

EXTERIOR

CONTENTS

5110900036

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

WARNING!

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

NOTE

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

51-2 EXTERIOR – Service Specifications/Sealant and Adhesive/Special Tools

SERVICE SPECIFICATIONS

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Items		Standard value
Windshield wiper blade installation position mm	Driver's side	25±5
	Passenger's side	20±5
Rear wiper blade installation position mm		15


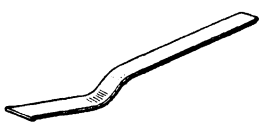
SEALANT AND ADHESIVE

51100050030

Items	Specified sealant and adhesive
Side airdam to body panel	Double-sided tape [5 mm wide and 1.2 mm thick]
Rear spoiler	Double-sided tape [10 mm wide and 1.2 mm thick]

SPECIAL TOOLS

51100060033

Tool	Number	Name	Use
	MB990784	Ornament remover	Removal of rear wiper and washer switch and door mirror control switch.
	MB990449	Window moulding remover	Removal of roof drip moulding, etc.

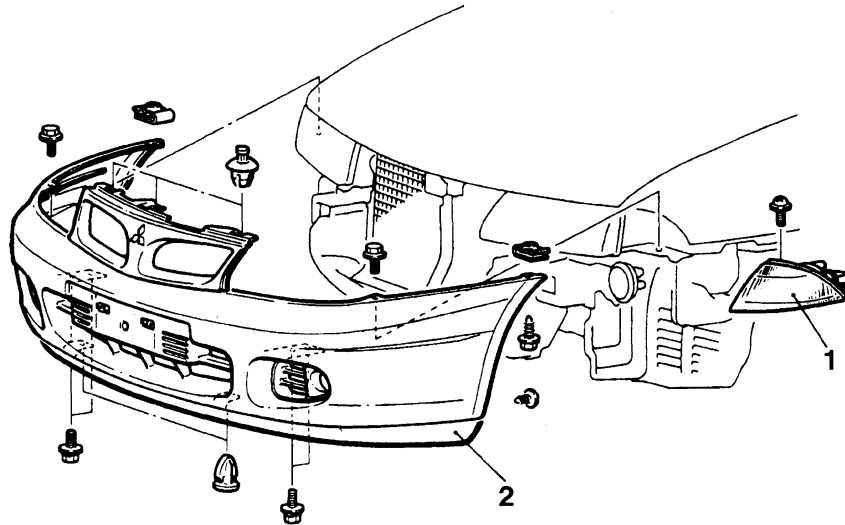
FRONT BUMPER

51100140034

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Front Under Cover Panel Removal and Installation



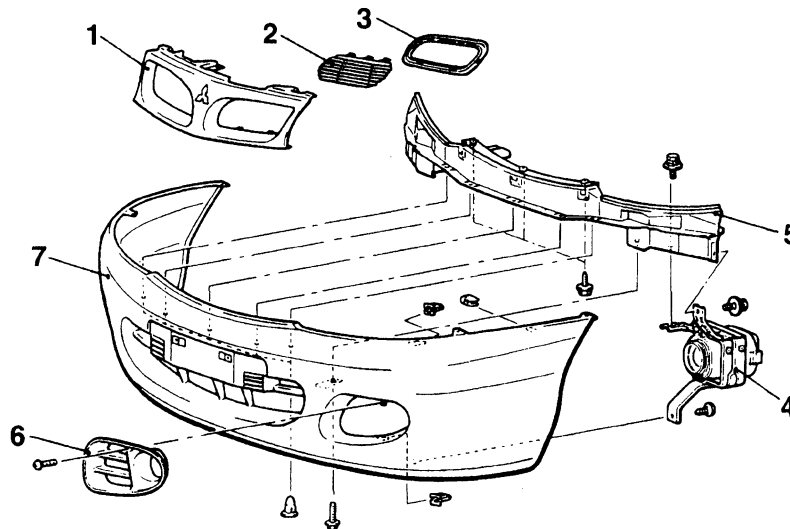
A18U0061

Removal steps

1. Front turn signal lamp
2. Bumper assembly

DISASSEMBLY AND REASSEMBLY

51100160030



A18U0001

Disassembly steps

1. Radiator grille, outer
2. Radiator grille, inner
3. Radiator grille cover
4. Front fog lamp
5. Bumper reinforcement
6. Fog lamp cover
7. Bumper face

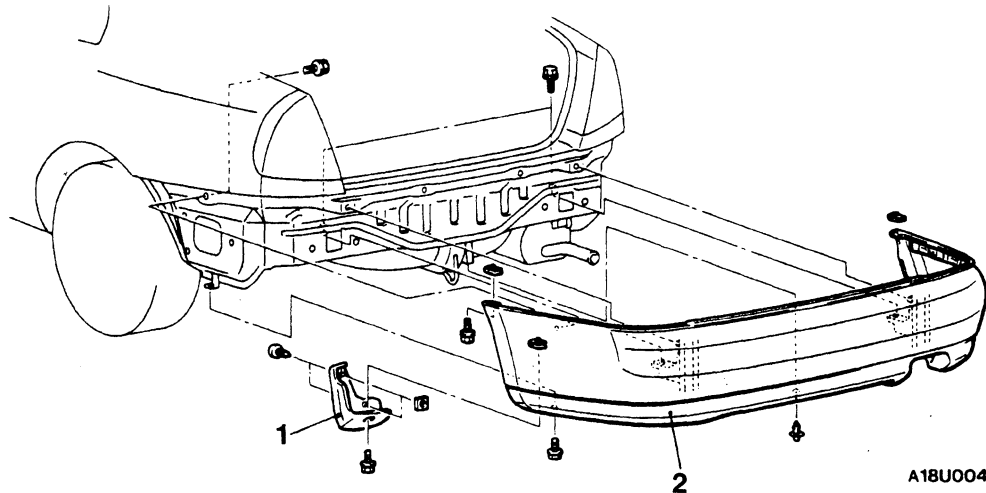
REAR BUMPER

51100190039

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Rear End Trim Removal and Installation (Refer to GROUP 52A.)

