

EXTERIOR

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EXTERIOR

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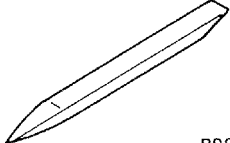
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FRONT BUMPER ADHESIVE

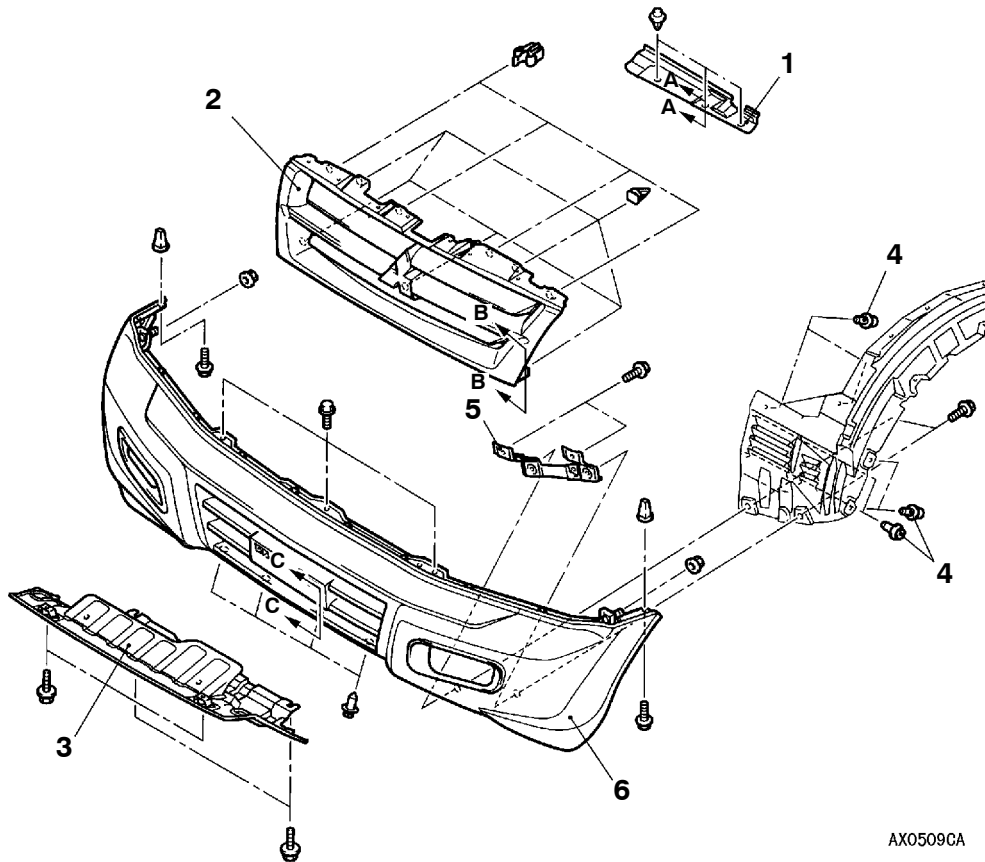
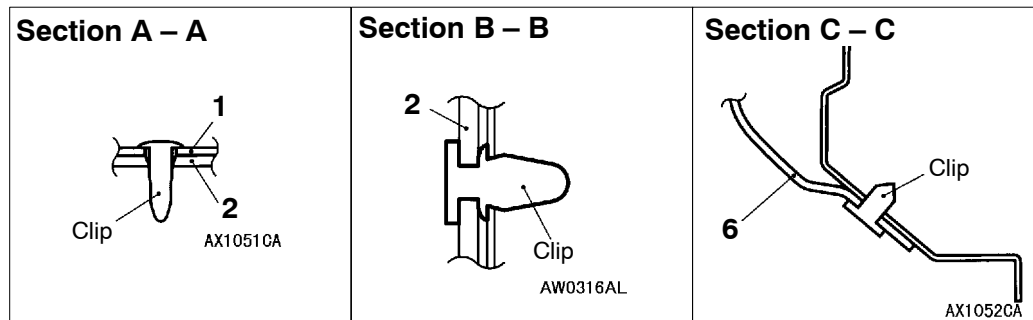
Items	Specified sealant and adhesive
Front bumper side extension	Double-sided tape [5 mm wide and 1.2 mm thick]

SPECIAL TOOL

Tool	Number	Name	Use
 B990784	MB990784	Ornament remover	Front bumper reinforcement assembly removal

FRONT BUMPER

REMOVAL AND INSTALLATION

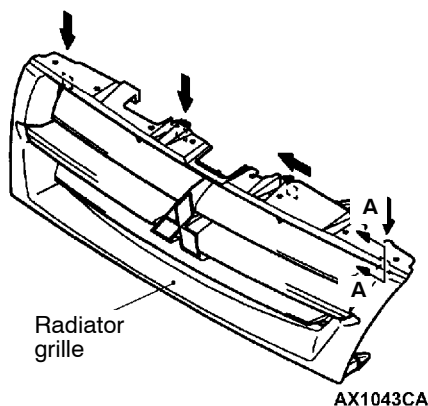
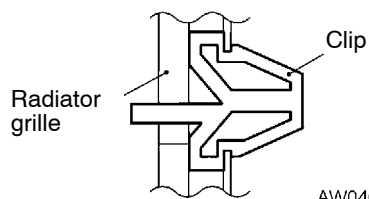


Removal steps

1. Radiator cover
2. Radiator grille
3. Skid plate
4. Splash shield mounting clip

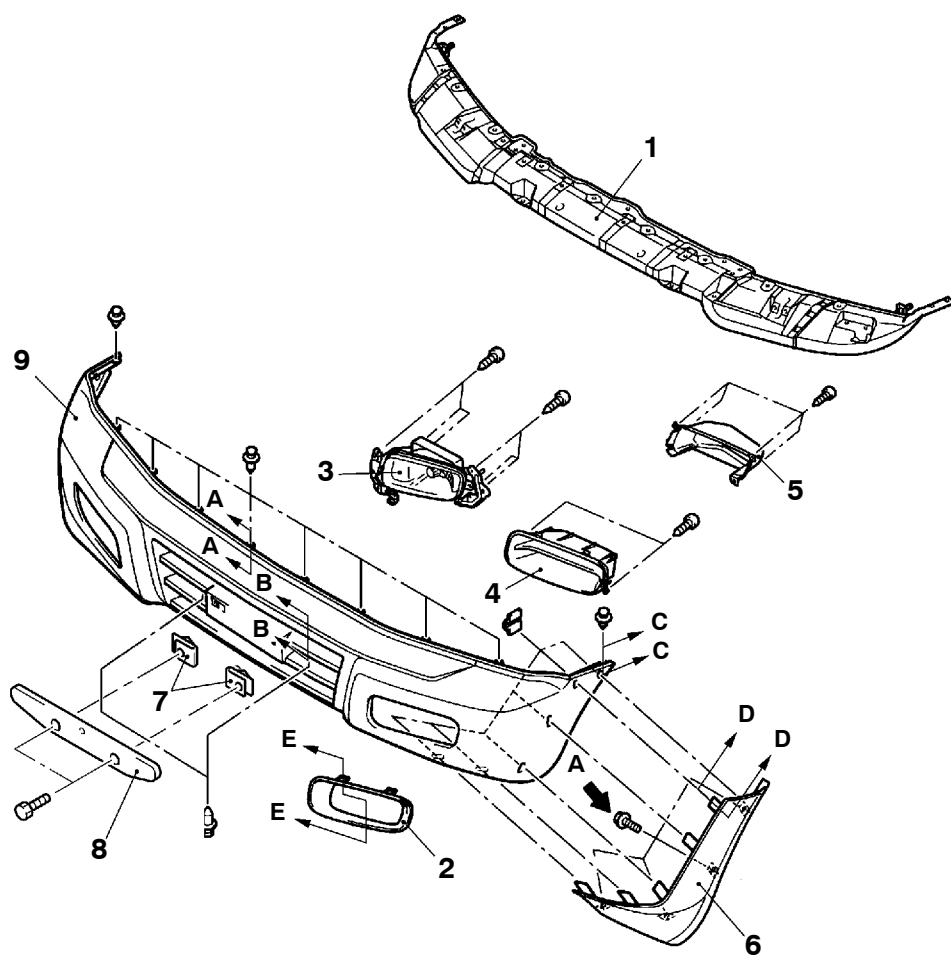
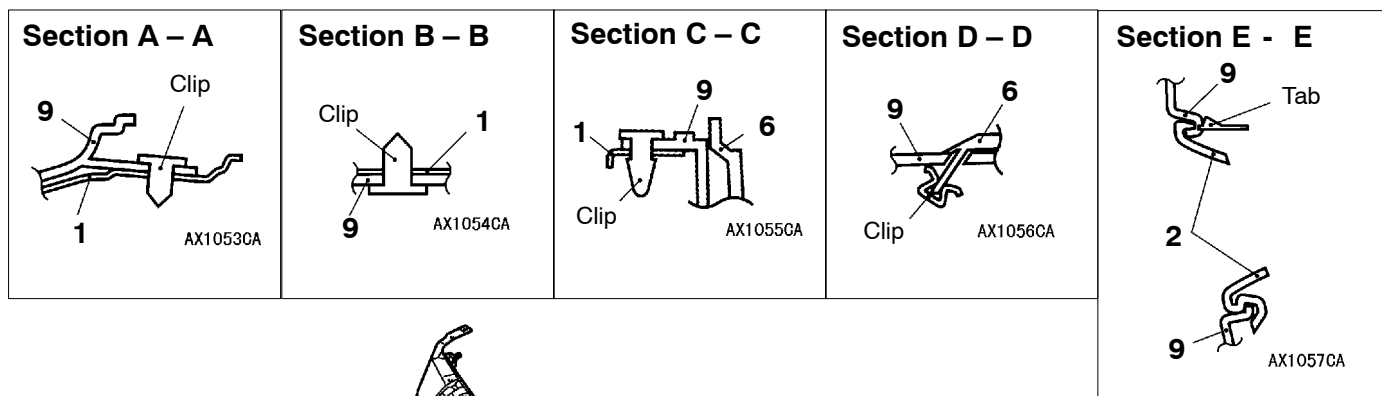
5. Front bumper lower stay
- Fog lamp connector connection
6. Front bumper face assembly



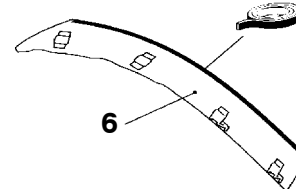
Section A – A**REMOVAL SERVICE POINT****◀A▶ RADIATOR GRILLE REMOVAL**

While pulling the radiator grille gently towards you, push the tabs of the clip in the direction of the arrow with a flat-tipped screwdriver to remove the radiator grille.

DISASSEMBLY AND REASSEMBLY



View A



AX1139CA

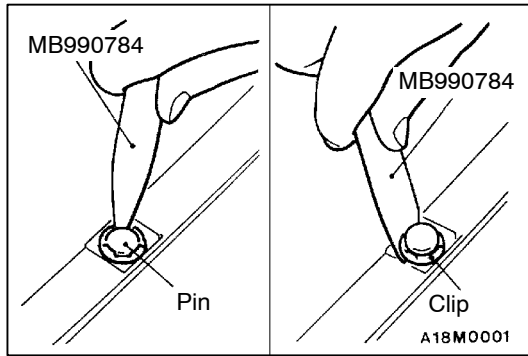
AX1491CA

Adhesive tape: Double-side tape [5 mm width and 1.2 mm thickness.]

Disassembly steps

- Headlamp washer
- 1. Front bumper reinforcement assembly
- 2. Fog lamp cover
- 3. Fog lamp
- 4. Air blower garnish <Vehicles without fog lamps>

- 5. Air duct <LH side in vehicles without fog lamps>
- 6. Front bumper side extension
- 7. Licence plate garnish
- 8. Licence plate bracket
- 9. Front bumper face



DISASSEMBLY SERVICE POINTS

◀A▶ FRONT BUMPER REINFORCEMENT ASSEMBLY REMOVAL

1. Use the special tool to lift up the pin in the centre of the clip.
2. Remove the clip.

◀B▶ FRONT BUMPER SIDE EXTENSION REMOVAL

Remove by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING REMOVAL. (Refer to P.51-14.)

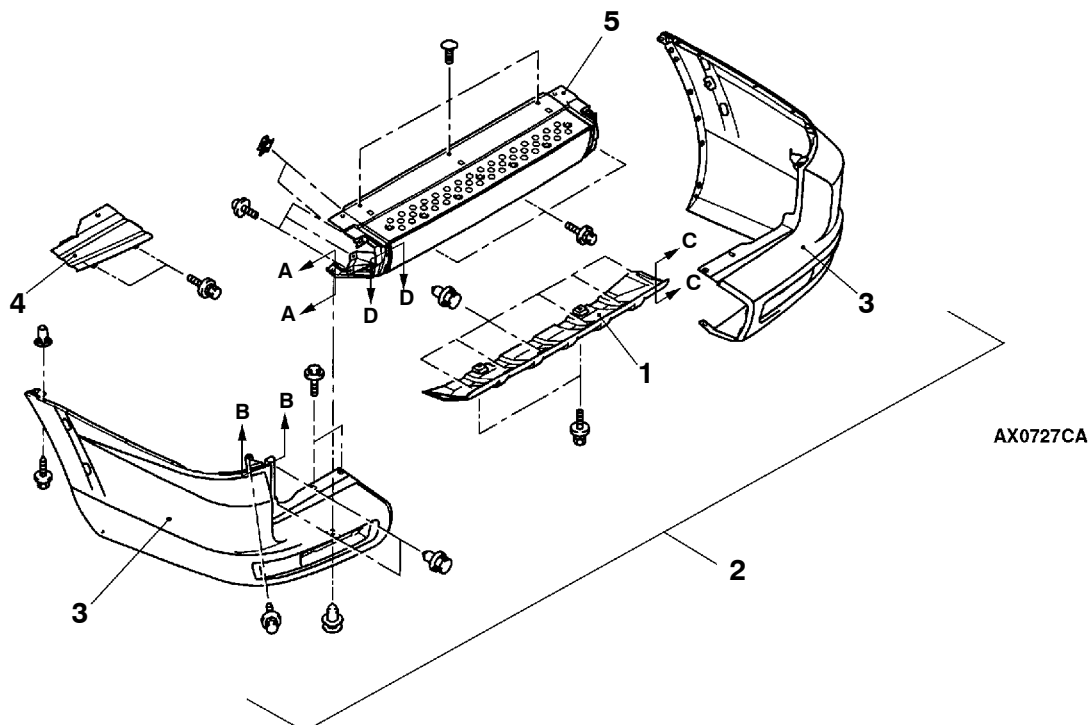
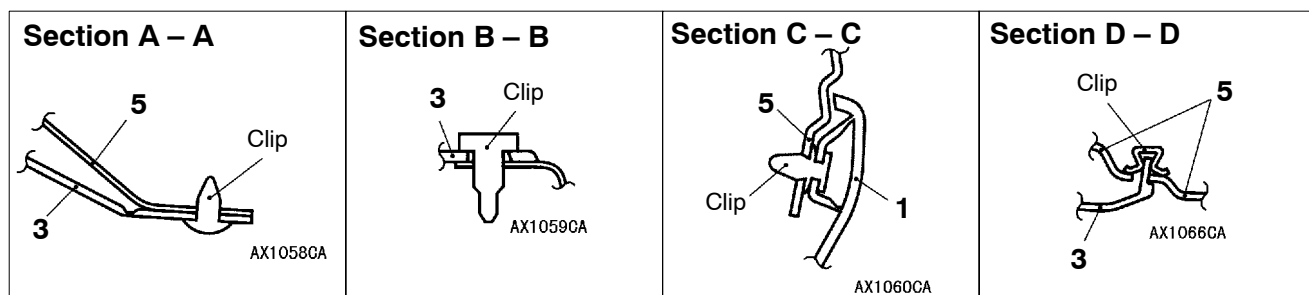
REASSEMBLY SERVICE POINT

▶A◀ FRONT BUMPER EXTENSION INSTALLATION

Install by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING INSTALLATION. (Refer to P.51-14.)

