

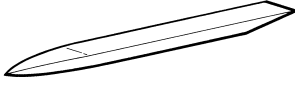

## SERVICE SPECIFICATION

Item	Standard value
Windshield wiper blade installation position mm	10–25

## SEALANT AND ADHESIVE

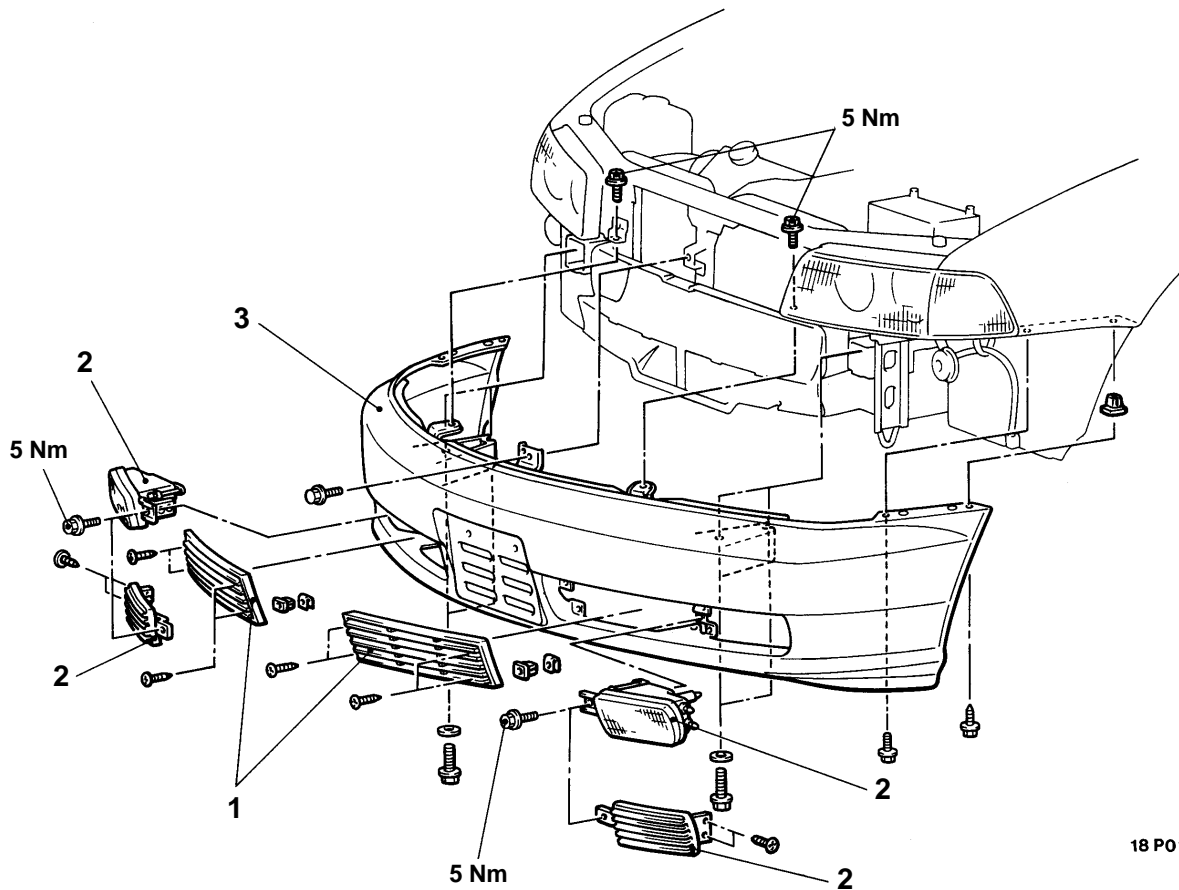
Items	Specified sealant and adhesive
Side sill splash protector	3M ATD Part No. 5357 or equivalent
Side protector moulding	3M ATD Part No. 4213 or equivalent
Side air dam	3M ATD Part No. 5356 or equivalent

## SPECIAL TOOLS

Tool	Tool number and name	Supersession	Application
	MB990784 Ornament remover	E23M6	Removal of door mirror control switch
	MB990449 Window moulding remover	–	Removal of roof drip moulding, etc.