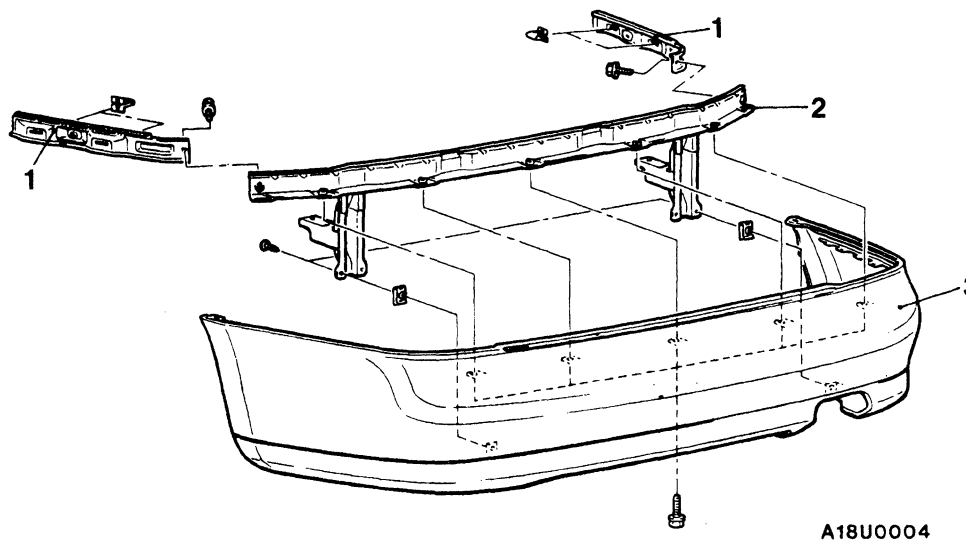


Removal steps

1. Mud guard
2. Bumper assembly

DISASSEMBLY AND REASSEMBLY

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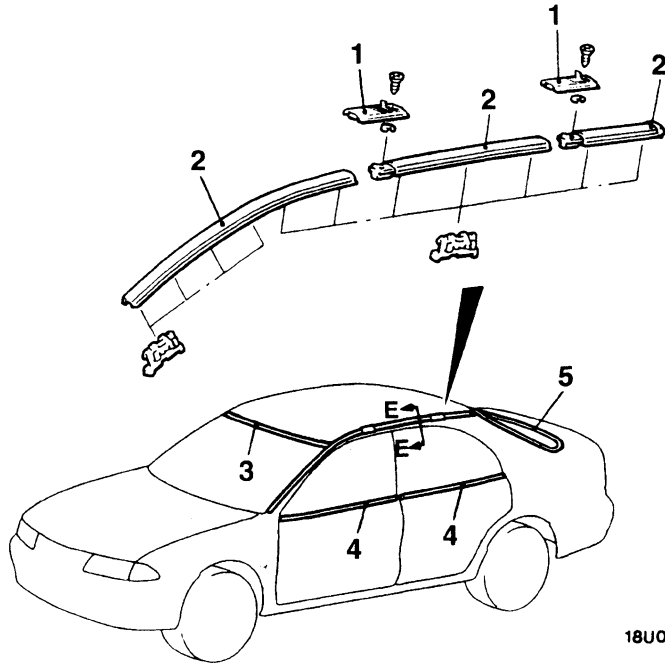
Disassembly steps

1. Side reinforcement
2. Bumper reinforcement
3. Bumper face

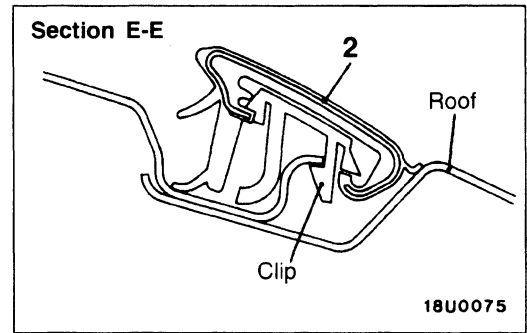
MOULDINGS

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REMOVAL AND INSTALLATION



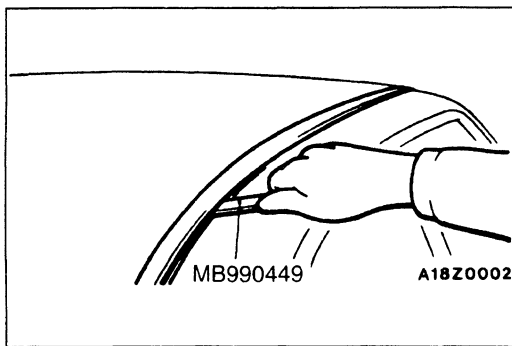
18U0044



18U0075

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- ◀A▶ ▶A◀
1. Roof carrier caps
 2. Roof drip moulding
 3. Windshield upper moulding
(Refer to GROUP 42 – Windshield.)
 4. Belt line moulding
(Refer to GROUP 42.)
 5. Tailgate moulding
(Refer to GROUP 42 – Tailgate Window Glass.)



MB990449

A18Z0002

REMOVAL SERVICE POINT

◀A▶ **ROOF DRIP MOULDING REMOVAL**

Use the special tool to lever out the moulding.

Caution

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

INSTALLATION SERVICE POINT

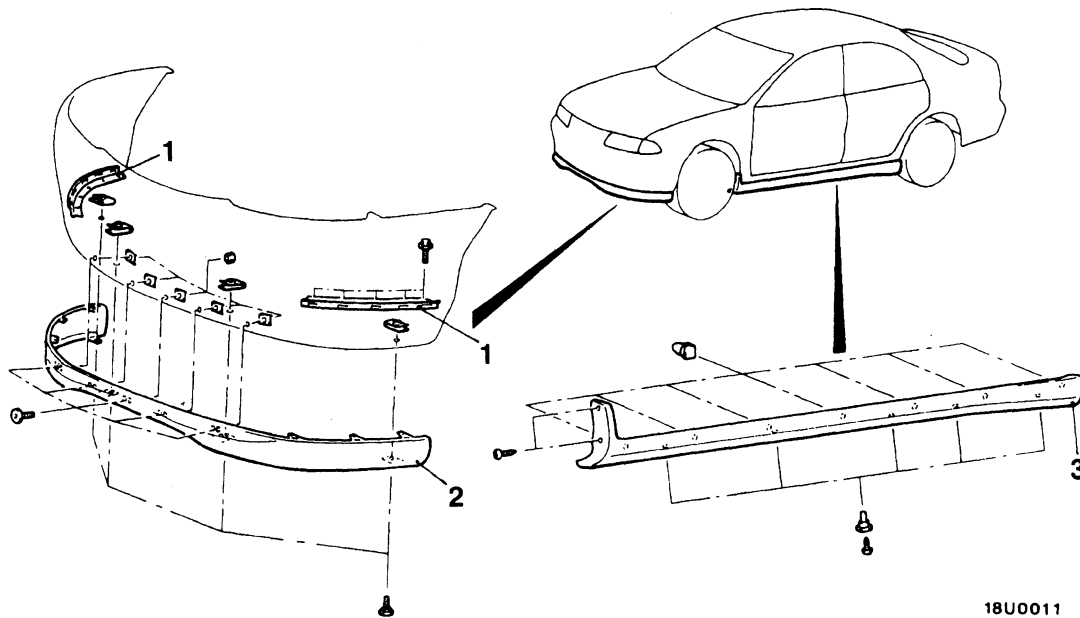
▶A◀ **ROOF DRIP MOULDING INSTALLATION**

- (1) Install the clips to the clip installation bosses on the roof.
- (2) Install the roof moulding with the clips.