REAR BUMPER

REMOVAL AND INSTALLATION



Rear bumper assembly removal steps

1. Rear bumper center lower face
2. Rear bumper assembly

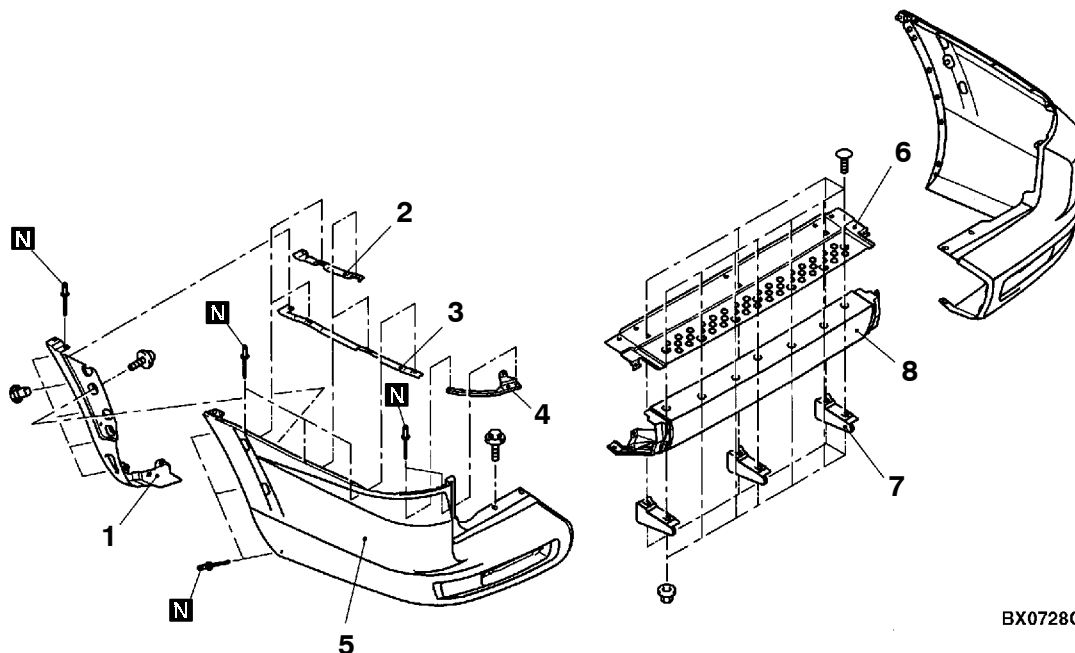
Rear bumper side face assembly removal steps

1. Rear bumper center lower face
3. Rear bumper side face assembly
4. Rear bumper side reinforcement

Rear bumper center face assembly removal steps

1. Rear bumper center lower face
3. Rear bumper side face assembly
5. Rear bumper center face assembly

DISASSEMBLY AND REASSEMBLY



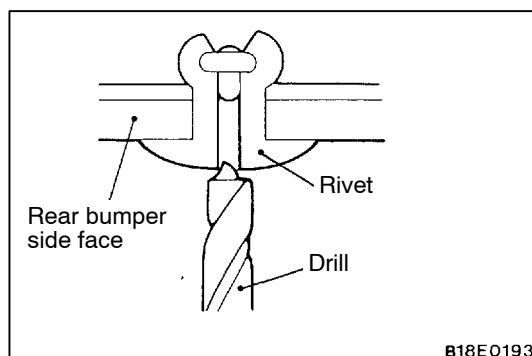
BX0728CA

Rear bumper side face assembly disassembly steps

- ◀A▶ ▶A◀ 1. Rear mudguard reinforcement
- ◀A▶ ▶A◀ 2. Rear bumper side retainer (Short wheelbase)
- ◀A▶ ▶A◀ 3. Rear bumper side retainer (Long wheelbase)
- ◀A▶ ▶A◀ 4. Rear bumper corner bracket
 - Rear lamp and rear lamp bracket (Refer to GROUP 54A.)
- 5. Rear bumper side face

Rear bumper center face assembly disassembly steps

- 6. Rear bumper step plate
- 7. Rear bumper center face stay
- 8. Rear bumper center face

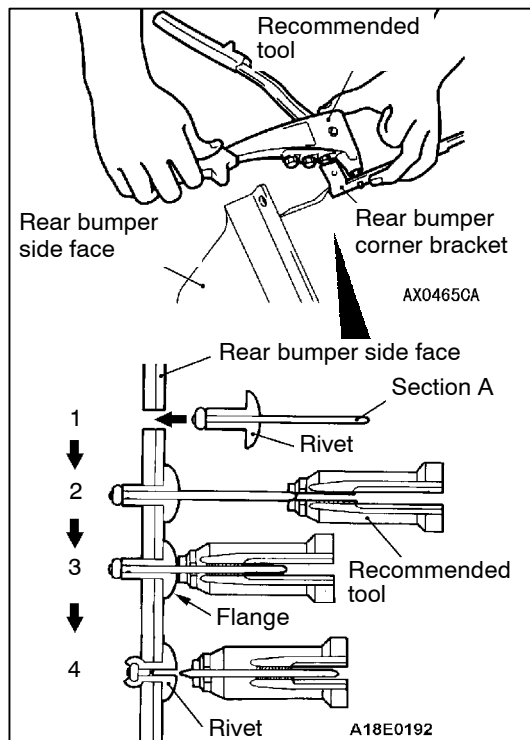


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DISASSEMBLY SERVICE POINT

◀A▶ REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE SILL RETAINER AND REAR BUMPER CORNER BRACKET REMOVAL

Use a drill (4.5 mm diameter) to make a hole in the rivet to break it, and then remove the rivet.



REASSEMBLY SERVICE POINT

►A◄ REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE SILL RETAINER AND REAR BUMPER CORNER BRACKET INSTALLATION

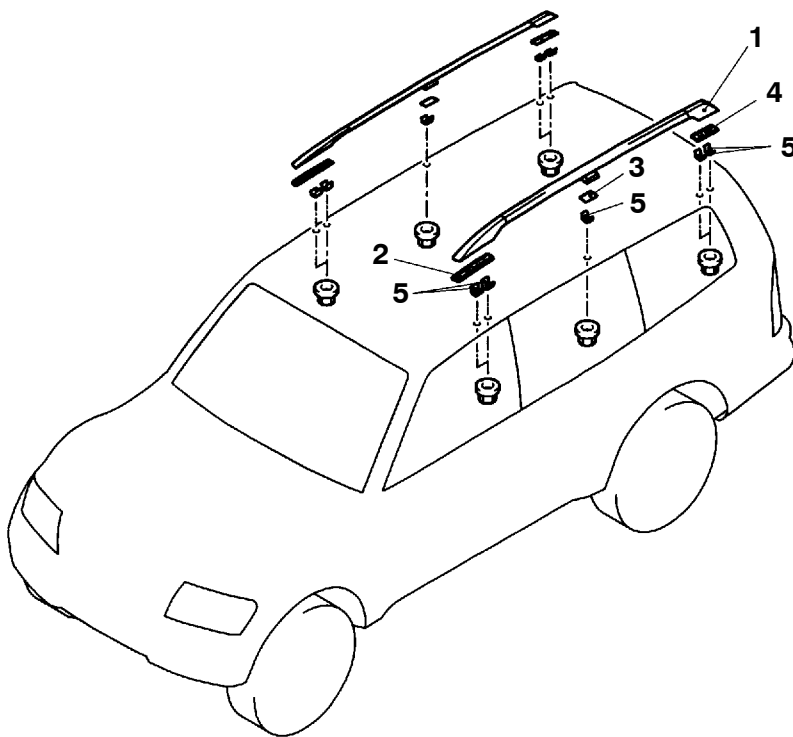
Use the recommended tool shown in the illustration to connect the rivet by the following procedure.

1. Insert the rivet into the base material (rear bumper side face, rear mudguard reinforcement, rear bumperside reinforcement or rear bumper corner bracket).
2. Place the recommended tool over section A of the 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 section A of the rivet will break and the rivet will then be attached.

ROOF RAIL

ROOF RAIL

REMOVAL AND INSTALLATION



AX0761CA

Removal steps

- Head lining
 - Set bracket (Refer to GROUP 42 - Sunroof.)
1. Roof rail assembly

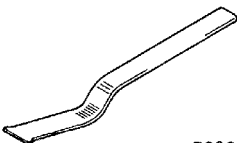
2. Roof rail front seal
3. Roof rail center seal
4. Roof rail rear seal
5. Roof rail seal

MOULDING

ADHESIVE

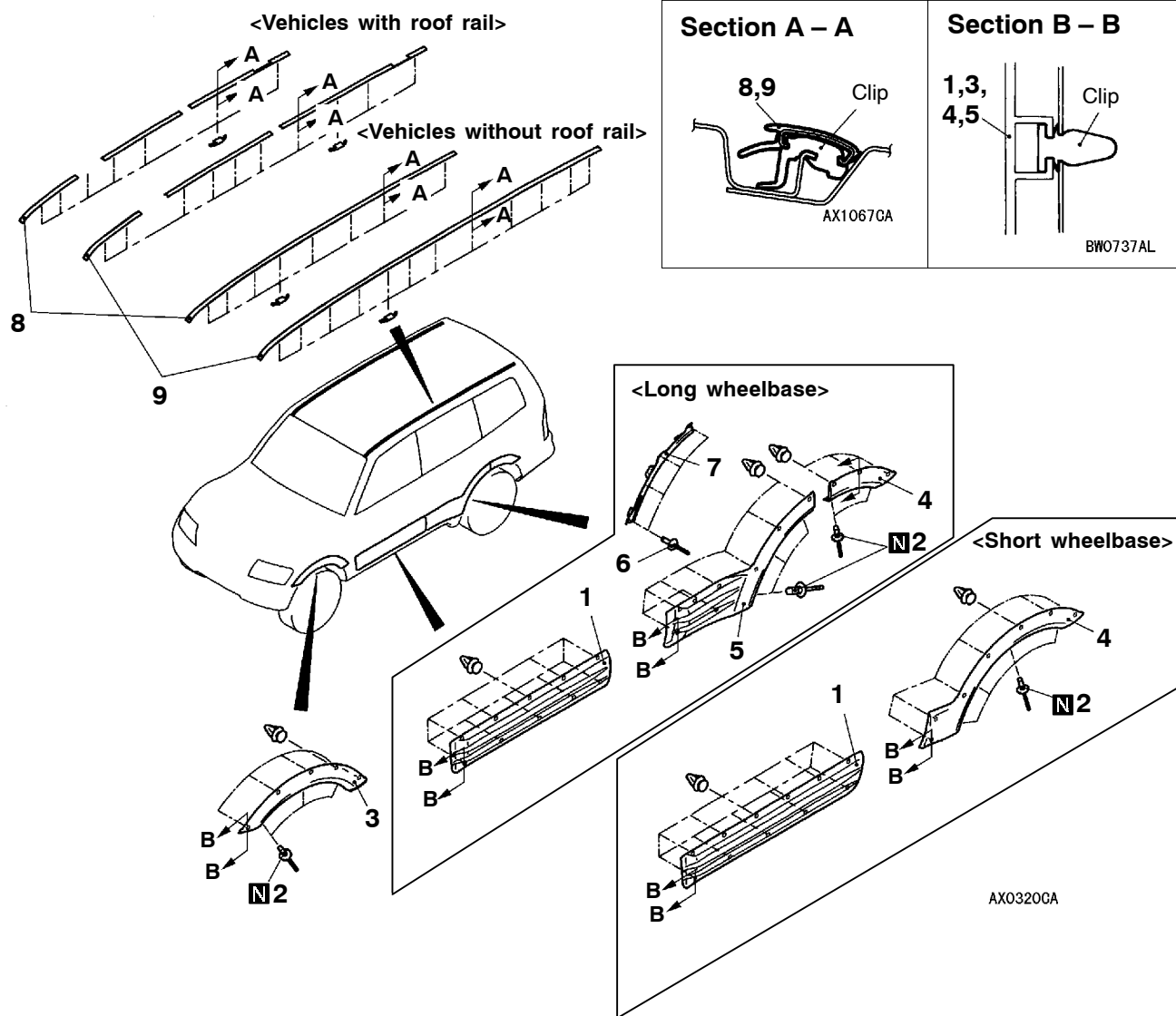
Items	Specified sealant and adhesive
Wheel cut moulding and door moulding	Double-sided tape [4 mm width and 1.2 mm thickness, 12 mm width and 1.2 mm thickness, 5 mm width and 1.2 mm thickness.]

SPECIAL TOOL

Tools	No.	Name	Application
 B990449	MB990449	Window moulding remover	Roof drip moulding removal

MOULDING

REMOVAL AND INSTALLATION



◀A▶ ▶A◀ 1. Front door moulding
Front wheel cut moulding removal steps

◀B▶ ▶B◀ 2. Rivet A
 ▶A◀ ▶A◀ 3. Front wheel cut moulding

Rear wheel cut moulding removal steps

◀B▶ ▶B◀ 2. Rivet A
 ▶A◀ ▶A◀ 4. Rear wheel cut moulding

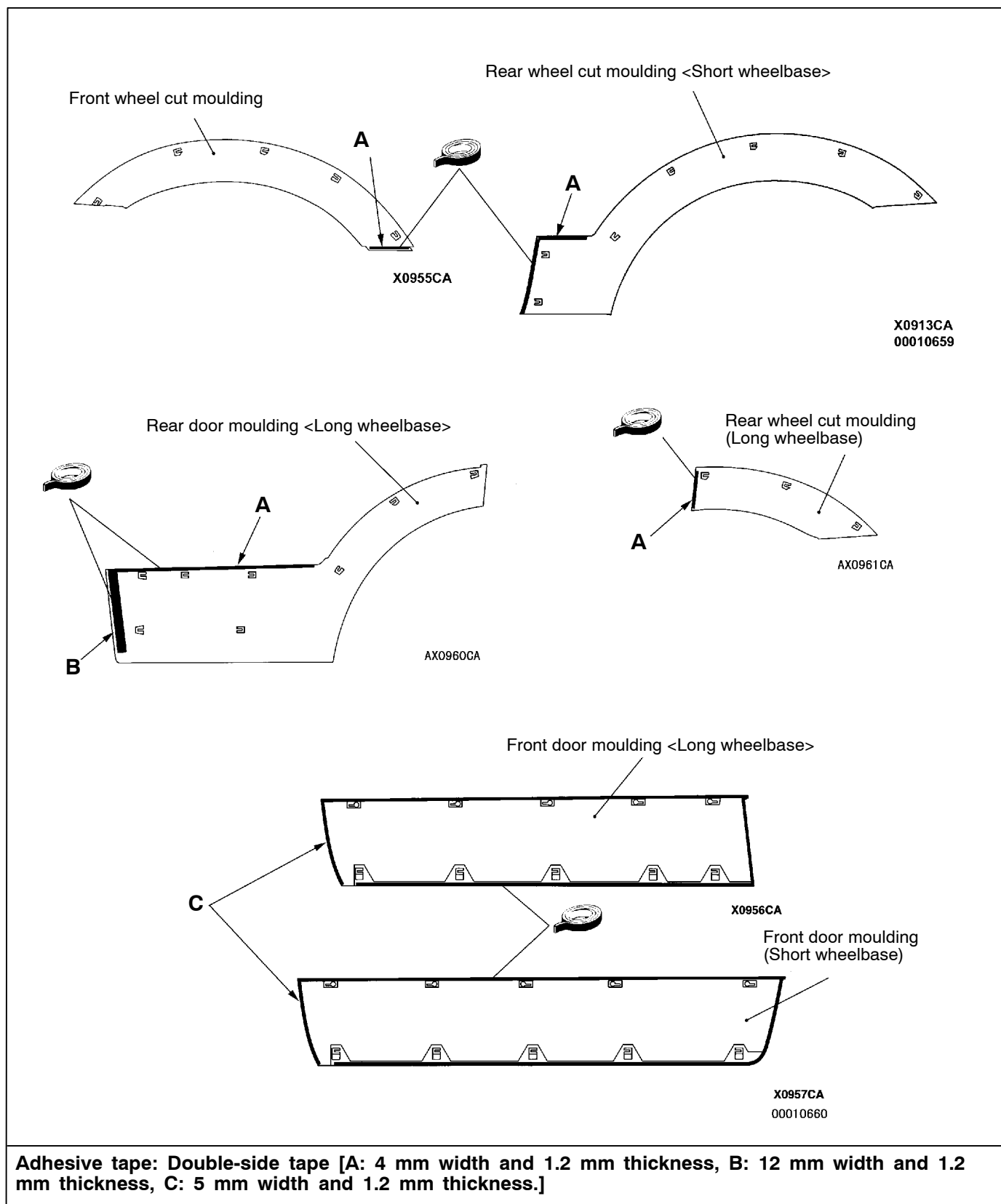
Rear door moulding removal steps

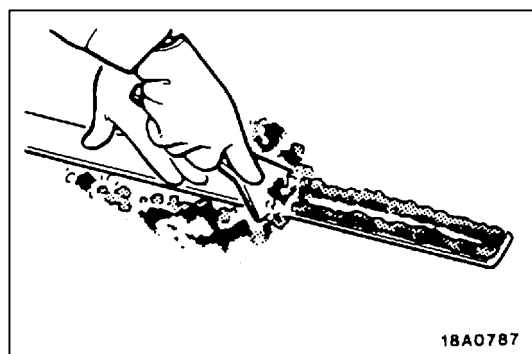
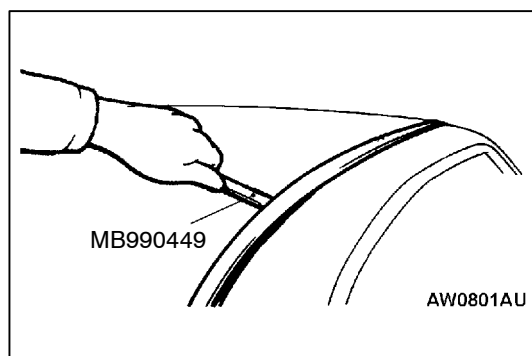
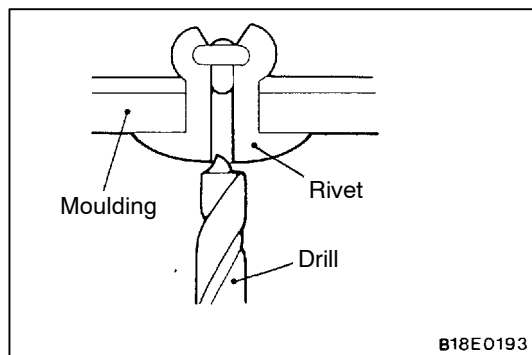
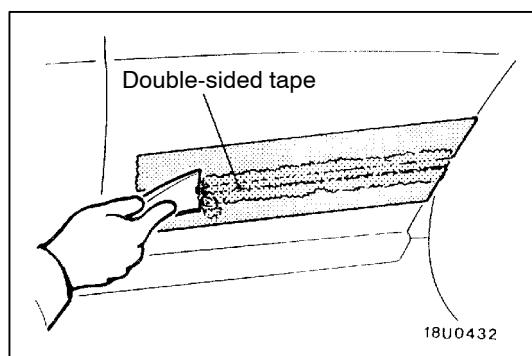
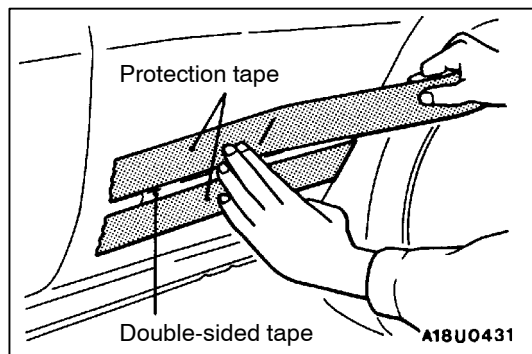
◀B▶ ▶B◀ 2. Rivet A
 ▶A◀ ▶A◀ 5. Rear door moulding
 ▶B▶ ▶C◀ 6. Rivet B
 ▶A◀ ▶A◀ 7. Rear door moulding bracket