**FRONT BUMPER <MAGNA>****REMOVAL AND INSTALLATION****Pre-removal and Post-installation Operation**

1. Undercover panel Removal and Installation
2. Splash shield Removal and Installation
3. Radiator grille Removal and Installation (Refer to [On vehicle service.](#))



18 P0110

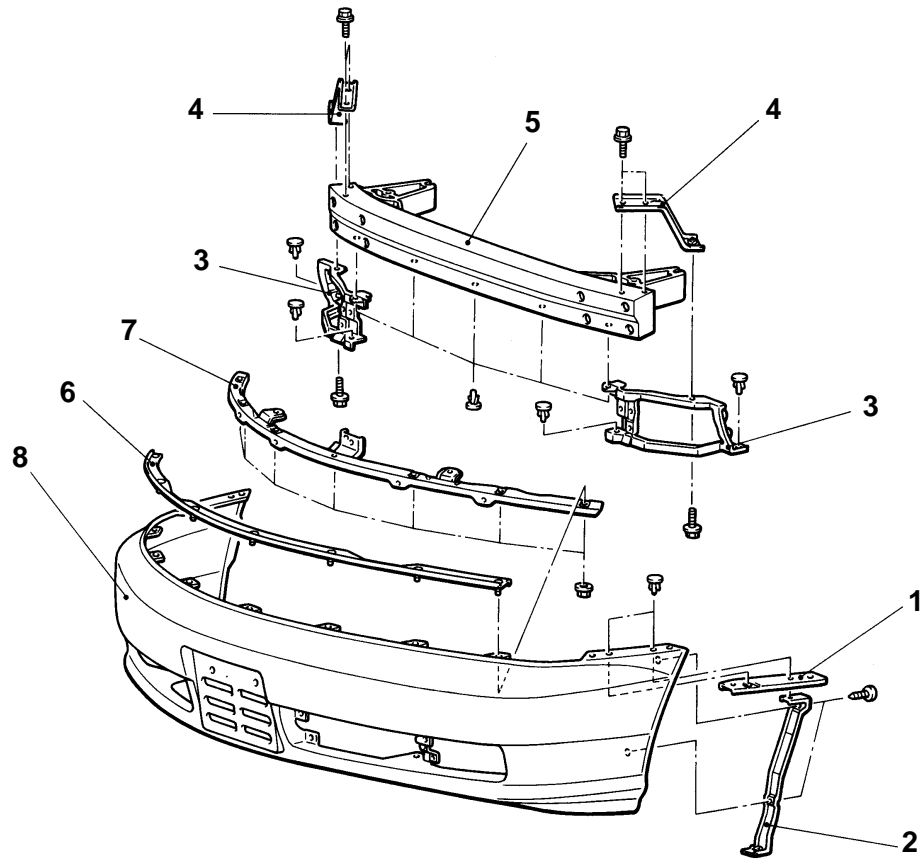
**Removal steps**

1. Under grille
2. Fog light or fog light cover

3. Bumper assembly

## DISASSEMBLY AND REASSEMBLY

Main  
Index

51  
Index


18P0107

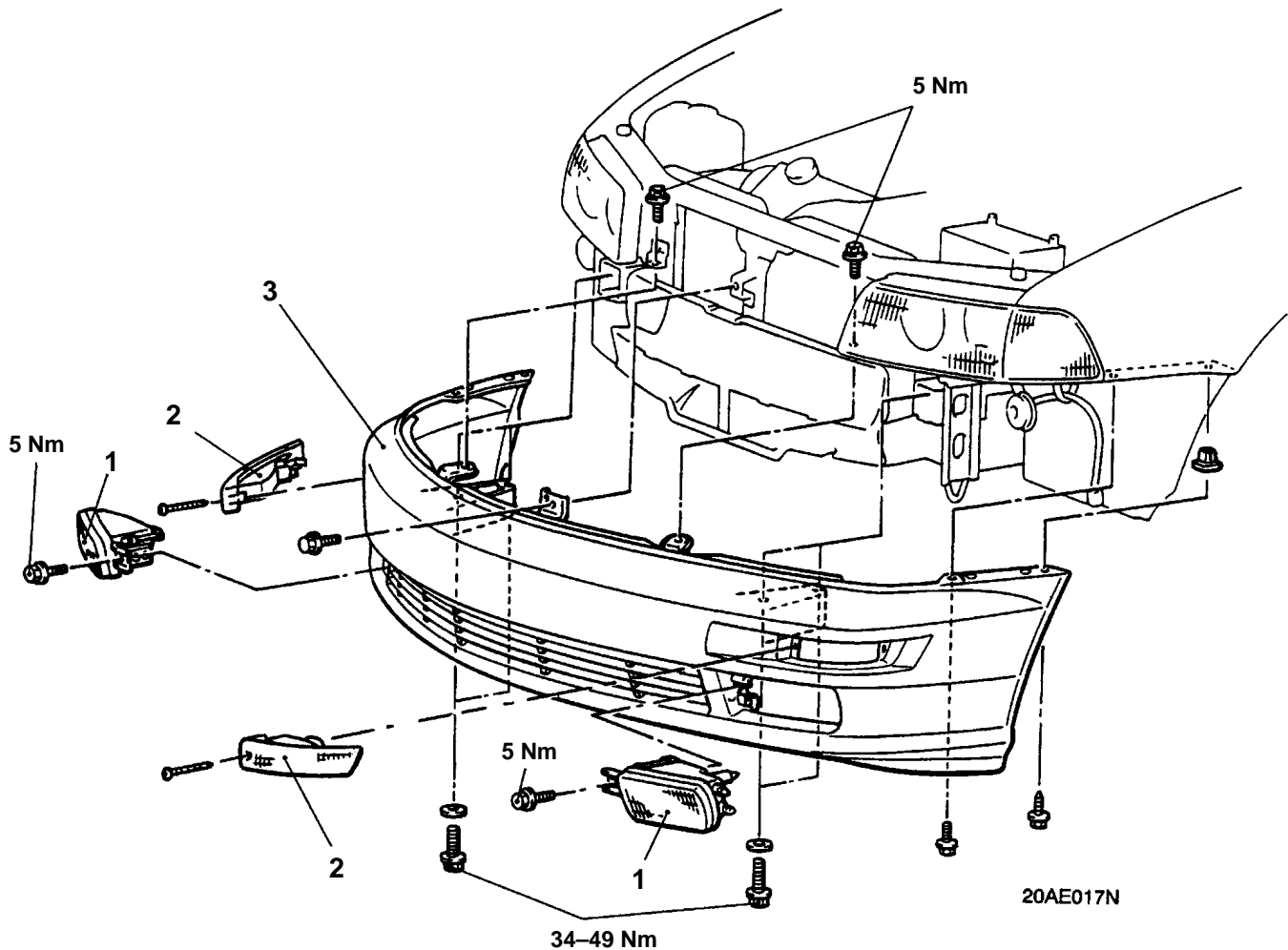