AERO PARTS

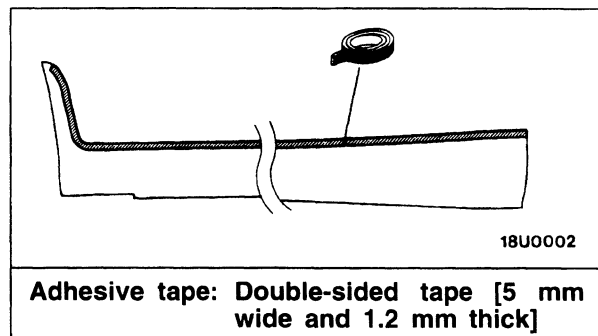
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REMOVAL AND INSTALLATION



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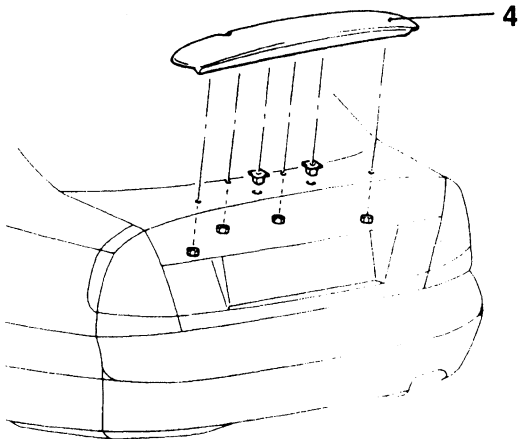


Airdam panel removal steps

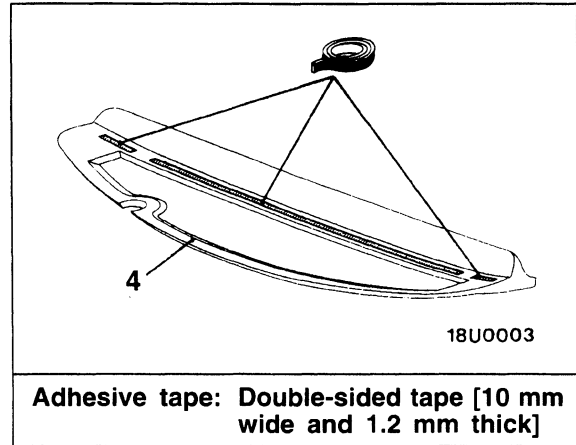
- Front under cover panel
- 1. Airdam side plate
- 2. Airdam skirt panel

Side airdam removal

- ◀A▶ ▶A◀ 3. Side airdam



18U0010
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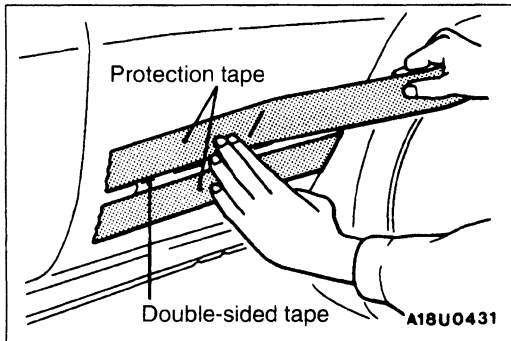


18U0003

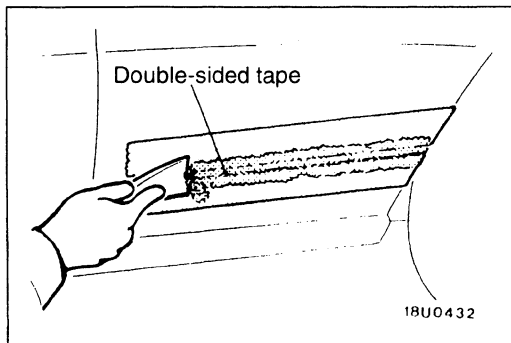
Adhesive tape: Double-sided tape [10 mm wide and 1.2 mm thick]

Rear spoiler removal steps

- Tailgate lower trim (Refer to GROUP 52A.)
- 4. Rear spoiler



A18U0431

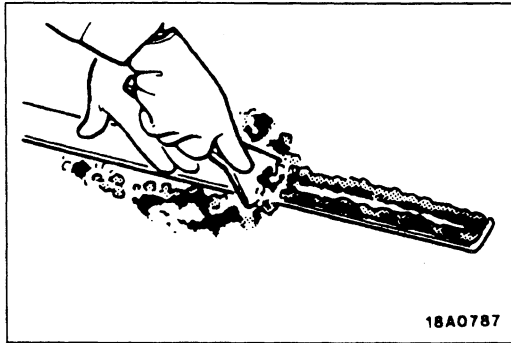


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REMOVAL SERVICE POINT

◀A▶ SIDE AIRDAM/REAR SPOILER 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.



INSTALLATION SERVICE POINTS

▶A◀SIDE AIRDAM/REAR SPOILER INSTALLATION

Double-sided tape affixing to the side airdam or rear spoiler (when reusing)

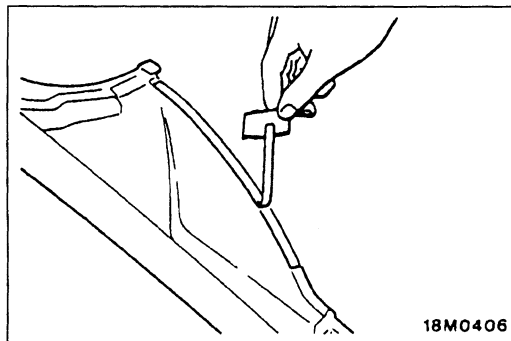
(1) Scrape off the double-sided tape with a resin spatula or gasket scraper.

(2) Wipe the side airdam or rear spoiler adhesion surface and clean it with a rag moistened with isopropyl alcohol.

(3) Affix specified pressure sensitive double-sided tape to the side airdam or rear spoiler.

Specified adhesive tape:

Double-sided tape [5 mm wide and 1.2 mm thick]



(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.

(5) Install the side airdam or rear spoiler.

NOTE

If it is hard to affix the pressure sensitive double-sided tape in winter, heat the application surface of the body and the adhesive surface of the side airdam or rear spoiler before affixing the tape.

Body 40–60°C

Side airdam or rear spoiler 20–30°C

Apply pressure fully to the side airdam or rear spoiler.

WINDSHIELD WIPER AND WASHER

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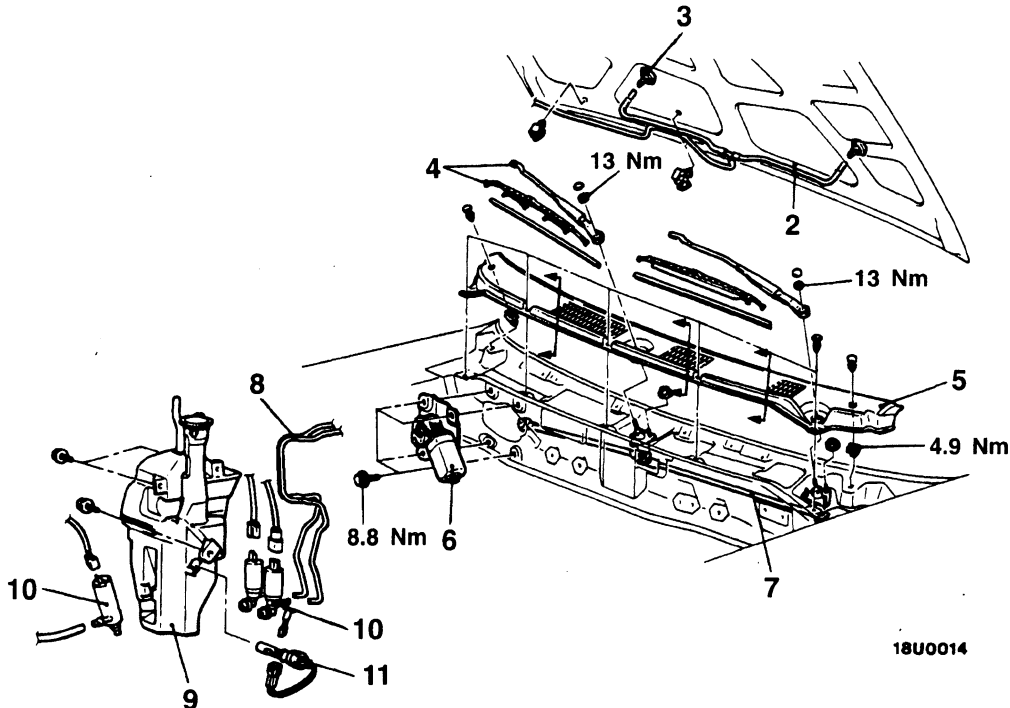
REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