Roof drip moulding removal steps

- Roof rail assembly
- 8. Roof drip moulding <Short wheelbase>
- 9. Roof drip moulding <Long wheelbase>

Double-sided tape application locations





REMOVAL SERVICE POINTS

◀A▶ FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING REMOVAL

1. Attach protection tape all the way along the edges of the double-sided tape which is still adhering to the body.
2. Use a resin spatula to scrape off the double-sided tape.
3. Peel off the protection tape.
4. Wipe the body surface and clean it with a rag moistened with isopropyl alcohol.

◀B▶ RIVET A AND B REMOVAL

Use a drill (with a 4.0 mm bit for rivet A, or a 6.5 mm bit for rivet B) to make a hole in the rivet to break it, and then remove the rivet.

◀C▶ ROOF LID MOULDING REMOVAL

Use the special tool to remove the moulding from the rear of the vehicle by twisting it.

Caution

If the moulding becomes deformed, it should not be re-used.

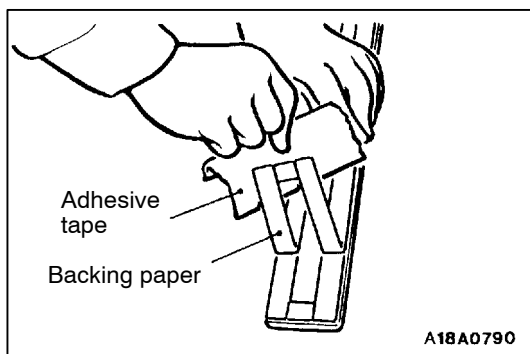
INSTALLATION SERVICE POINTS

▶A◀ FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING INSTALLATION

Double-sided tape affixing to the protect moulding (when reusing)

1. Scrape off the double-sided tape with a resin spatula or gasket scraper.

2. Wipe off the moulding adhesion surface and clean it with a shop towel moistened with isopropyl alcohol.
3. Affix the specified double sided tape to the moulding. (Refer to P.51-13.)



4. Remove strip paper from the pressure sensitive double-sided tape.

NOTE

Affix double-sided tape to the end of strip paper for ease of strip paper removal. (Refer to P.51-13.)

5. Install the moulding.

NOTE

If it is hard to affix the double-sided tape in winter, heat the application surfaces at both the vehicle body and the moulding.

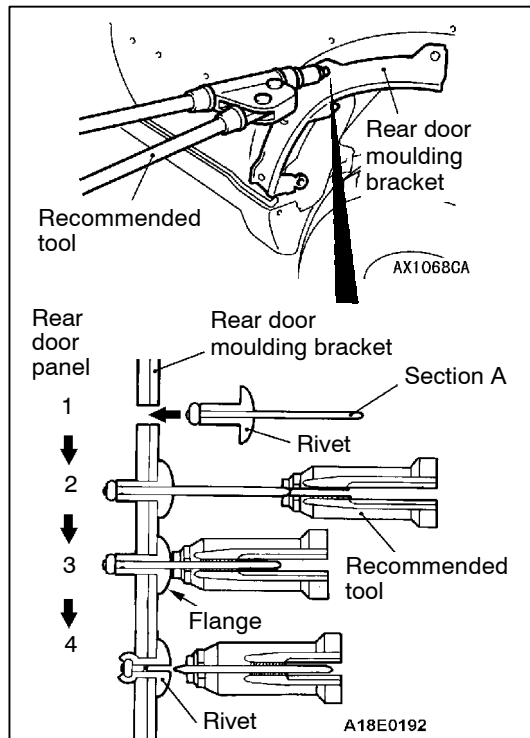
Body 40 - 60°C

Moulding 20 - 30 °C

Apply pressure fully to the moulding.

►B◄ RIVET A INSTALLATION

Install by the same procedure as for REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE RETAINER, REAR BUMPER CORNER BRACKET INSTALLATION. (Refer to P.51-9.)



►C◄ RIVET B INSTALLATION

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

1. Insert the rivet into the base material (vehicle body or rear door moulding bracket).
2. Place the recommended tool over section A of the 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 section A of the rivet will break and the rivet will then be attached.

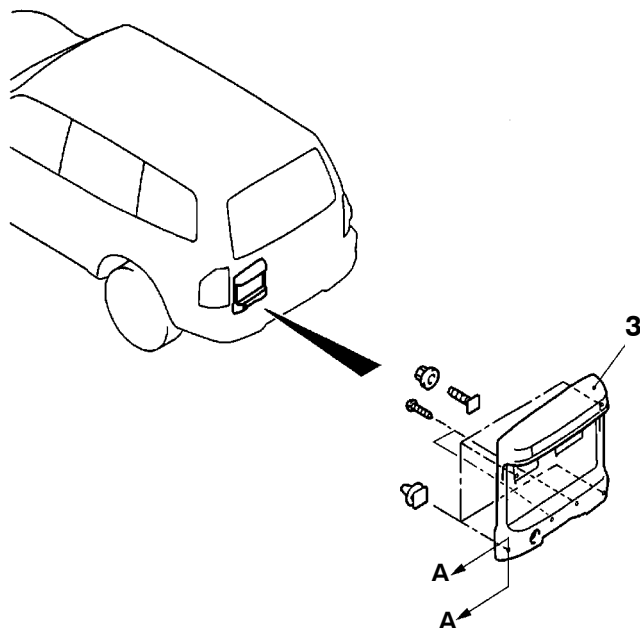
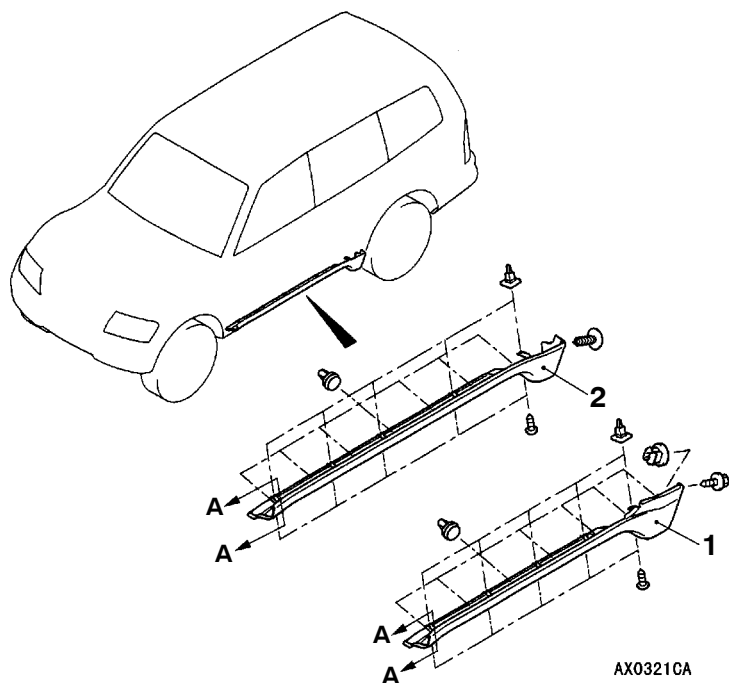
GARNISH

ADHESIVE

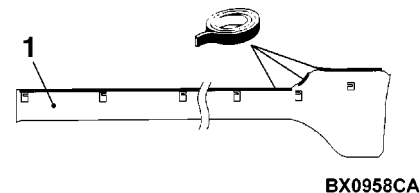
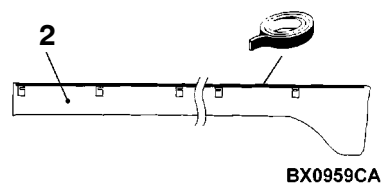
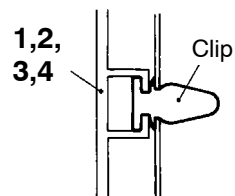
Items	Specified sealant and adhesive
Side sill garnish	Double-sided tape [4 mm width and 1.2 mm thickness.]

GARNISH

REMOVAL AND INSTALLATION



Section A - A



Adhesive tape: Double-side tape [4 mm width and 1.2 mm thickness.]

Side sill garnish removal steps

- Side step
- Front mudguard
- 1. Side sill garnish <Short wheelbase>
- 2. Side sill garnish <Long wheelbase>

Licence plate garnish removal steps

- Toolbox bracket, upper (Refer to GROUP 42 - Back door trim and waterproof film.)
- Licence lamp (Refer to GROUP 54A.)
- 3. Licence plate garnish



REMOVAL SERVICE POINT**◀A▶ SIDE SILL GARNISH REMOVAL**

Remove by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING REMOVAL. (Refer to P.51-14.)

INSTALLATION SERVICE POINT**▶A◀ SIDE SILL GARNISH INSTALLATION**

Install by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING INSTALLATION. (Refer to P.51-14.)

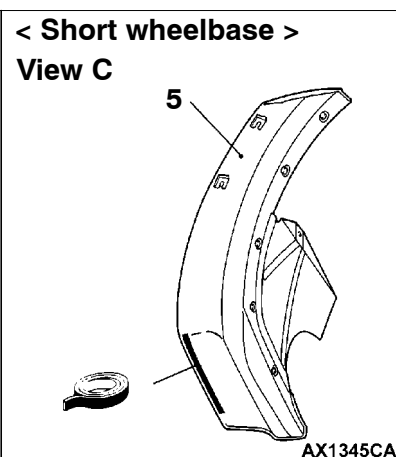
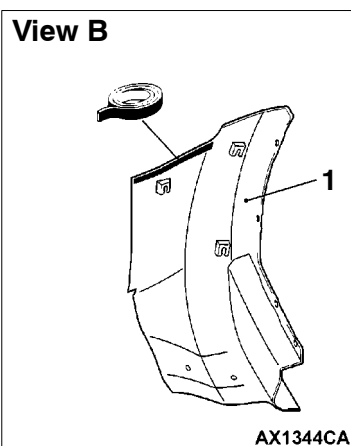
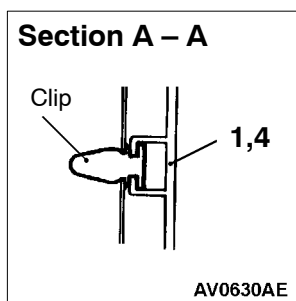
MUDGUARD

ADHESIVE

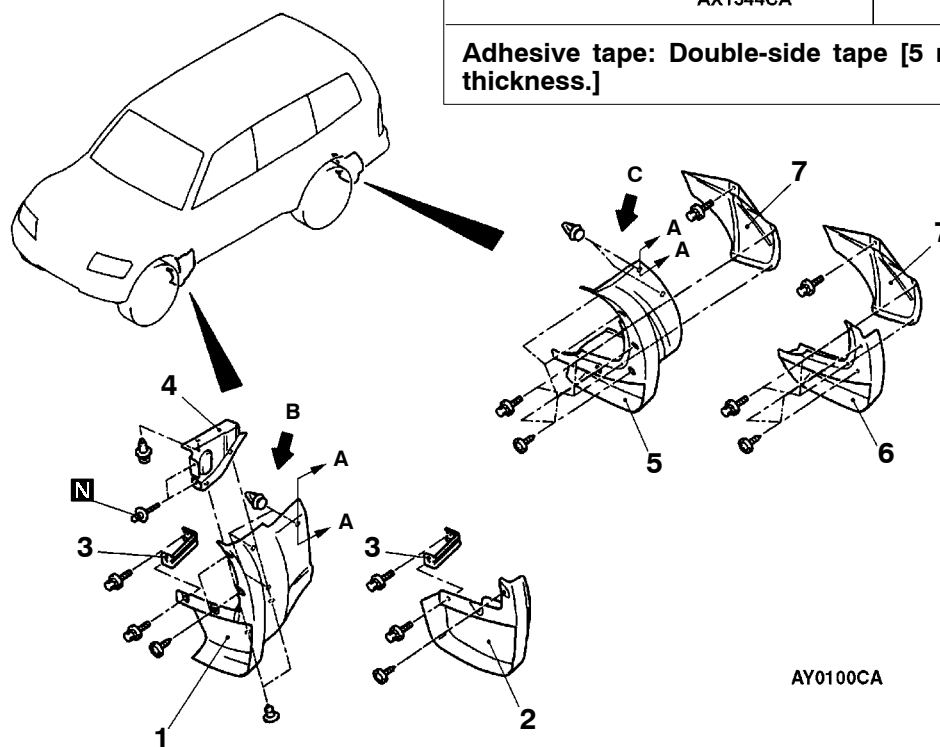
Items	Specified sealant and adhesive
Front mudguard	Double-sided tape [5 mm wide and 0.8mm thick]
Rear mudguard <Short wheelbase>	

MUDGUARD

REMOVAL AND INSTALLATION



Adhesive tape: Double-side tape [5 mm width and 0.8 mm thickness.]



Front mudguard removal steps

- ◀A▶ ▶A▶ 1. Front mudguard (wide type)
2. Front mudguard (standard type)
3. Front mudguard bracket
◀B▶ ▶B▶ 4. Front mudguard cover

Rear mudguard removal steps

- ◀A▶ ▶A▶ 5. Rear mudguard (wide type)
6. Rear mudguard (standard type)
7. Rear mudguard protector

REMOVAL SERVICE POINTS**◀A▶ FRONT MUDGUARD, REAR MUDGUARD
REMOVAL**

Remove by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING REMOVAL. (Refer to P.51-14.)

◀B▶ FRONT MUDGUARD COVER REMOVAL

Remove by the same procedure as for REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE RETAINER, REAR BUMPER CORNER BRACKET REMOVAL. (Refer to P.51-10.)

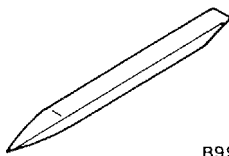
INSTALLATION SERVICE POINTS**▶A◀ FRONT MUDGUARD, REAR MUDGUARD
INSTALLATION**

Install by the same procedure as given in FRONT DOOR MOULDING, FRONT WHEEL CUT MOULDING, REAR WHEEL CUT MOULDING AND REAR DOOR MOULDING INSTALLATION. (Refer to P.51-14.)