### Disassembly steps

1. Upper side plate
2. Rear side plate
3. Lower reinforcement
4. Reinforcement extension

5. Bumper reinforcement
6. Upper plate
7. Upper support
8. Bumper face

**FRONT BUMPER <VERADA>****REMOVAL AND INSTALLATION****Pre-removal and Post-installation Operation**

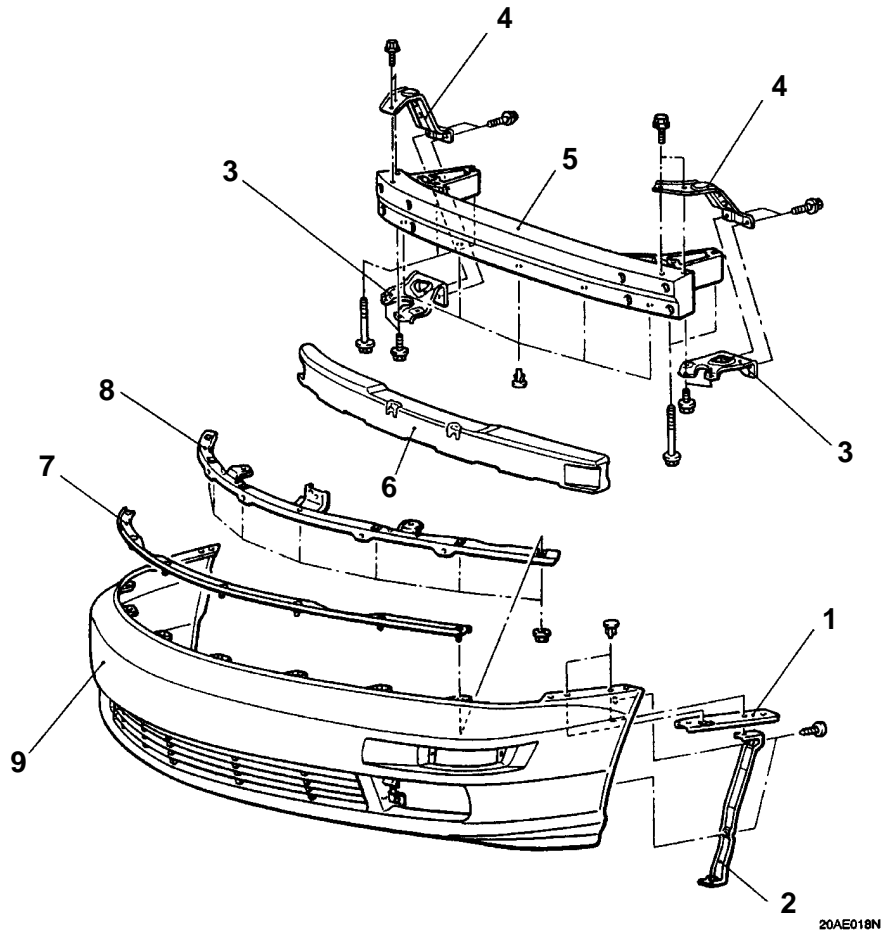
1. Undercover panel Removal and Installation
2. Splash shield Removal and Installation
3. Radiator grille Removal and Installation (Refer to [On vehicle service.](#))