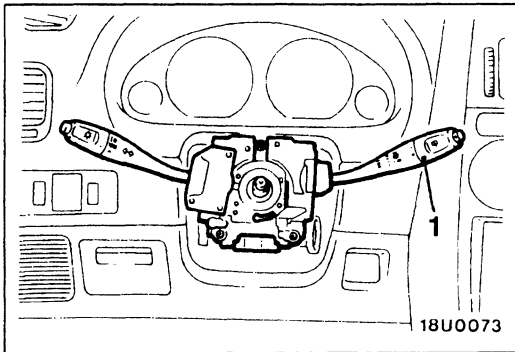
- Relay Box Removal and Installation
<R.H. drive vehicles>

CAUTION: SRS

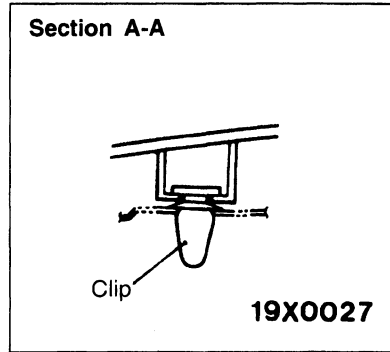
Before removal of air bag module and clock spring, refer to GROUP 52B – SRS Service Precautions and Air Bag Module and Clock Spring.



18U0014



18U0073



19X0027

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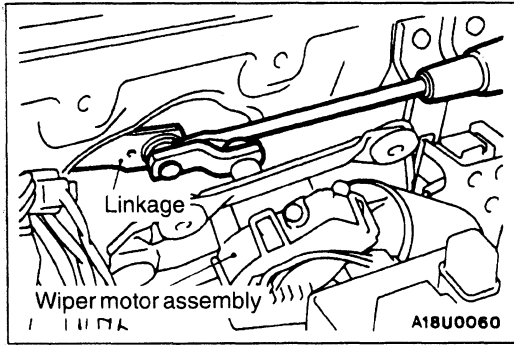
1. Column switch assembly (with built-in wiper and washer switch, and wiper relay) (Refer to GROUP 37A – Steering wheel and shaft.)
2. Washer hose
3. Washer nozzle

Washer tank removal steps

- Draining of washer fluid
- Front bumper (Refer to P.51-3.)
- 8. Washer hose
- 9. Washer tank
- 10. Washer motor
- 11. Washer fluid level switch

Wiper motor and linkage removal steps

- ▶◀ A ▶◀ 4. Wiper arm and blade assembly
- 5. Front deck garnish
- ◀◀ A ▶◀ 6. Wiper motor
- 7. Linkage



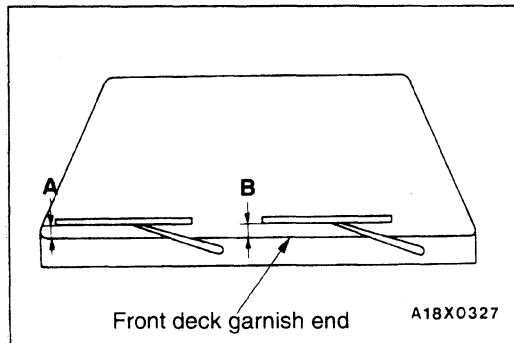
REMOVAL SERVICE POINT

◀A▶ WIPER MOTOR REMOVAL

Loosen the wiper motor assembly mounting bolts, and then remove the wiper motor assembly. Disconnect the linkage and the motor assembly, and then remove the linkage.

Caution

Because the installation angle of the crank arm and the motor has been set, do not remove them unless it is necessary to do so. If they must be removed, remove them only after marking their mounting positions.



INSTALLATION SERVICE POINT

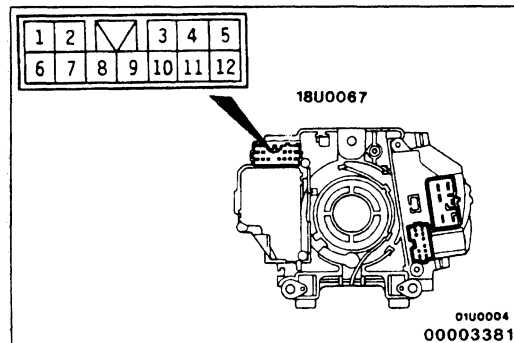
▶A◀ WIPER ARM AND BLADE ASSEMBLY INSTALLATION

- (1) The movements of the left and right wiper arms are different, so check the identification marks.
- (2) Install the wiper blade in the specified position (standard value) as shown in the illustration.

Standard value:

Passenger's side (A): 20±5 mm

Driver's side (B): 25±5 mm



INSPECTION

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COLUMN SWITCH CHECK

Wiper and Washer Switch

Switch position		Terminal No.				
		6	7	8	9	10
Wiper switch	OFF		○—○			
	INT		○—○			
	1 (LO)			○—○		
	2 (HI)				○—○	
Washer switch	ON	○—○				

Intermittent Wiper Relay (Intermittent Operation Inspection)

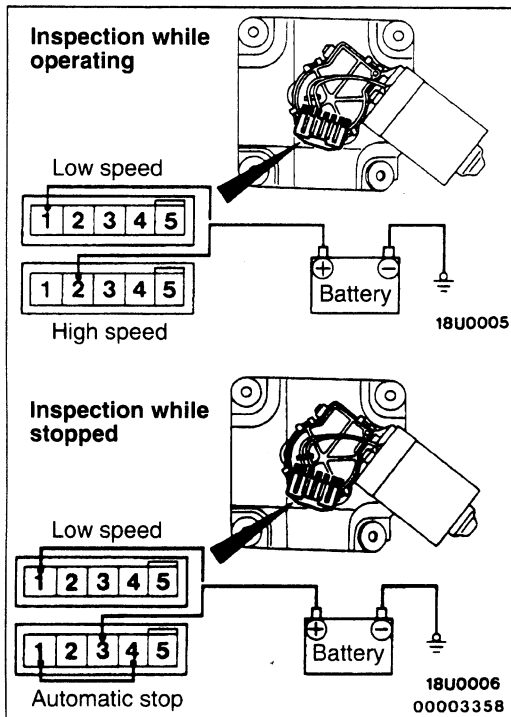
- (1) Connect the column switch connector.
- (2) Turn the ignition switch to ACC.

- (3) Inspect the intermittent operation time when the wiper switch is turned to INT.