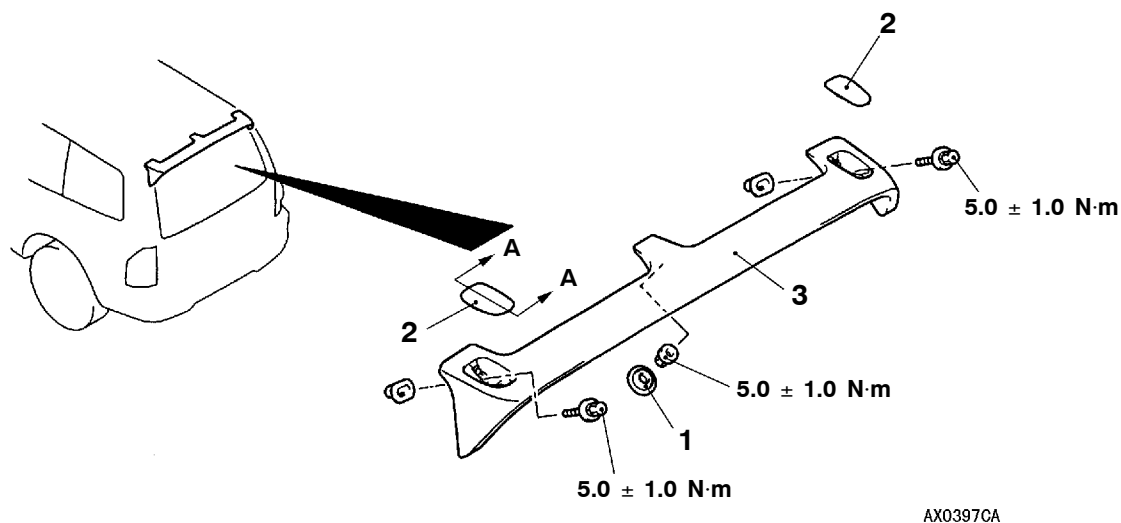
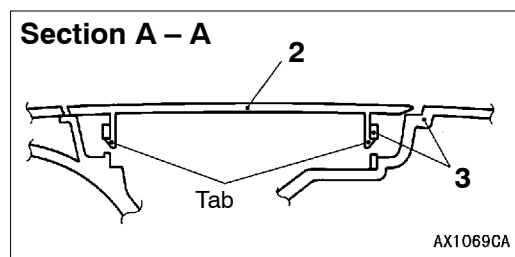
▶B◀ FRONT MUDGUARD COVER INSTALLATION

Install by the same procedure as for REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE RETAINER, REAR BUMPER CORNER BRACKET INSTALLATION. (Refer to P.51-10.)

REAR DEFLECTOR SPECIAL TOOL

Tools	Number	Name	Use
 B990784	MB990784	Ornament remover	Rear deflector cover removal

REAR DEFLECTOR REMOVAL AND INSTALLATION

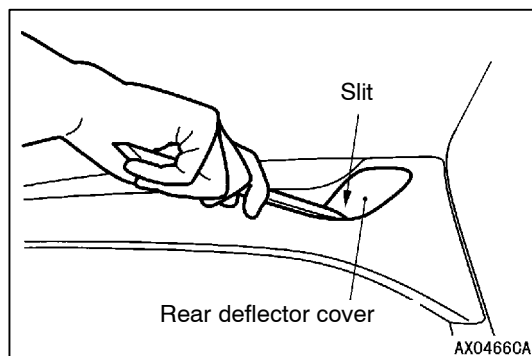


Rear deflector removal steps

1. Resin plug



2. Rear deflector cover
3. Rear deflector



REMOVAL SERVICE POINT

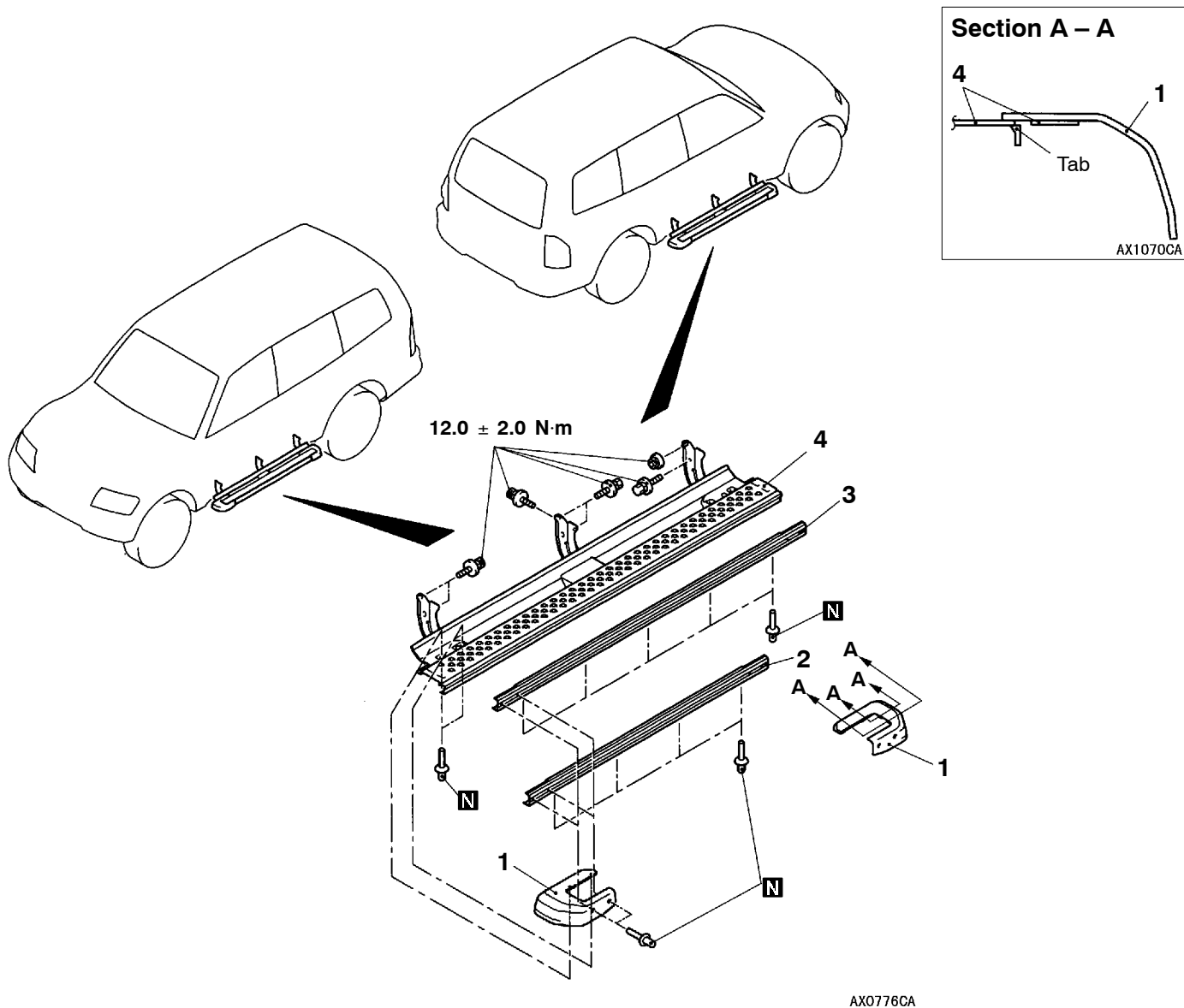
◀A▶ REAR DEFLECTOR COVER REMOVAL

1. Insert the special tool into the slit on the rear deflector cover.
2. Release the tab by prying it towards the front of the vehicle.

SIDE STEP

SIDE STEP

REMOVAL AND INSTALLATION



Side step removal steps



1. Side step cover
2. Non-slip cover <Short wheelbase>



3. Non-slip cover <Long wheelbase>
4. Side step assembly

REMOVAL SERVICE POINT**◀A▶ SIDE STEP COVER, NON-SLIP COVER REMOVAL**

Remove by the same procedure as for REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE RETAINER, REAR BUMPER CORNER BRACKET REMOVAL. (Refer to P.51-9.)

INSTALLATION SERVICE POINT**▶A◀ SIDE STEP COVER, NON-SLIP COVER INSTALLATION**

Install by the same procedure as for REAR MUDGUARD REINFORCEMENT, REAR BUMPER SIDE RETAINER, REAR BUMPER CORNER BRACKET INSTALLATION. (Refer to P.51-10.)

WINDSHIELD WIPER AND WASHER

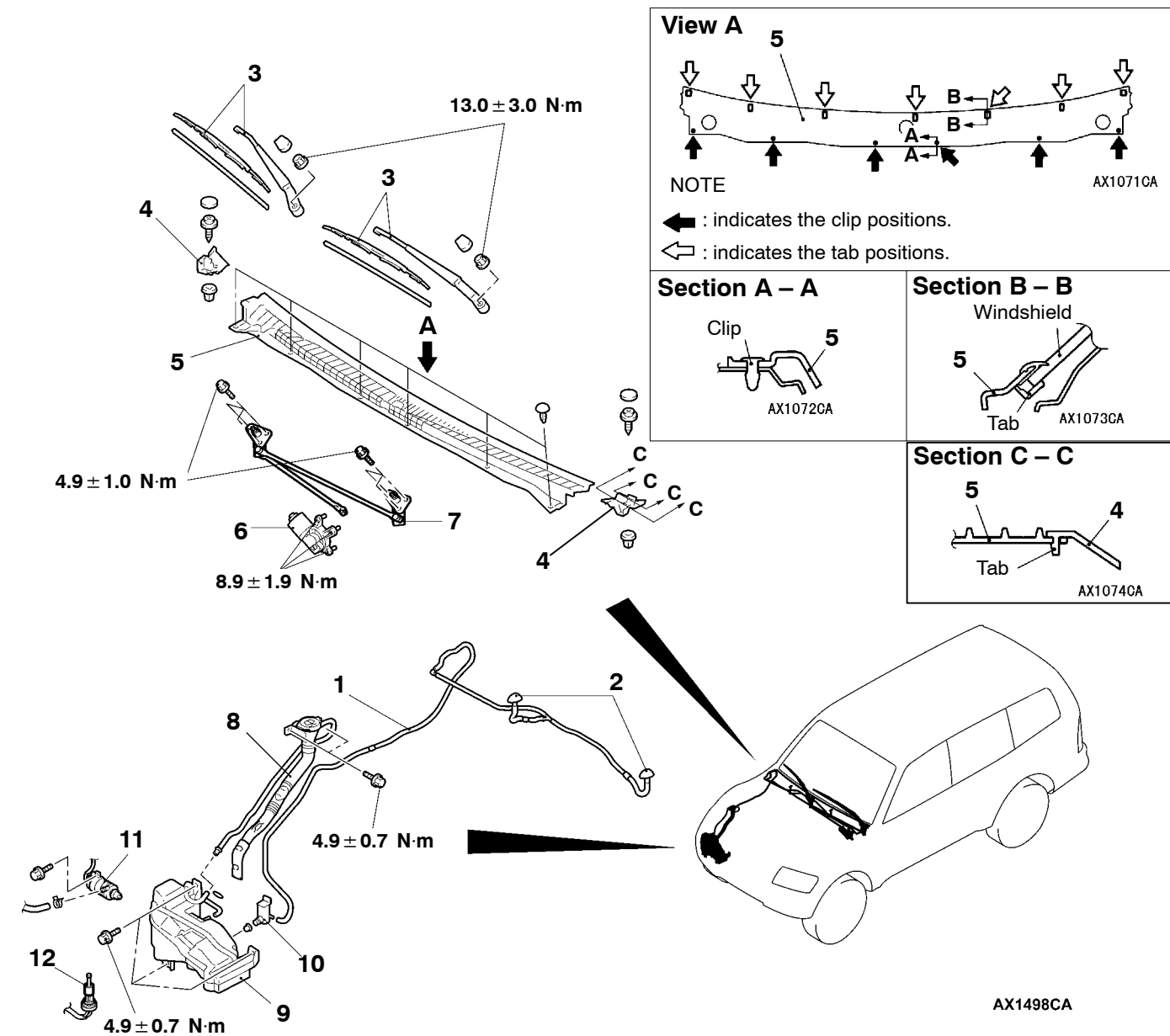
SERVICE SPECIFICATIONS

Items		Standard value
Park position of the windshield wiper arm and blade assembly (Distance from end of wiper blade to end of front deck garnish) mm	Driver's side	20 - 30
	Passenger's side	25 - 35

TROUBLESHOOTING

The windshield wiper and washer is controlled by the SWS (Smart Wiring System). For troubleshooting procedures, refer to GROUP 54B - SWS Diagnosis.

WINDSHIELD WIPER AND WASHER REMOVAL AND INSTALLATION



1. Windshield washer hose assembly
2. Windshield washer nozzle

Windshield wiper motor assembly and link assembly removal steps

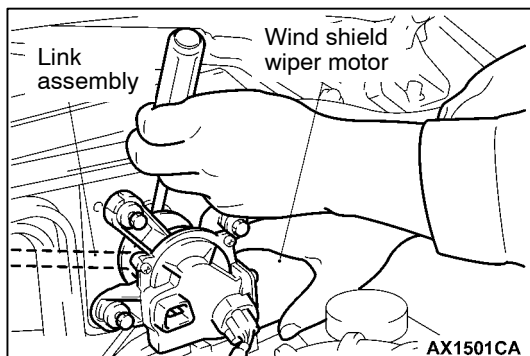
3. Windshield wiper arm and blade assembly
4. Front deck side garnish
5. Front deck garnish
6. Windshield wiper motor assembly
7. Link assembly

Windshield washer tank removal steps

- Front bumper face assembly (Refer to P.51- 4.)
- Headlamp assembly (Refer to GROUP 54A.)
- 8. Inlet assembly
- 9. Windshield washer tank assembly
- 10. Windshield washer motor
- 11. Headlamp washer motor
- 12. Washer fluid level sensor

NOTE

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



REMOVAL SERVICE POINT

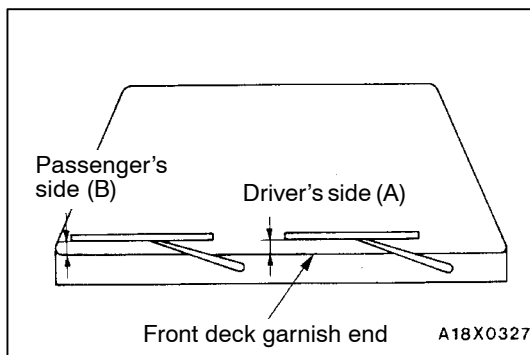
◀A▶ WINDSHIELD WIPER MOTOR ASSEMBLY REMOVAL

1. Remove the windshield wiper motor assembly mounting bolts.
2. Use a flat-tipped screwdriver to separate the clamp arm of the windshield wiper motor assembly and the link assembly, and then remove the windshield wiper motor assembly.

Caution

The automatic stop angle is determined at the time that the clamp arm and the windshield wiper motor assembly are installed together, and so they should not be disassembled unless required.

Make markings on the vehicle body before removing the windshield wiper motor assembly.



INSTALLATION SERVICE POINT

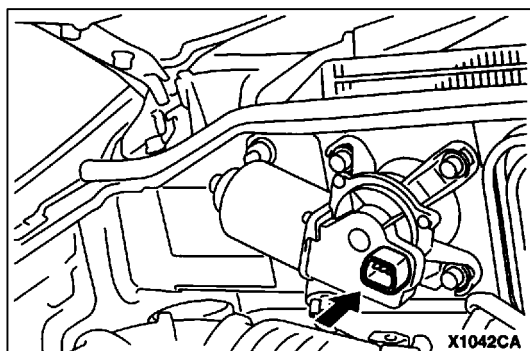
▶A◀ WINDSHIELD WIPER ARM AND BLADE ASSEMBLY INSTALLATION

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

Standard value:

Driver's side (A) 20 - 30 mm

Passenger's side (B) 25 - 35 mm



INSPECTION

WINDSHIELD WIPER MOTOR ASSEMBLY CHECK

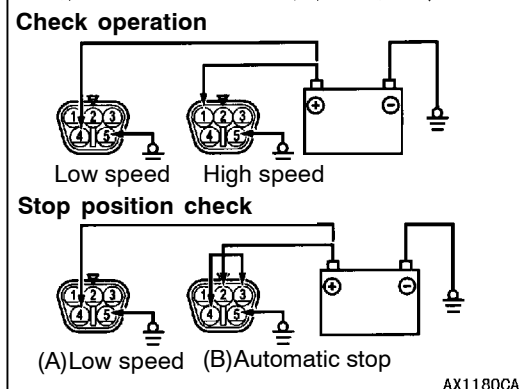
The windshield wiper motor assembly should be installed to the vehicle body and the harness connector should be disconnected when checking the wiper motor.

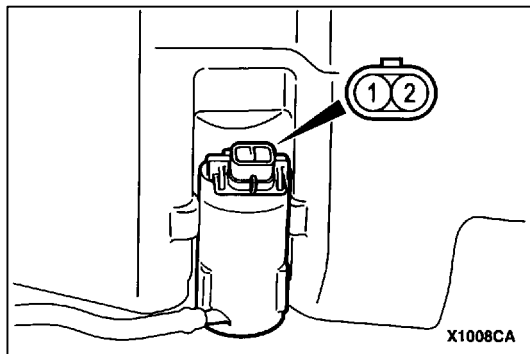
• Low Speed and High Speed Wiper Motor Operation Check

Connect the battery to the wiper motor as shown in the illustration, and then check the operation of the wiper motor at low speed and at high speed.

• Windshield Wiper Motor Assembly Stop Position Check

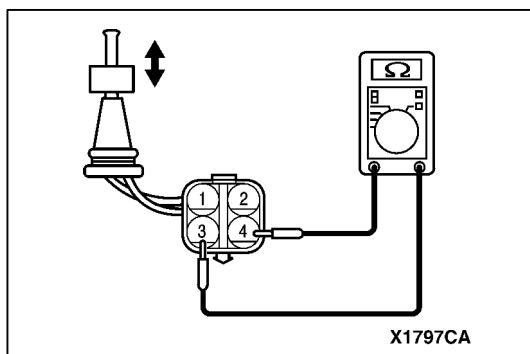
1. Connect the battery to the wiper motor as shown in illustration (A), and then run the wiper motor at low speed. Then, while the motor is operating, disconnect the battery to make the wiper motor stop.
2. Connect the terminals and the battery as shown in illustration (B), and then check whether the wiper motor automatically stops in the correct stop position after it has been running at low speed.





WINDSHIELD WASHER MOTOR CHECK

1. The windshield washer tank assembly should be installed and the windshield washer tank should be filled with water when checking the washer motor.
2. Check that water is circulated strongly when system voltage is applied to terminal (2) and terminal (1) is earthed.



WASHER FLUID LEVEL CHECK

1. Connect a circuit tester to the connector of the level sensor as shown.
2. Check that when the float is moved down, the circuit is closed and that when the float is moved up, the circuit is opened.

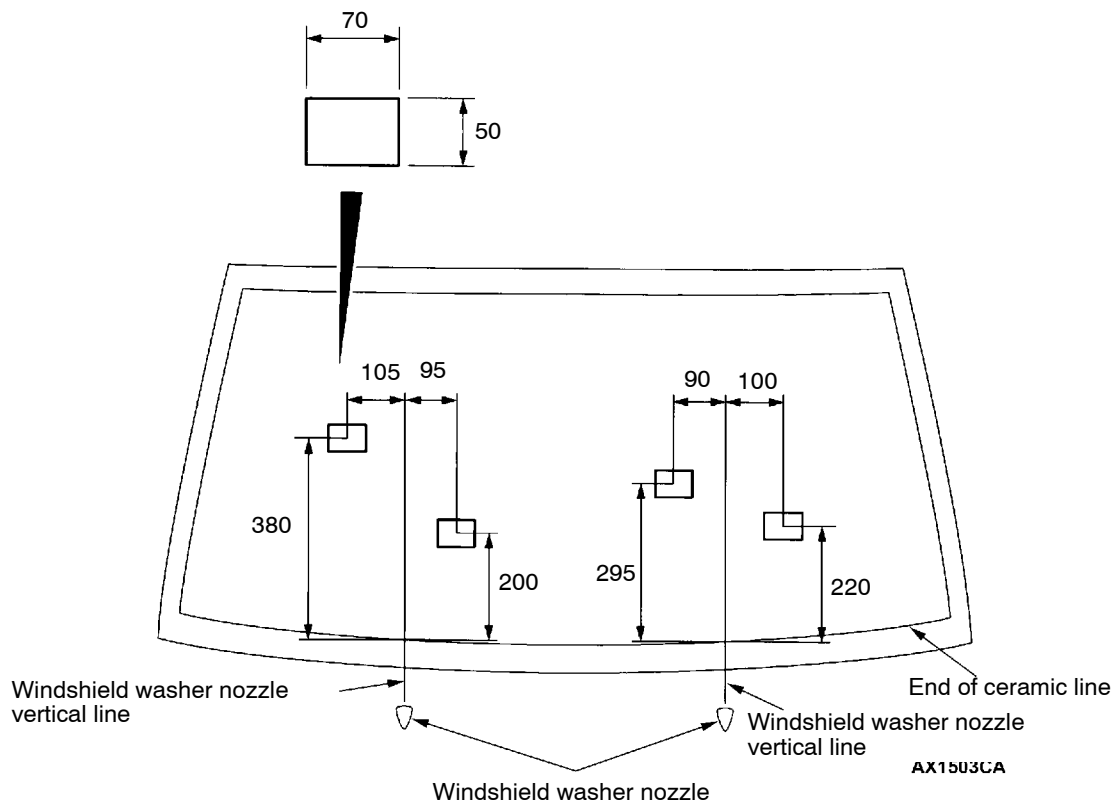
WINDSHIELD WASHER NOZZLE SPRAY POSITION CHECK

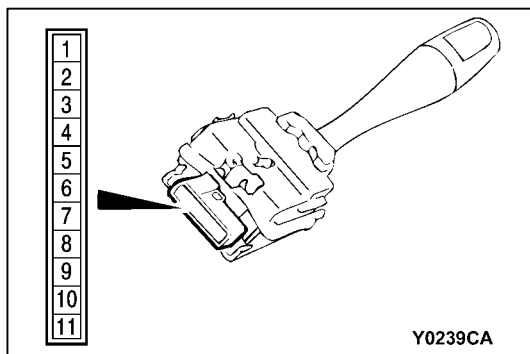
Move the nozzle to adjust so that the water is sprayed out within the range shown in the illustration.

Caution

On R.H. drive vehicles, the illustration is symmetrical.

Units: mm





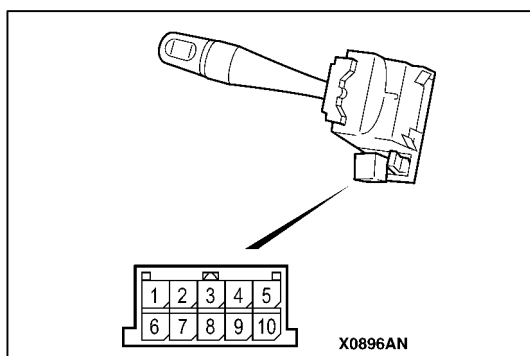
WINDSHIELD WIPER AND WINDSHIELD WASHER SWITCH AND WINDSHIELD INTERMITTENT WIPER INTERVAL ADJUSTING KNOB CHECK

<L.H. drive vehicles>

1. Windshield wiper and washer switch, rear wiper and washer switch

Switch position	Terminal No.					
	6	7	8	9	10	11
OFF						
Windshield wiper mist switch ON	○					○
Windshield intermittent wiper switch ON	○				○	
Windshield low-speed wiper switch ON	○			○		
Windshield high-speed wiper switch ON	○		○			
Windshield washer switch ON	○	○				

2. Windshield intermittent wiper interval adjusting knob
Measure the resistance value at terminal numbers 3 and 6. The resistance value should rise smoothly from approximately 0 Ω ("FAST" position) to apporoximately 1 k Ω ("SLOW" position).



<R.H.drive vehicles>

WINDSHIELD INTERMITTENT WIPER INTERVAL ADJUSTING KNOB

Measure the resistance value at terminal numbers 4 and 6. The resistance value should rise smoothly from approximately 0 Ω ("FAST" position) to apporoximately 1 k Ω ("SLOW" position).

NOTE:

Windshield washer and wiper switch is integrated with the column-ECU, and can not be checked. However, its operation can be checked by the input signal check. (Refer to GROUP 54B – Troubleshooting.)

REAR WIPER AND WASHER

REFERENCE VALUE

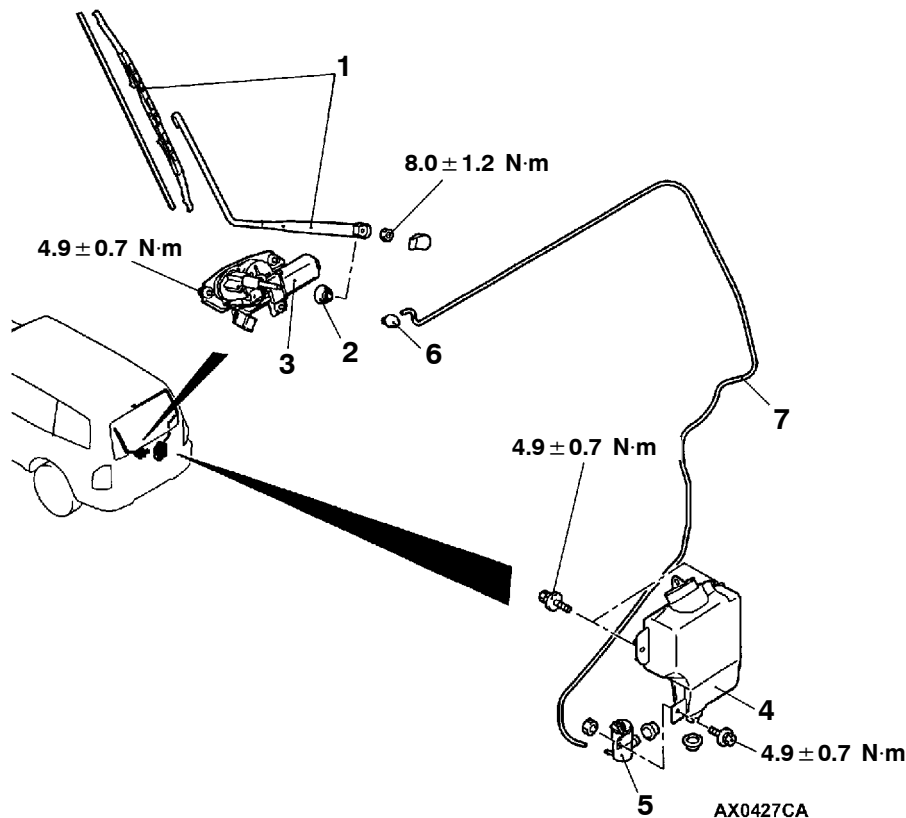
Item	Standard value
Rear wiper arm and blade assembly stop position (Distance from end of wiper blade to end of ceramic line) mm	30 ± 5

TROUBLESHOOTING

The rear wiper and washer is controlled by the SWS (Smart Wiring System). For troubleshooting procedures, refer to GROUP 54B - SWS Diagnosis.

REAR WIPER AND WASHER

REMOVAL AND INSTALLATION



Rear wiper motor assembly removal steps



- Toolbox bracket, upper (Refer to GROUP 42 – Back Door Trim, Waterproof Film.)
1. Rear wiper arm and blade assembly
 2. Grommet
 3. Rear wiper motor assembly

Rear washer tank and rear washer motor removal steps

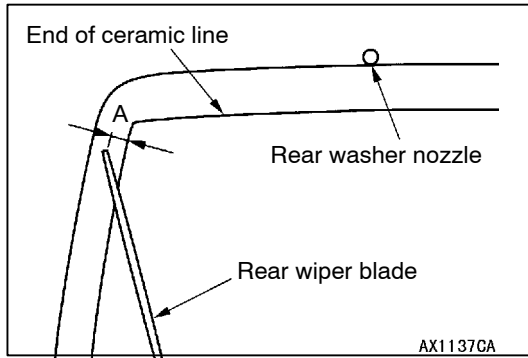
- Waterproof film (Refer to GROUP 42.)
4. Rear washer tank assembly
 5. Rear washer motor

Rear washer hose removal steps

6. Rear washer nozzle
- Waterproof film (Refer to GROUP 42.)
7. Rear washer hose

NOTE

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

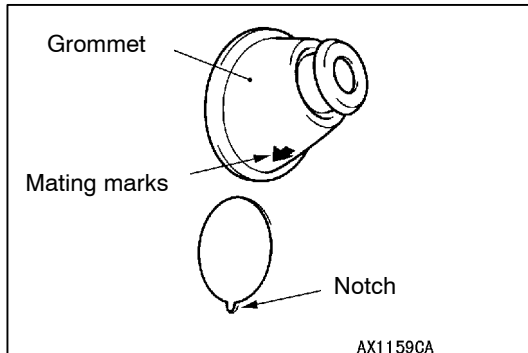


INSTALLATION SERVICE POINTS

►A◄ REAR WIPER ARM AND BLADE ASSEMBLY INSTALLATION

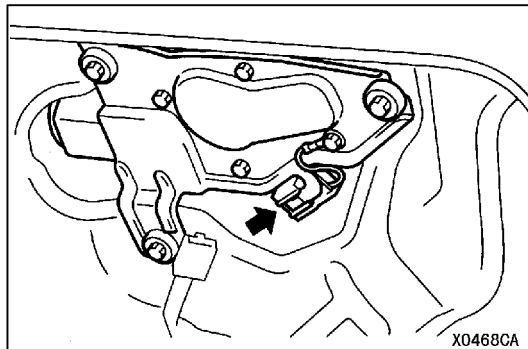
Install so that the end of the wiper blade stops at the specified position.

Standard value (A) : 30 ± 5 mm



►B◄ GROMMET INSTALLATION

Install so that the mating mark on the grommet is aligned with the notch in the mounting hole.



INSPECTION

REAR WIPER MOTOR ASSEMBLY CHECK

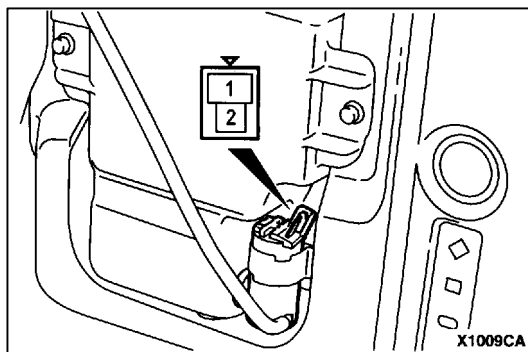
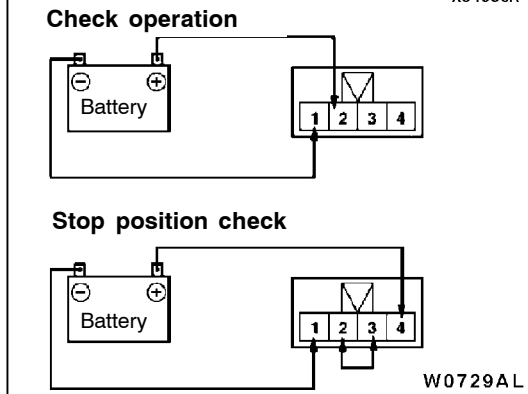
The rear wiper motor assembly should be installed to the vehicle body and the harness connector should be disconnected when checking the wiper motor.

• Wiper Motor Operation Check

Connect the battery to the wiper motor as shown in the illustration, and then check the operation of the wiper motor.

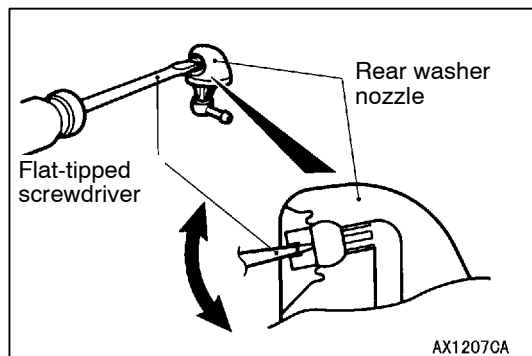
• Wiper Motor Stop Position Check

1. Operate the wiper motor by the same method as described in the check procedure above. Then, while the motor is operating, disconnect the battery to make the wiper motor stop.
2. Reconnect the battery as shown in the illustration, and then check whether the wiper motor automatically stops in the correct stop position after it has been running.



REAR WASHER MOTOR CHECK

1. The rear washer tank assembly should be installed and the rear washer tank should be filled with water when checking the washer motor.
2. Check that water is circulated strongly when system voltage is applied to terminal (2) and terminal (1) is earthed.



REAR WASHER NOZZLE SPRAY DIRECTION CHECK

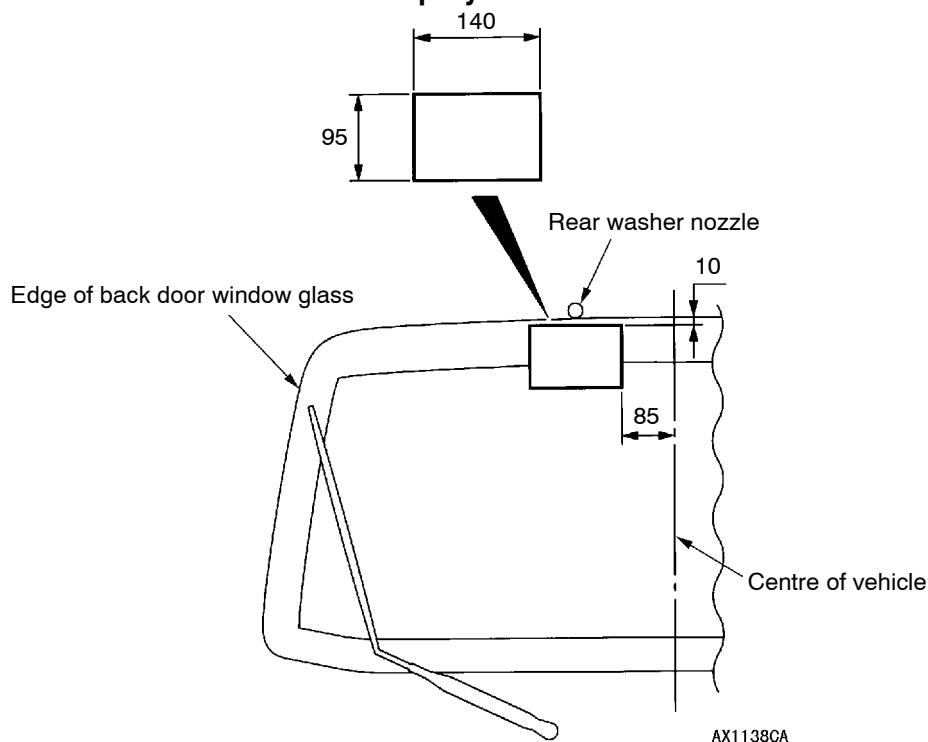
Move the nozzle to adjust so that the water is sprayed out within the range shown in the illustration.