Vehicles with variable intermittent control

FAST: Approx. 3 seconds

SLOW: Approx. 12 seconds



WIPER MOTOR CHECK

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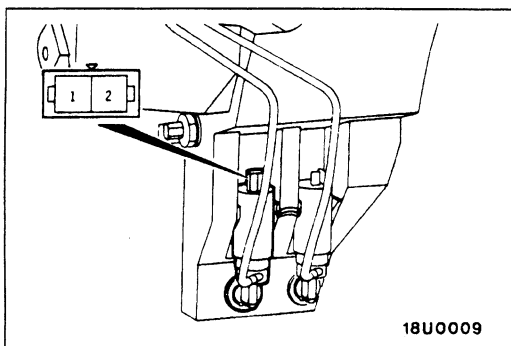
Check the wiper motor after disconnecting the wiring harness connector, and with the wiper motor remaining installed to the body.

Wiper Motor at Low Speed and High Speed Operation

Connect a battery to the wiper motor as shown in the illustration and inspect motor operation at low speed and high speed.

Wiper Motor at Stop Position Operation

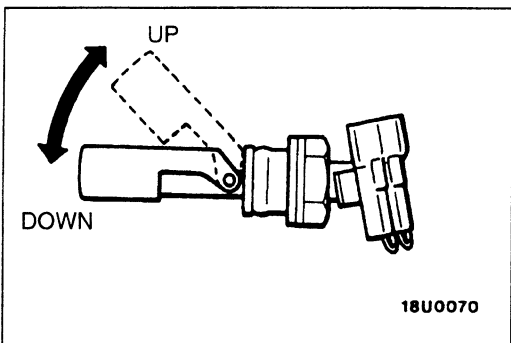
- (1) Run the wiper motor at low speed, disconnect the battery, and stop the motor.
- (2) Reconnect the battery as shown in the illustration, and confirm the after the motor starts turning at low speed, it stops at the automatic stop position.



WASHER MOTOR CHECK

51101270015

- (1) With the 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).



WASHER FLUID LEVEL SWITCH CHECK

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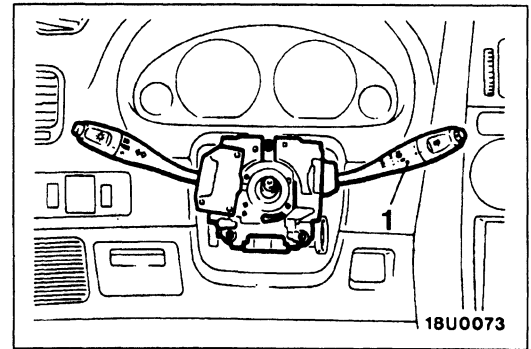
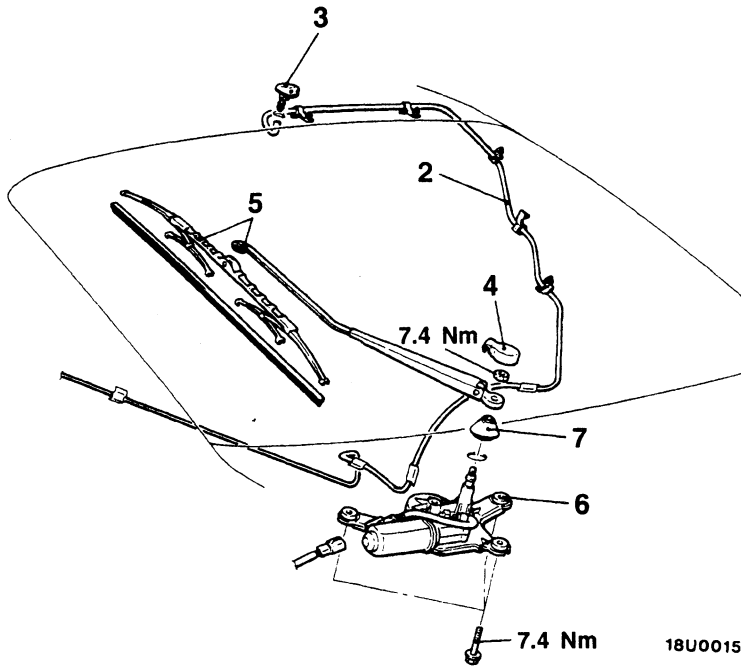
- (1) Remove the washer fluid level switch from the washer tank.
- (2) Connect a circuit tester to the connector of washer fluid level switch.
- (3) Move the float up and down.
- (4) Check to be sure that there is continuity between the terminals when the float is down.

REAR WIPER AND WASHER

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REMOVAL AND INSTALLATION

CAUTION: SRS
Before removal of air bag module and clock spring, refer to GROUP 52B – SRS Service Precautions and Air Bag Module and Clock Spring.



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18U0073

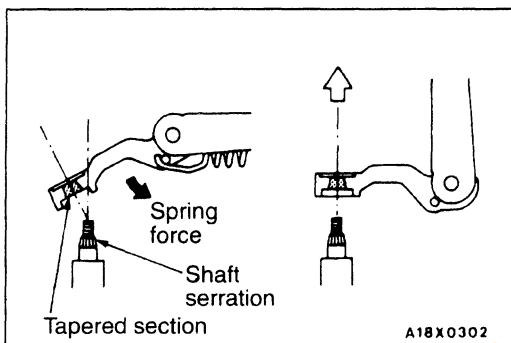
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1. Column switch assembly (with built-in rear wiper and washer switch) (Refer to GROUP 37A – Steering wheel and shaft.)
2. Washer hose
3. Washer nozzle

Wiper motor removal steps



4. Cover
5. Wiper arm and blade
6. Wiper motor
7. Grommet



A18X0302

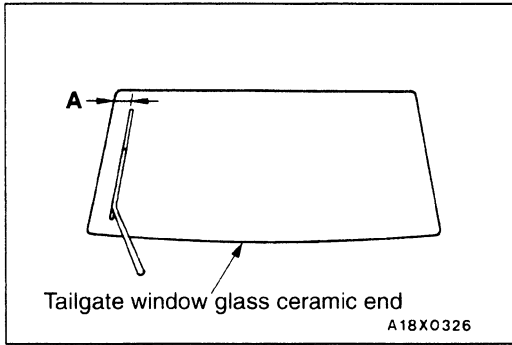
REMOVAL SERVICE POINT

◀A▶ WIPER ARM AND BLADE REMOVAL

Remove the wiper arm from the shaft while the wiper arm is raised.

Caution

If the wiper arm is forced while it is still lowered, the tapered section of the wiper arm will be scraped by the shaft serrations and the diameter of the tapered section will become too big, so sufficient care should be exercised.

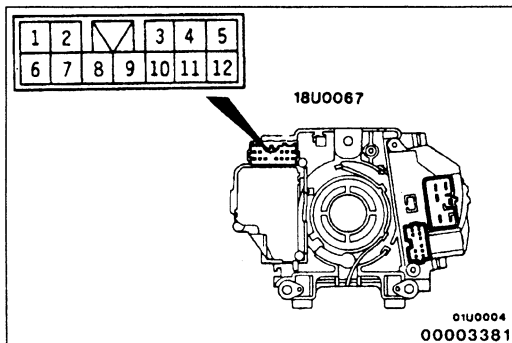


INSTALLATION SERVICE POINT

▶◀ WIPER ARM ASSEMBLY INSTALLATION

Install the wiper arm to the pivot shaft so that the wiper blade's stop position is the position (standard value) shown in the illustration.