• Rear Washer Nozzle Spray Position Vertical Direction Adjustment

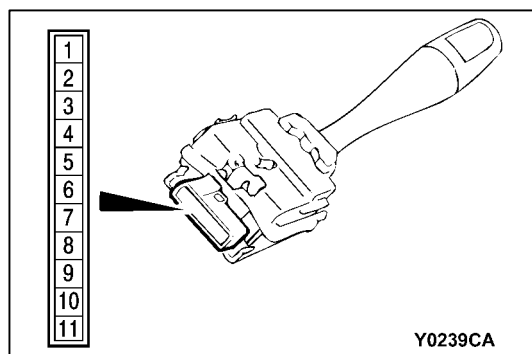
To adjust the vertical direction of the rear washer nozzle spray position, insert a flat-tipped screwdriver into the spray hole of the rear washer nozzle and move it in the direction of the arrow.

Caution

Be careful not to damage the spray hole of the nozzle when inserting the flat-tipped screwdriver. Into the spray hole of the nozzle.



Units: mm



REAR WIPER AND WASHER SWITCH CHECK

<L.H.drive vehicles>

Switch position	Terminal No.		
	4	5	6
OFF			
Rear washer switch ON		○	○
Rear wiper switch ON	○		○

<R.H.drive vehicles>

Rear wiper and washer switch is integrated in the column-ECU, and can not be checked. However, its operation can be checked by the input signal check. (Refer to GROUP 54B – Troubleshooting.)

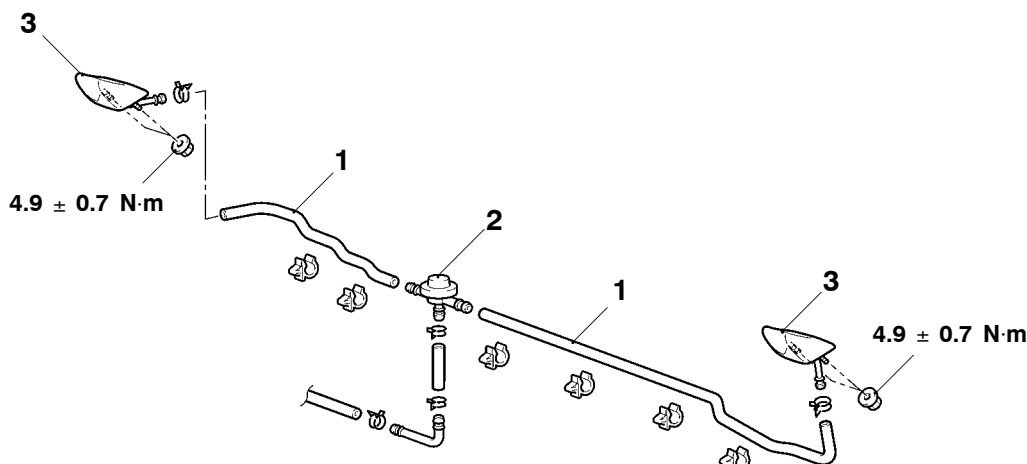
HEADLAMP WASHER

TROUBLESHOOTING

The headlamp washer is controlled by the Smart Wiring System (SWS). For troubleshooting, refer to GROUP 54B - Troubleshooting.

HEADLAMP WASHER

REMOVAL AND INSTALLATION

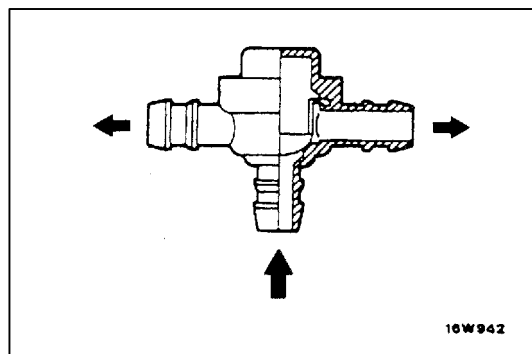


Washer nozzle and check valve removal steps

- Washer fluid draining
 - Front bumper face assembly(Refer to P.51-4.)
1. Washer hose
 2. Check valve
 3. Washer nozzle

NOTE

1. For removal and installation of the Lighting switch, refer to GROUP 54A - Column switch.
2. For removal and installation of the washer tank, refer to P.51-24.

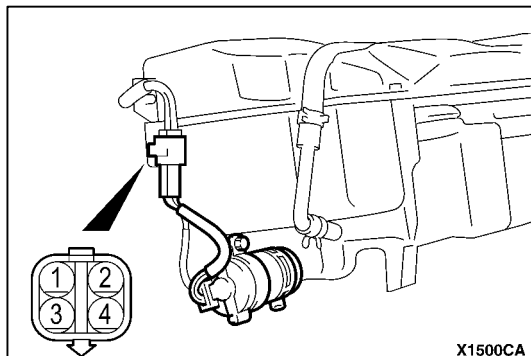


INSPECTION

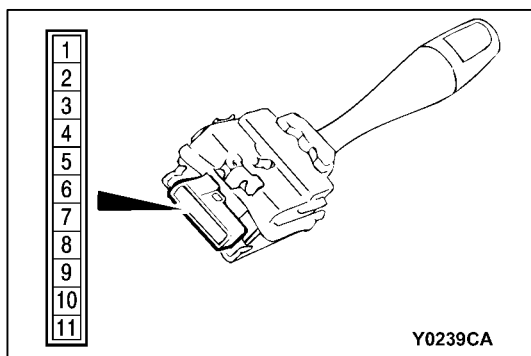
CHECK VALVE CHECK

Apply pressure to the inlet of the check valve to check its opening pressure.

Opening pressure: 78 kPa

**HEADLAMP WASHER MOTOR CHECK**

1. With the headlamp washer motor installed to the washer tank, fill the washer tank with water.
2. Check that the water squirts out strongly when battery voltage is applied to terminals (1) and (2).

**HEADLAMP WASHER SWITCH CHECK****<R.H.drive vehicles>**

Switch position	Terminal No.	
	3	4
OFF		
Headlamp washer switch ON		

<L.H.drive vehicles>

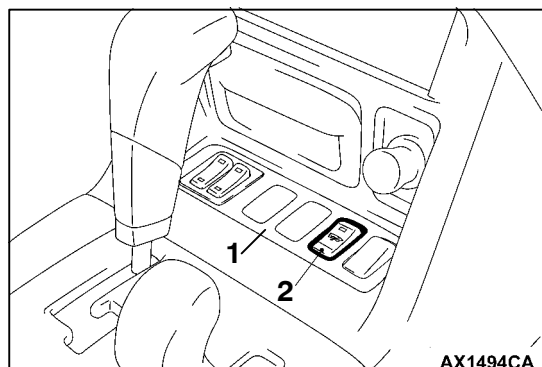
Headlamp washer switch is integrated in the column-ECU, and can not be checked. However, its operation can be checked by the input signal check. (Refer to GROUP 54B – Troubleshooting.)

WIPER DEICER**SPECIAL TOOL**

Tools	No.	Name	Application
 B990784	MB990784	Ornament remover	Wiper deicer switch removal

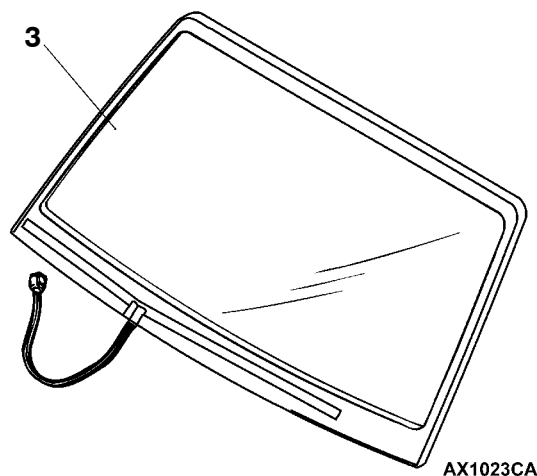
WIPER DEICER

REMOVAL AND INSTALLATION



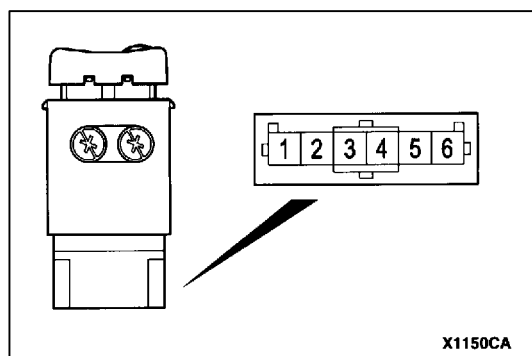
Wiper deicer switch removal steps

1. Switch panel (Refer to GROUP 52A - Instrument Panel.)
2. Wiper deicer switch



Windshield Removal

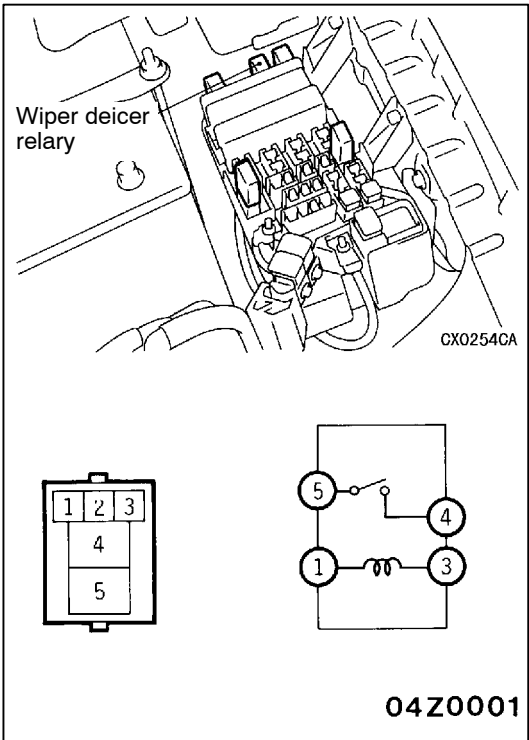
3. Windshield (Refer to GROUP 42.)



INSPECTION

WIPER DEICER SWITCH CONTINUITY CHECK

Switch position	Terminal No.							
	1	-	2	3	4	5	-	6
OFF							ILL	
ON		IND						



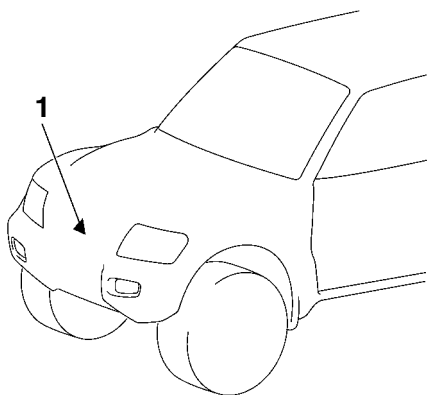
WIPER DEICER RELAY CHECK

System voltage	Terminal No.			
	1	3	4	5
When current is not flowing	○	○		
When current is flowing	⊖	⊕	○	○

MARKS

MARKS

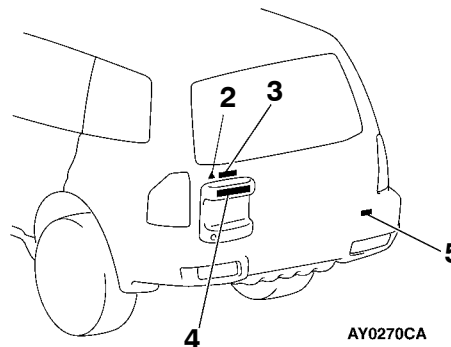
REMOVAL AND INSTALLATION



AY0269CA



1. Three diamond mark
2. Three diamond mark
3. GDI or DI-D mark



AY0270CA



4. Vehicle logo plate
5. GLS or GLX mark

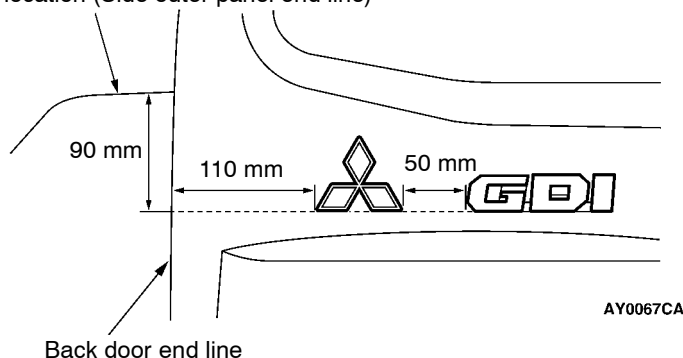
INSTALLATION SERVICE POINT

MARK INSTALLATION

1. INSTALLATION POSITION

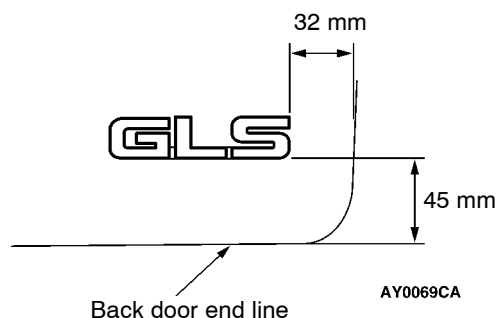
(2) Tree diamond mark (3) GDI or DI-D mark

Combination lamp installation location (Side outer panel end line)



AY0067CA

(5) GLS mark or GLX mark



AY0069CA

2. INSTALLATION SERVICE POINTS

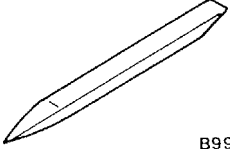
- (1) Clean the mark attachment location on the vehicle body with unleaded petrol.
- (2) Peel off the protective paper from the reverse surface of the mark, and then attach the mark to the attachment location.
- (3) Remove the application tape.

Caution

- 1) Carry out this work in a location which has an ambient temperature of 20 - 38°C and which is free from dust.
- 2) If the ambient temperature is lower than 20°C, heat the mark and the vehicle body (application location) to 20 - 30°C.

OUTSIDE DOOR MIRROR

SPECIAL TOOL

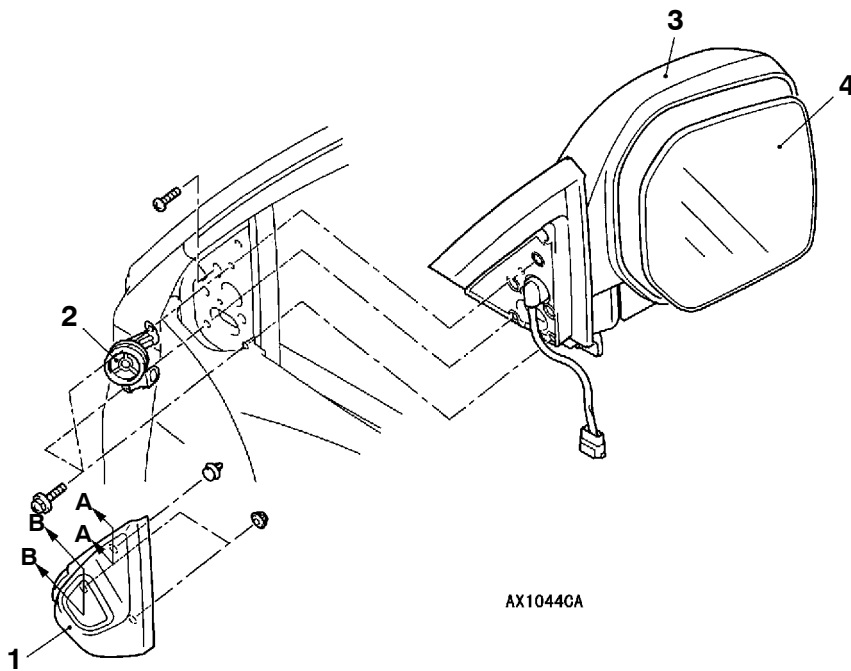
Tools	No.	Name	Application
 B990784	MB990784	Ornament remover	Motor-driven remote controlled door mirror switch removal

TROUBLESHOOTING

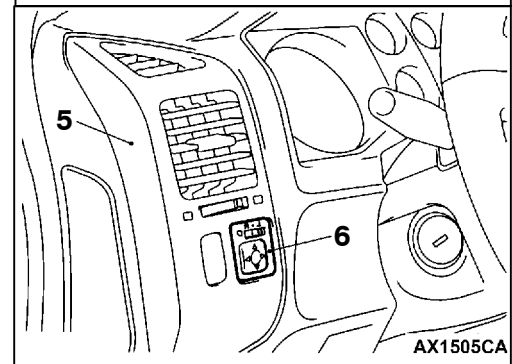
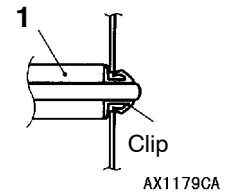
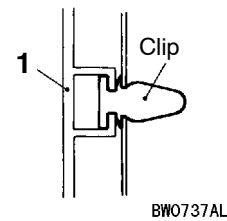
The outside mirrors are controlled by the SWS (Smart Wiring System). For troubleshooting procedures, refer to GROUP 54B - SWS Diagnosis.

OUTSIDE DOOR MIRROR

REMOVAL AND INSTALLATION



Section A – A Section B – B



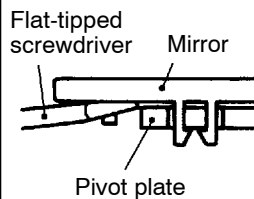
Door mirror removal steps

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

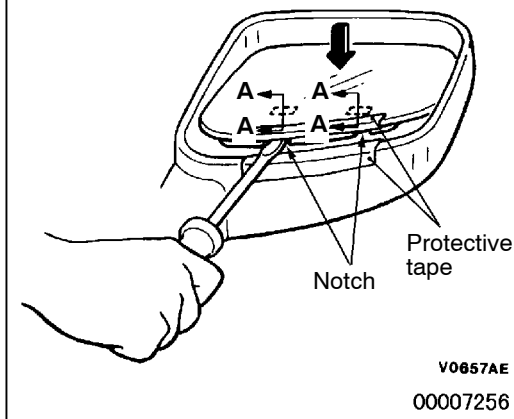
Motor-driven remote controlled mirror switch removal steps

5. Air outlet assembly (Refer to GROUP 52A - Instrument Panel.)
6. Motor-driven remote controlled mirror switch

Section A – A



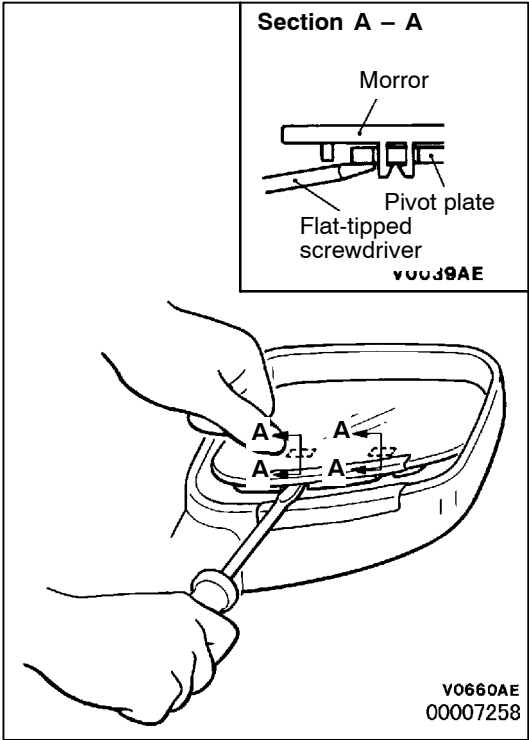
V0037AE



REMOVAL SERVICE POINT

◀A▶ MIRROR REMOVAL

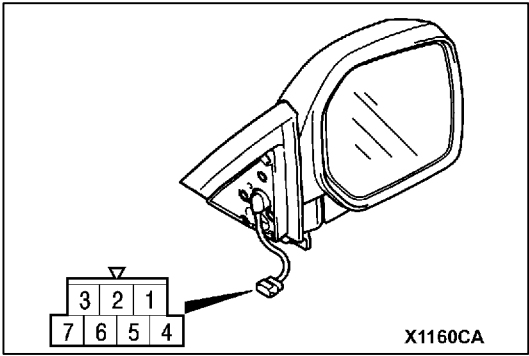
Push the top of the mirror with your hand to tilt it and attach the protective tape as shown in the illustration. Then insert a flat-tipped screwdriver in between the notch at the rear of the mirror and the pivot plate, and disengage the bottom of the mirror.



INSTALLATION SERVICE POINT

►A◄ MIRROR INSTALLATION

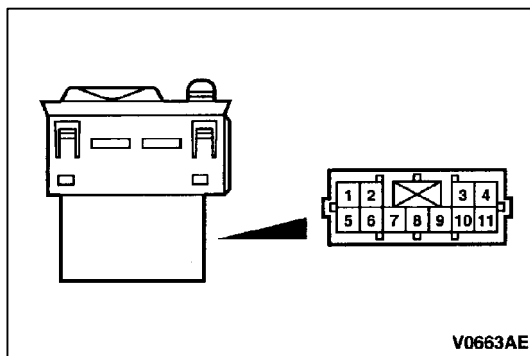
While supporting the clip position on the underside of the pivot plate with a flat-tipped screwdriver, press the clip at the front of the mirror to install the bottom of the mirror.






































INSPECTION

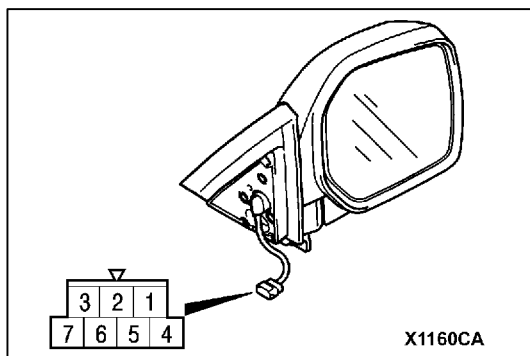
MIRROR ASSEMBLY OPERATION CHECK

Battery connection terminal					Direction of operation
3	4	5	6	7	
	⊕		⊖		UP
	⊖		⊕		DOWN
		⊖	⊕		LEFT
		⊕	⊖		RIGHT
○				○	Vehicles with heater mirror



MOTOR-DRIVEN REMOTE CONTROLLED MIRROR SWITCH CONTINUITY CHECK

Switch	Switch position	Terminal No.											5	8
		Left side					Right side							
		1	6	9	10	11	1	2	3	6	9			
Mirror adjust- ment switch	Up													
	Down													
	Left													
	Right													
Illumination														



THERMAL PRINTED WIRE FUNCTION CHECK

For vehicles with thermal printed wires, check that there is continuity between terminals (3) and (7).


Service Bulletins

Click on the applicable bookmark to select the Service Bulletin.



SERVICE BULLETIN

QUALITY INFORMATION ANALYSIS
OVERSEAS SERVICE DEPT. MITSUBISHI MOTORS CORPORATION

SERVICE BULLETIN		No.: MSB-00E51-001	
		Date: 2001-06-03	<Model> (EC)PAJERO/ MONTERO(V60, 70)
Subject: CHANGE IN REMOVAL AND INSTALLATION OF SIDE STEP		<M/Y> 01-10	
Group: EXTERIOR	Draft No.: 00SY090514		
INFORMATION	INTERNATIONAL CAR ADMINISTRATION OFFICE	 T.MASAKI-MANAGER TECHNICAL SERVICE PLANNING	

1. Description:

The mounting bolts, nuts, and tightening torque values of the side step assembly have been changed.

2. Applicable Manuals:

Manual	Pub. No.	Language	Page(s)
2001 PAJERO Workshop Manual Chassis	PWJE0001(2/2)	(English)	51-22
2001 MONTERO Workshop Manual Chassis	PWJS0002(2/2)	(Spanish)	
2001 PAJERO/MONTERO Workshop Manual Chassis CD-ROM	PWJT0008R	(English)	
	PWJT0008R	(Spanish)	
	PWJT0008R	(French)	
	PWJT0008R	(German)	

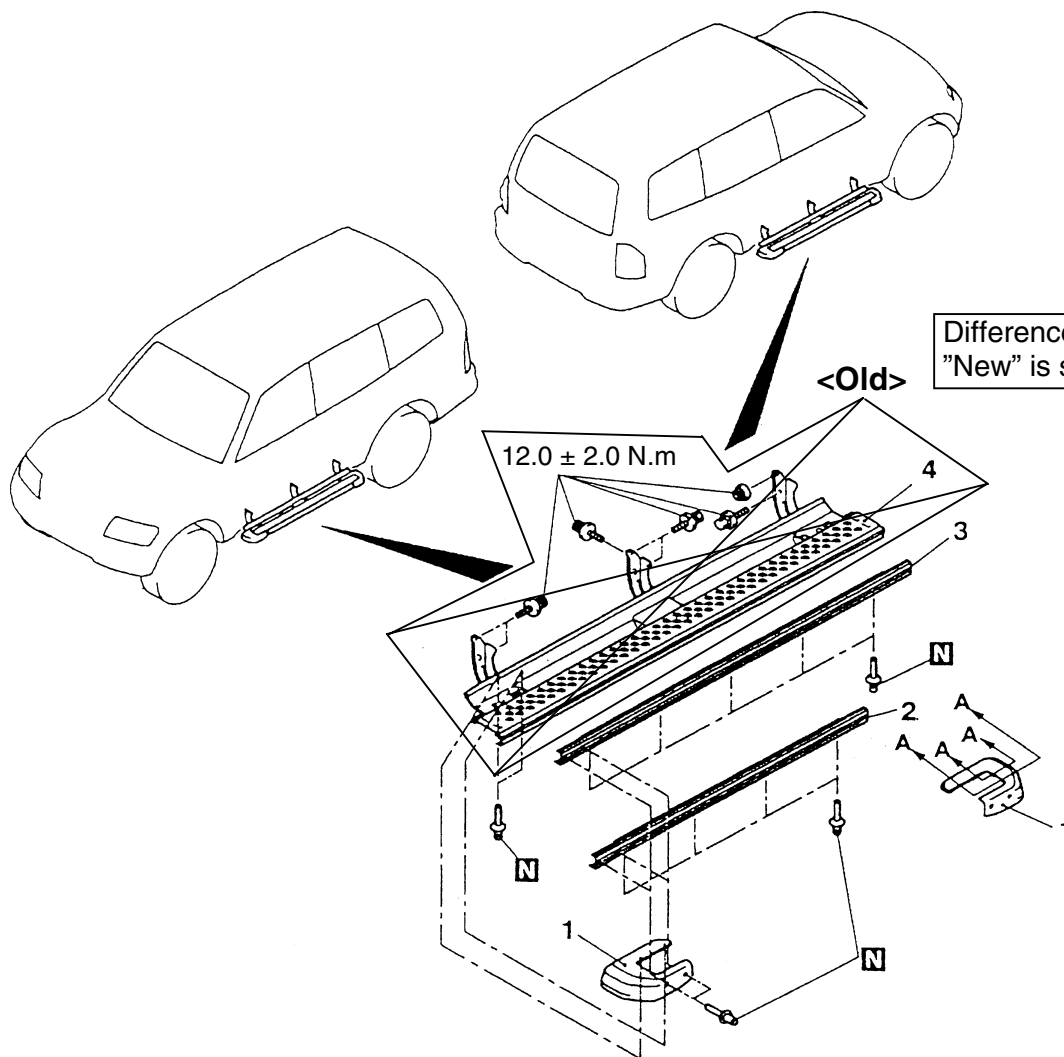
3. Effective date:

From August 2, 2000

SIDE STEP

SIDE STEP

REMOVAL AND INSTALLATION



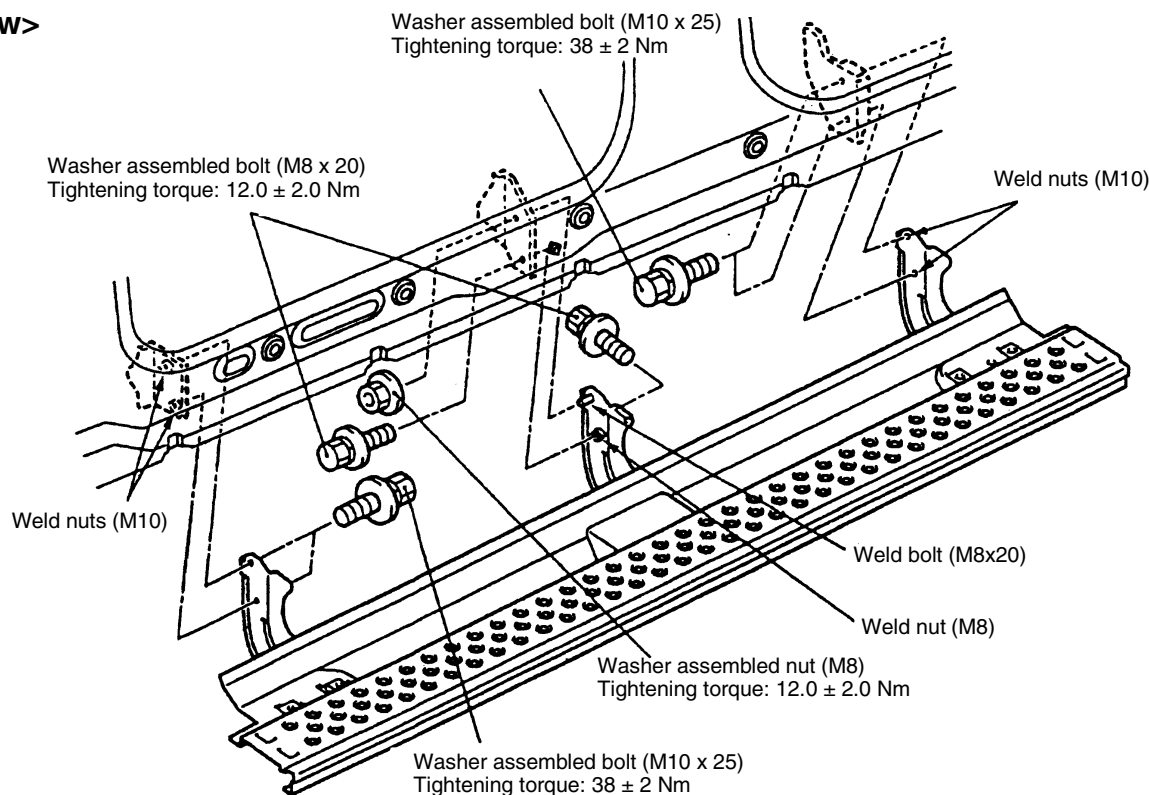
AX0776CA

Side step removal steps

- ◀A▶▶A◀ 1. Side step cover
◀A▶▶A◀ 2. Non-slip cover <Short wheelbase>

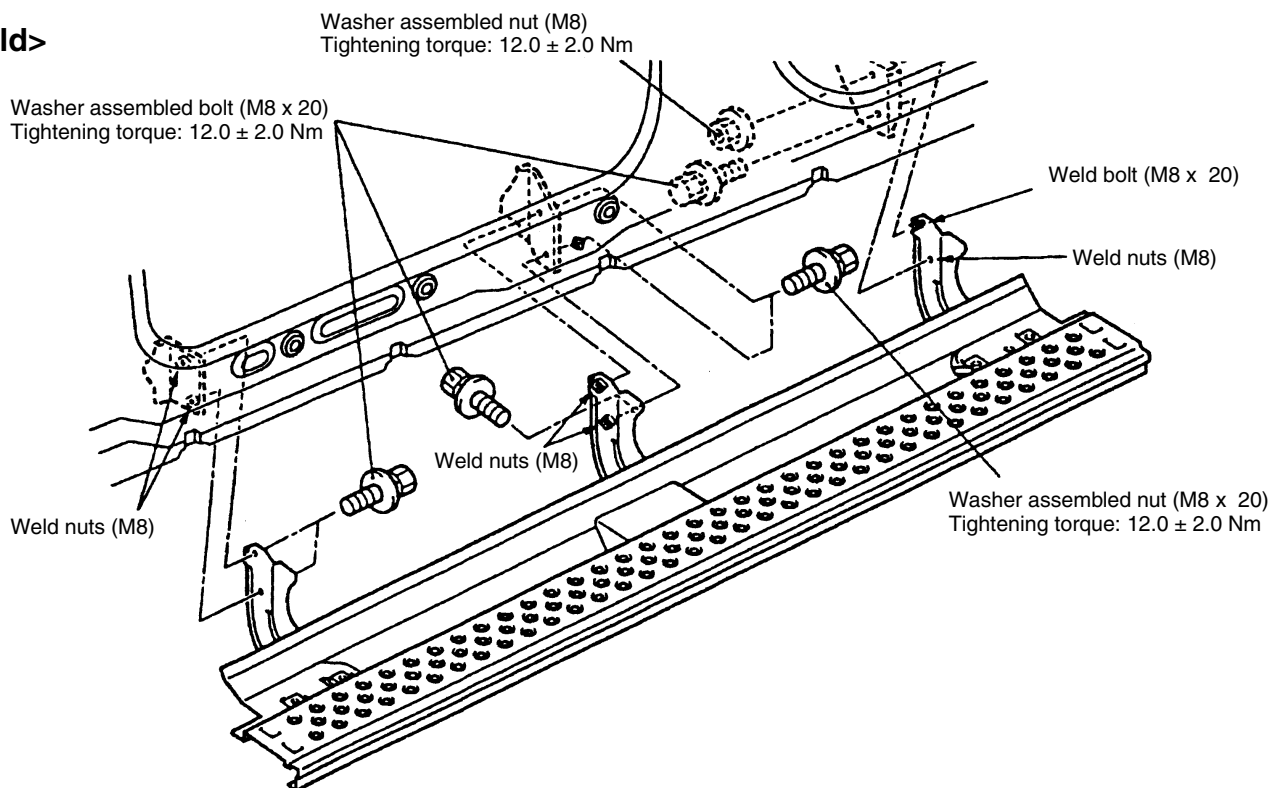
- ◀A▶▶A◀ 3. Non-slip cover <Long wheelbase>
4. Side step assembly

<New>



AY0456CA

<Old>



AY0455CA

GROUP 51

EXTERIOR

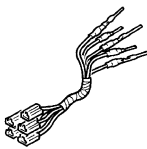
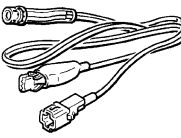
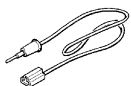

GENERAL

OUTLINE OF CHANGES

Service procedure has been added as electric-retractable mirrors and the mirror control unit have been added.