Standard value (A): 15 mm



INSPECTION

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REAR WIPER AND WASHER SWITCH CHECK

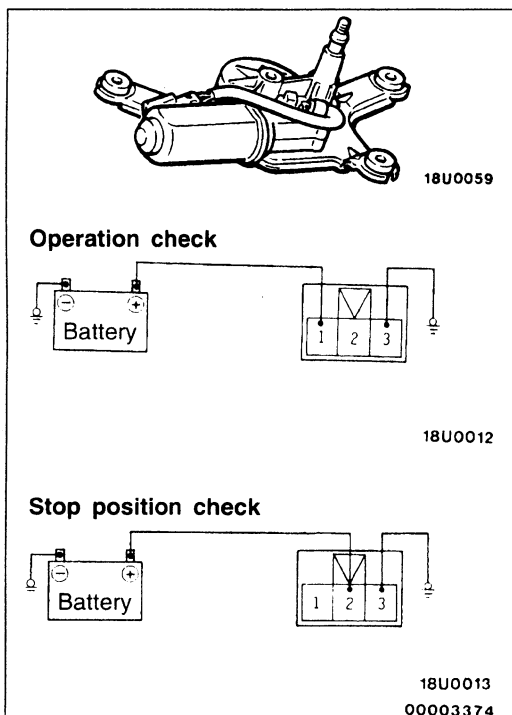
Rear Wiper and Washer Switch

<VEHICLES WITHOUT INTERMITTENT WIPER>

Switch position	Terminal No.		
	3	4	10
Wiper Switch	OFF	○ — ○	○ — ○
	ON	○ — ○	○ — ○

<VEHICLES WITH INTERMITTENT WIPER>

Switch position	Terminal No.		
	3	4	10
Wiper Switch	OFF		
	INT	○ — ○	○ — ○
	ON		○ — ○



WIPER MOTOR CHECK

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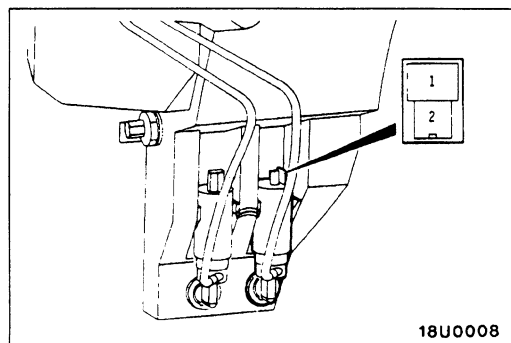
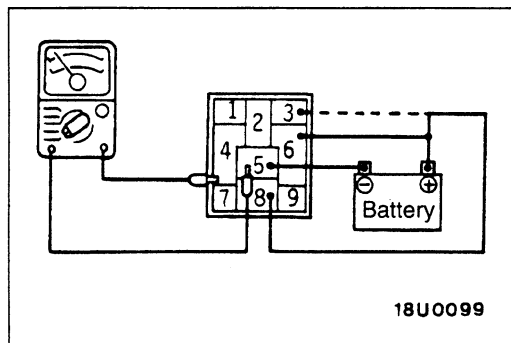
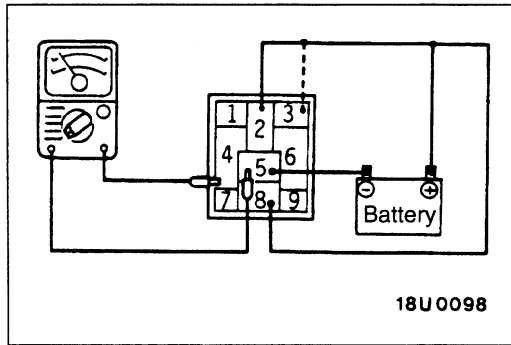
Check the wiper motor after first disconnecting the wiring harness connector, and with the wiper motor remaining installed to the body.

Wiper Motor Operation

Connect a battery to the wiper motor as shown in the illustration and inspect the motor operation.

Wiper Motor at Stop Position Operation

- (1) Run the wiper motor, disconnect the battery, and stop the motor.
- (2) Reconnect the battery as shown in the illustration, and confirm that after the motor starts turning, it stops at the automatic stop position.



INTERMITTENT WIPER RELAY CHECK 51101300011

- (1) After checking that there is continuity between terminals (4) and (5), connect a multimeter and battery as shown in the illustration.
- (2) Check that the multimeter displays battery voltage at this time.
- (3) Check that the multimeter needle moves approximately once every 10 seconds when the battery (+) terminal is disconnected from terminal (2) and connected to terminal (3).
- (4) Check that the multimeter displays battery voltage approximately one second after the battery (+) terminal is disconnected from terminal (3) and connected to terminal (6).
- (5) Check that the multimeter displays battery voltage for approximately 6 seconds and then displays 0 V after the battery (+) terminal is disconnected from terminal (6).

WASHER MOTOR CHECK 51101310014

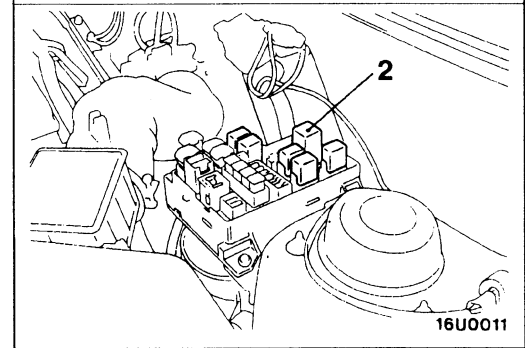
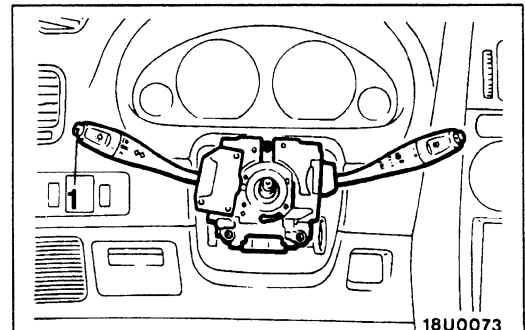
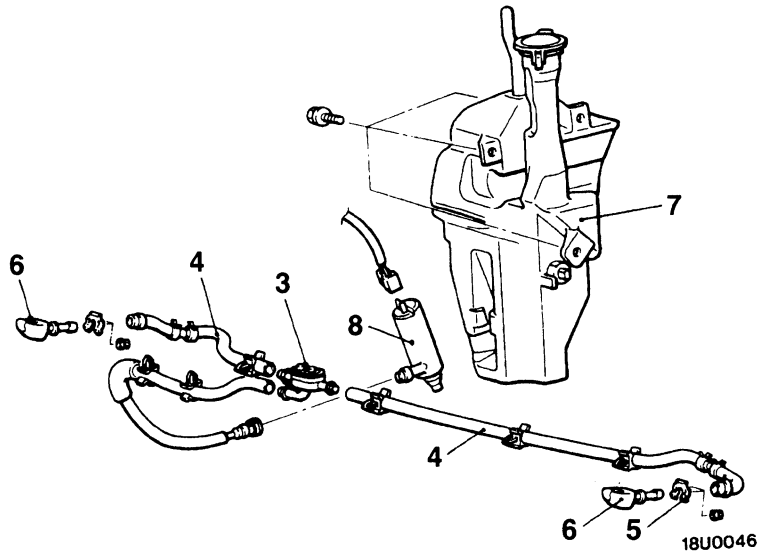
- (1) With the washer motor installed to the washer tank, fill the washer tank with water.
- (2) Check that the water squirts out strongly when battery voltage is applied to terminals (1) and (2).

HEADLAMP WASHER

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REMOVAL AND INSTALLATION

CAUTION: SRS
 Before removal of air bag module and clock spring, refer to GROUP 52B – SRS Service Precautions and Air Bag Module and Clock Spring.



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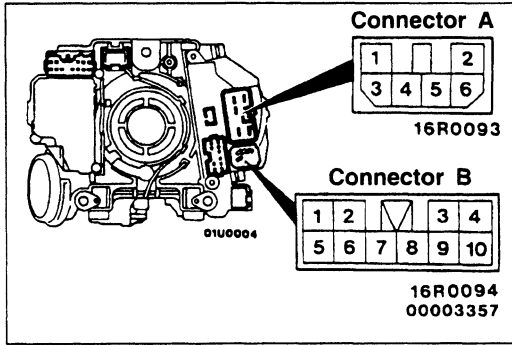
1. Column switch assembly (with built-in headlamp washer switch) (Refer to GROUP 37A – Steering Wheel and Shaft.)
2. Headlamp washer relay

Nozzle and check valve removal steps

- Draining of washer fluid
- Front bumper (Refer to P.51-3.)
- 3. Check valve
- 4. Washer hose assembly
- 5. Bracket
- 6. Nozzle

Washer tank removal steps

- Draining of washer fluid
- Front bumper (Refer to P.51-3.)
- 7. Washer tank assembly
- 8. Headlamp washer motor

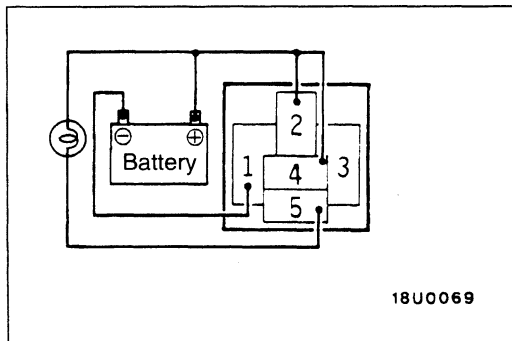


INSPECTION

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HEADLAMP WASHER SWITCH CHECK

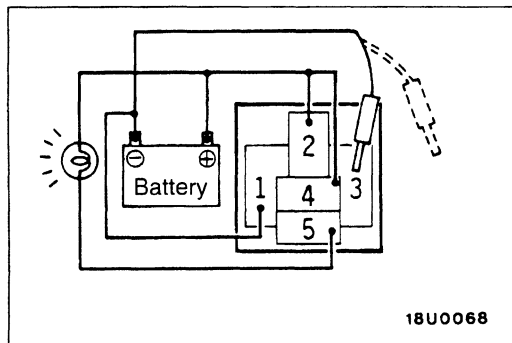
Switch position	Connector A Terminal No. 1	Connector B Terminal No. 3
Washer switch OFF		
Washer switch ON	○	○



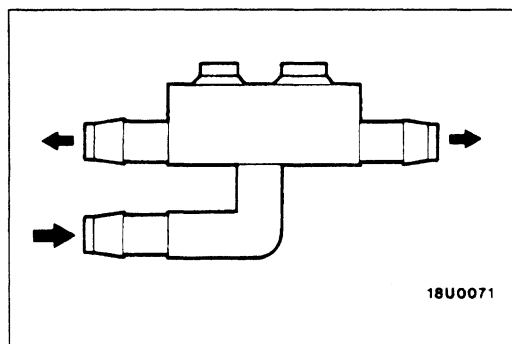
HEADLAMP WASHER RELAY CHECK

51101320017

(1) Connect battery and test lamp to the relay as illustrated.



(2) The relay is normal if the lamp lights for approximately 0.5 second upon connection of terminal (3) to battery (-).

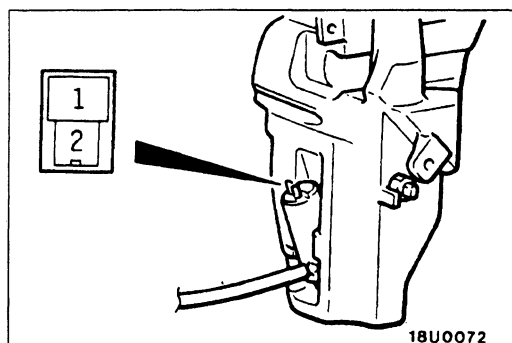


CHECK VALVE CHECK

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

Opening pressure: 78 kPa



HEADLAMP WASHER MOTOR CHECK

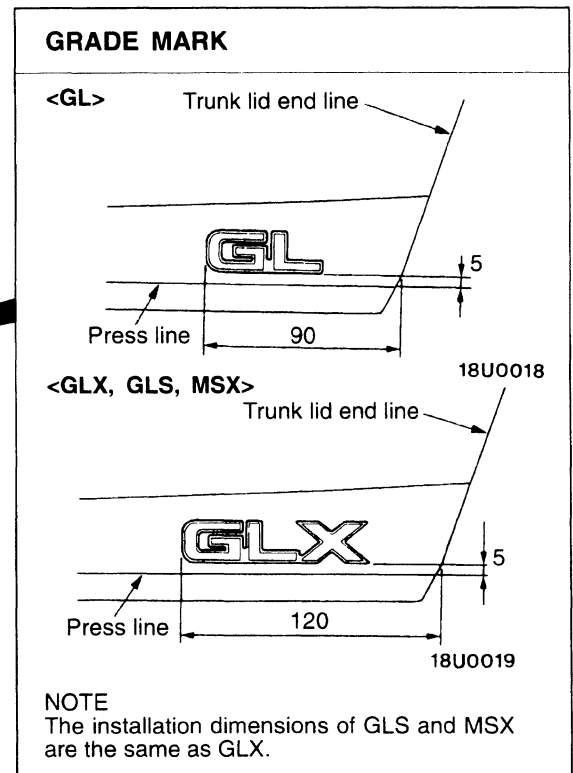
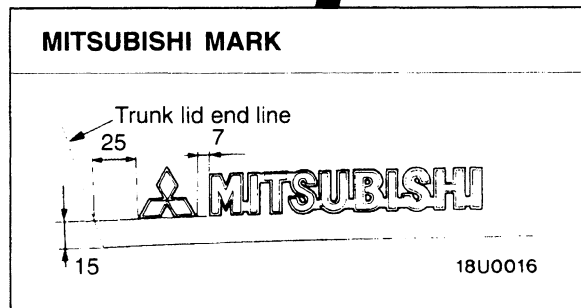
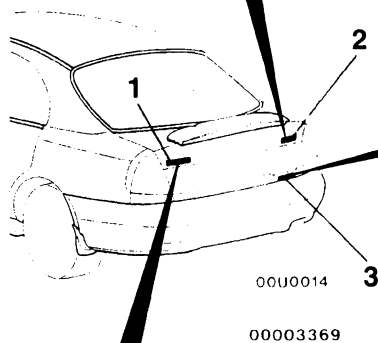
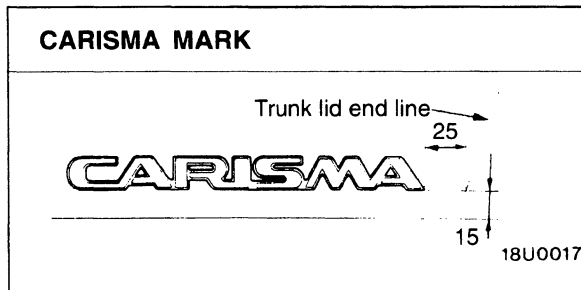
51101340013

(1) With the washer motor installed to the washer tank, fill the washer tank with water.