OUTSIDE MIRROR

SPECIAL TOOLS

Tool	Number	Name	Use
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	For checking voltage (continuity and value) at harnesses and connectors A: For checking connector pin contact voltage B: For checking power supply circuits C: For checking power supply circuits D: For connection to commercially available testers

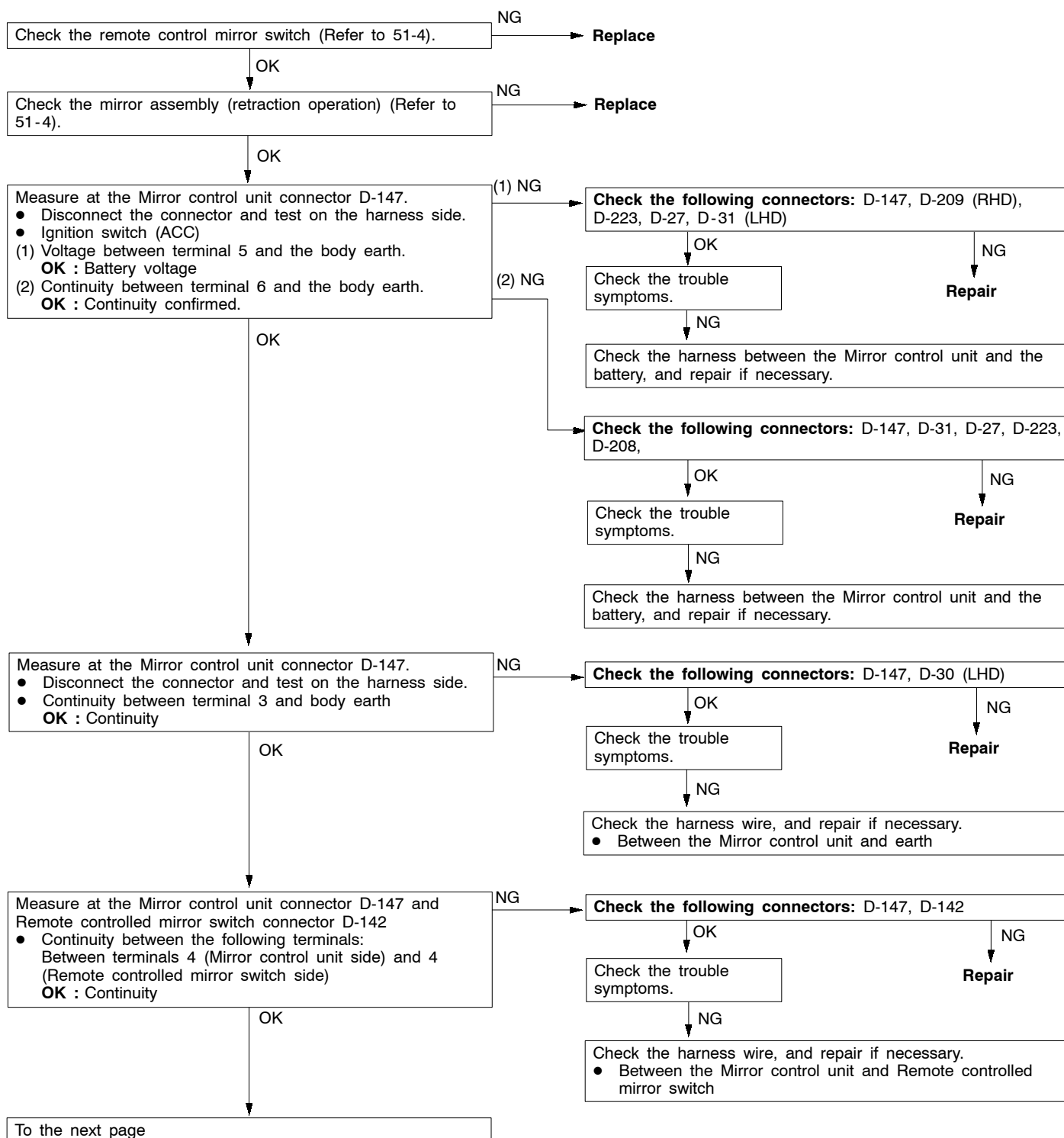
TROUBLESHOOTING

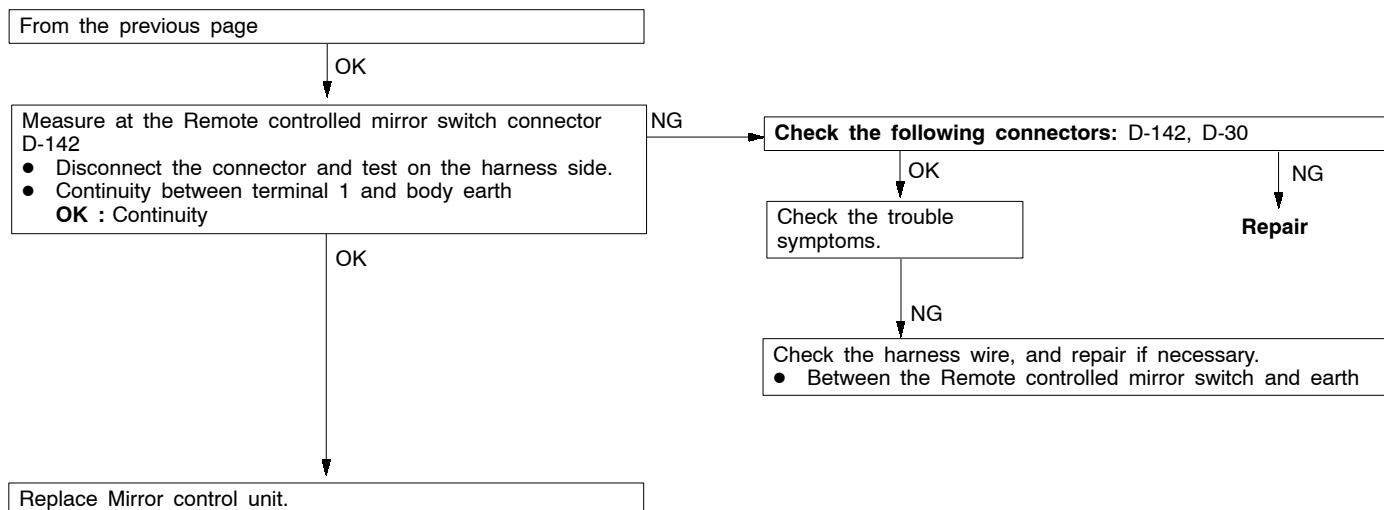
TROUBLE SYMPTOM CHART

Trouble symptom	Inspection procedure	Reference page
Both of the electric retractable door mirrors do not work at all.	1	51-2
Either of the electric retractable mirrors does not work.	2	51-3

Inspection Procedure 1

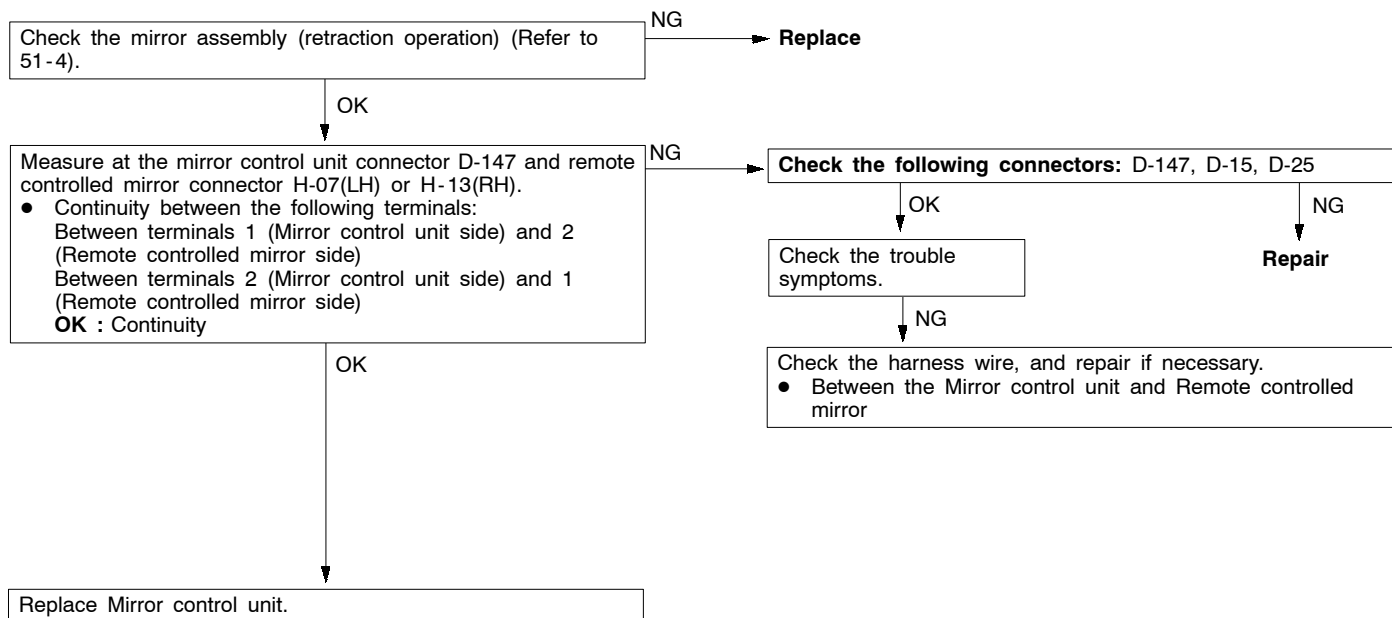
Both of the electric retractable mirrors do not work at all.	Probable cause
<p>The Mirror control unit controls the electric retractable mirror based on input signals from the following switches.</p> <ul style="list-style-type: none"> • Ignition switch (ACC) • Remote control mirror switch (for retracting and returning the mirror) <p>If the electric retractable mirror does not operate normally, one of the above input circuit systems, the mirror assembly, or the Mirror control unit may be defective.</p>	<ul style="list-style-type: none"> • Remote control mirror switch fault • Mirror assembly fault • Mirror control unit fault • Harness or connector fault

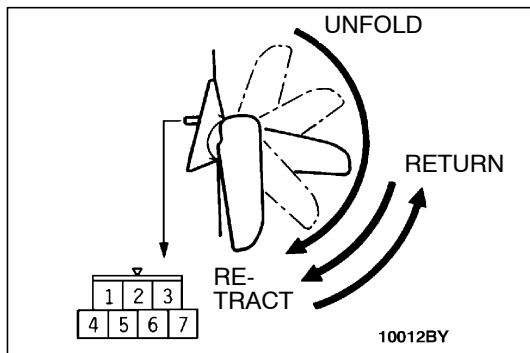




Inspection Procedure 2

Either of the electric retractable mirrors does not work.	Probable cause
<p>The Mirror control unit controls the electric retractable mirror based on input signals from the following switches.</p> <ul style="list-style-type: none"> • Ignition switch (ACC) • Remote control mirror switch (for retracting and returning the mirror) <p>If the electric retractable mirror does not operate normally, one of the above input circuit systems, the mirror assembly, or the Mirror control unit may be defective.</p>	<ul style="list-style-type: none"> • Mirror assembly fault • Mirror control unit fault • Harness or connector fault

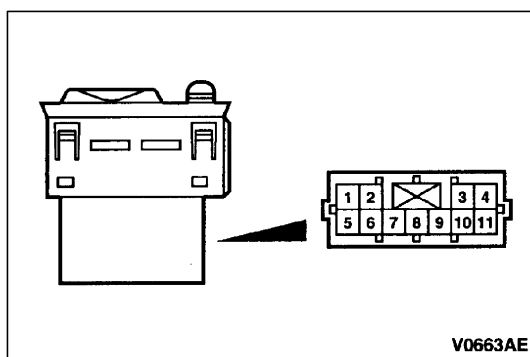



























INSPECTION

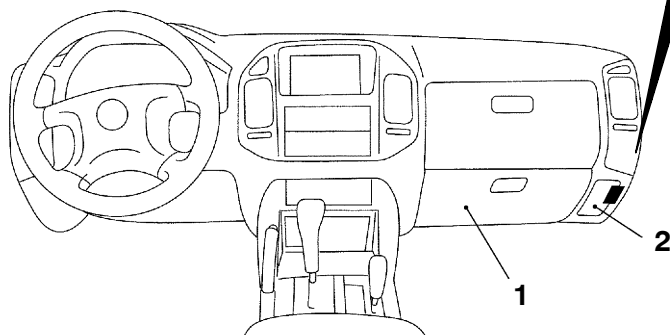
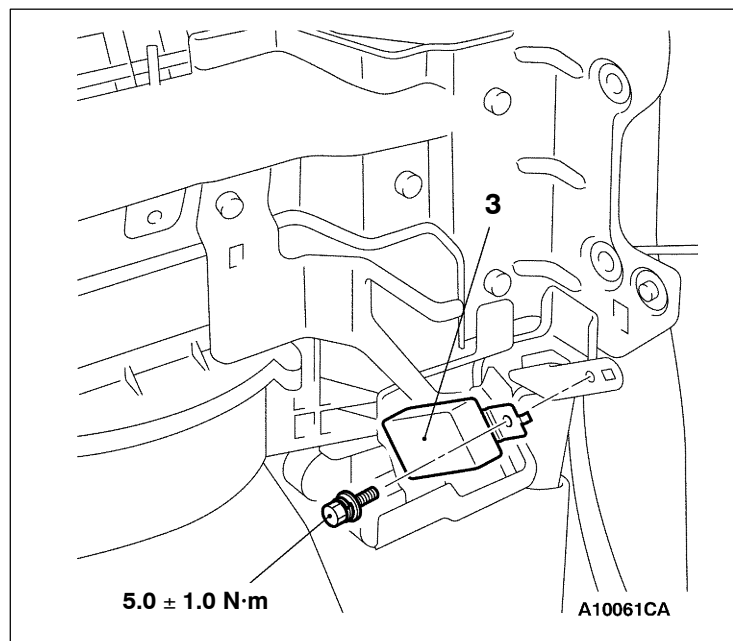
MIRROR ASSEMBLY OPERATION CHECK

Battery connection terminal					Direction of operation
1	2	3	4	5	
		⊕		⊖	UP
		⊖		⊕	DOWN
			⊖	⊕	LEFT
			⊕	⊖	RIGHT
⊕	⊖				RETURN or UNFOLD position to RETRACT position
⊖	⊕				RETRACT position to RETURN position



MOTOR-DRIVEN REMOTE CONTROLLED MIRROR SWITCH CONTINUITY CHECK

Switch	Switch position	Terminal No.										1	4
		Left side					Right side						
		1	6	9	10	11	1	2	3	6	9		
Mirror adjustment switch	Up												
	Down												
	Left												
	Right												
Mirror retracting switch	Retract and return												

MIRROR CONTROL UNIT**REMOVAL AND INSTALLATION**

A10071AU

Removal steps

1. Glove box assembly
2. Corner lower panel (Passenger's side)

3. Mirror control unit