(2) Connect battery (+) and (-) cables to terminals (2) and (1) respectively to see that the washer motor runs and water is injected.

MARKS

REMOVAL AND INSTALLATION



1. MITSUBISHI MARK
2. CARISMA MARK
3. GRADE MARK

INSTALLATION SERVICE POINT

MARKS INSTALLATION

1. Clean the mark installation surfaces on the body with unleaded petrol.
2. Peel off the backing paper from the reverse side of the marks, and then attach the marks to the vehicle body so that they fit properly into position.

Caution

When attaching the marks, the surrounding temperature should be 20–38°C and the air should be completely free from dust.

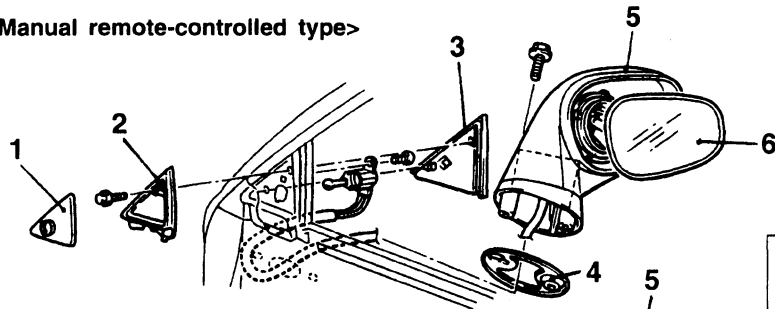
If the surrounding temperature is lower than 20°C, the marks and the places on the body where the marks are to be attached should be heated to 20–38°C.

DOOR MIRROR

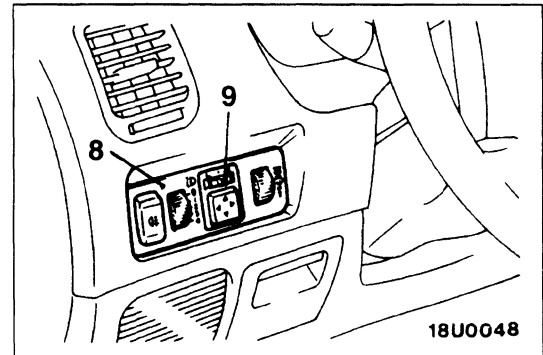
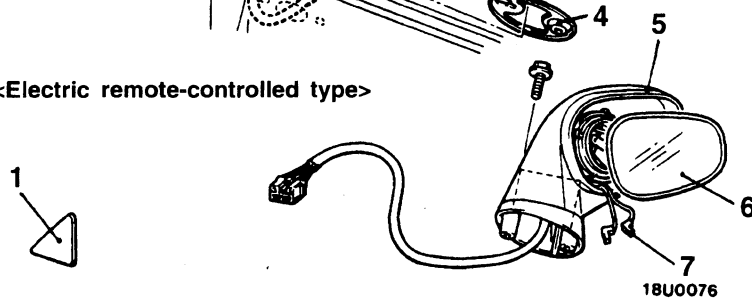
51100670038

REMOVAL SERVICE POINT

<Manual remote-controlled type>



<Electric remote-controlled type>



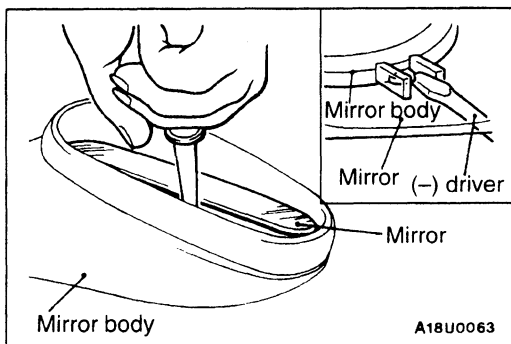
00003370

Door mirror removal steps

- Front door trim (Refer to GROUP 42.)
- 1. Delta cover, inner
- 2. Delta cover inner flame
- 3. Delta cover, outer
- 4. Gasket
- 5. Door mirror
- 6. Mirror
- 7. Harness connector

Door mirror control switch removal steps

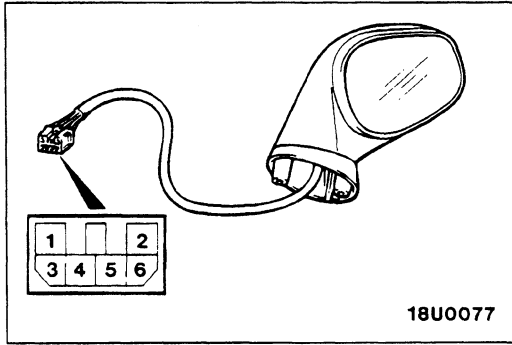
- 8. Instrument panel switch assembly
- 9. Door mirror control switch



REMOVAL SERVICE POINT

◀A▶ **MIRROR REMOVAL**

Turn the mirror by hand so that it faces upwards, insert the (-) driver wound with masking tape into the notched section, and lever out the mirror to remove it.



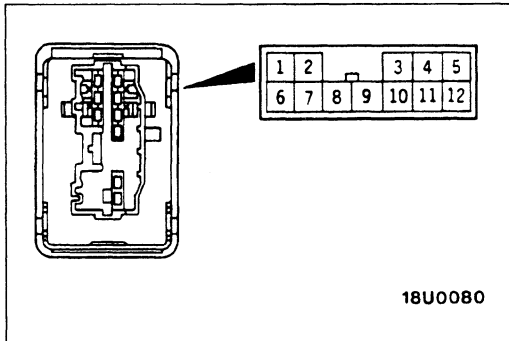
INSPECTION

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REMOTE CONTROL MIRROR ASSEMBLY CHECK

- (1) Check to be sure that the mirror moves as described in the table when each terminal is connected to the battery.
- (2) Check if there is continuity between terminals (1) and (2).

Battery connection terminal					Direction of operation
3	4	5	1	2	
⊕		⊖	 Printed heating wire		UP
⊖		⊕			DOWN
	⊕	⊖			RIGHT
	⊖	⊕			LEFT



DOOR MIRROR CONTROL SWITCH CONTINUITY CHECK

51101350016

Switch position	Terminal No.										
	3	4	5	6	7	9	10	11	12		
Left side	UP	○—○		○						○	
	DOWN		○							○	
	RIGHT			○							○—○
	LEFT		○							○	
Right side	UP	○—○						○	○		
	DOWN		○						○		
	RIGHT							○		○	
	LEFT		○						○		

SWITCH AND RELAY OF DOOR MIRROR PRINTED HEATING WIRE CHECK

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The printed heating wire of the door mirror operates in conjunction with the rear window defogger. The switch and relay are used for the rear window defogger also, so refer to GROUP 54 for inspection service points.