**Removal steps**

1. Fog lamp
2. Front turn signal lamp

3. Front Bumper assembly

## DISASSEMBLY AND REASSEMBLY



### Disassembly steps

1. Upper side plate
2. Rear side plate
3. Fog light bracket
4. Fog light support
5. Bumper reinforcement

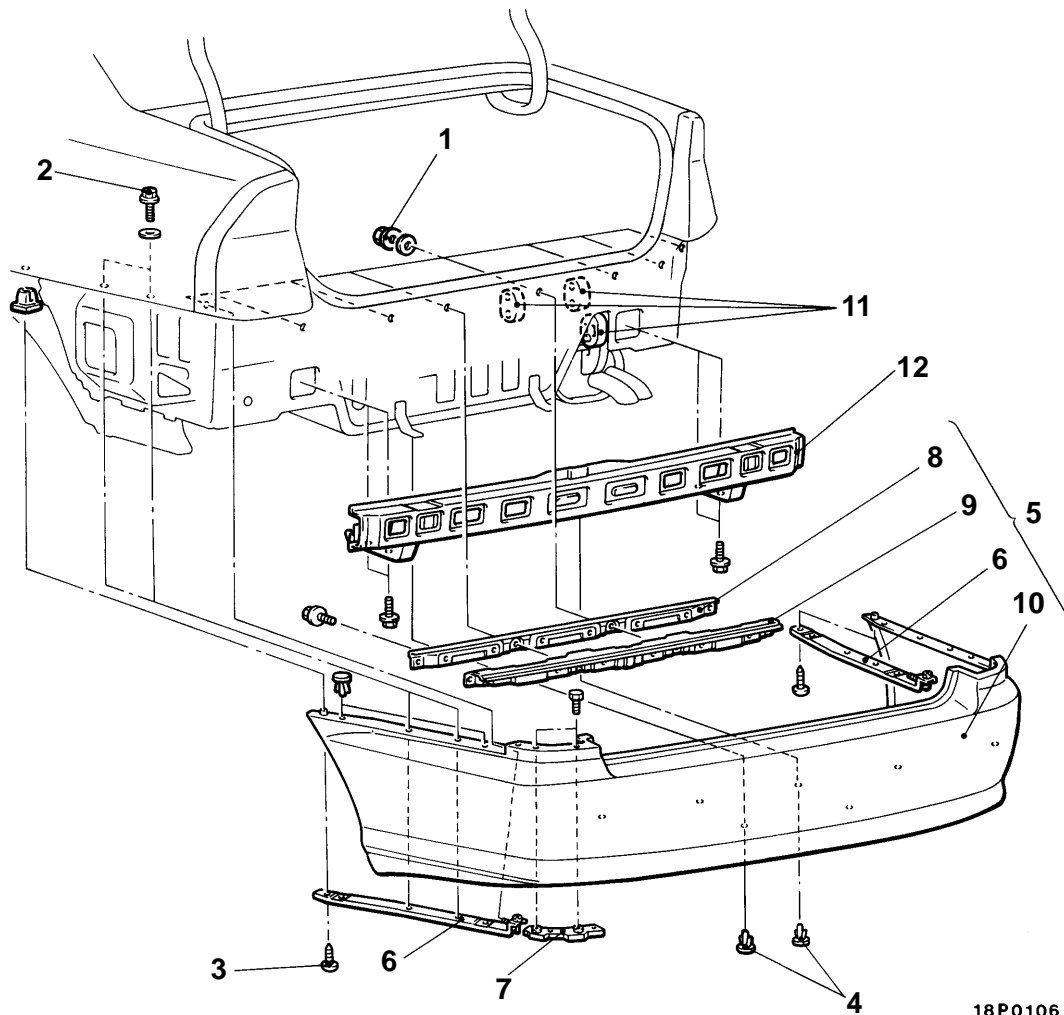
6. Bumper core
7. Upper plate
8. Upper support
9. Bumper face

# REAR BUMPER <MAGNA SEDAN>

## REMOVAL AND INSTALLATION

### Pre-removal and Post-installation Operation

1. Trunk rear trim cover, trunk rear centre trim and trunk rear side trim Removal and Installation (Refer [Group 52A.](#))
2. Splash shield Removal and Installation



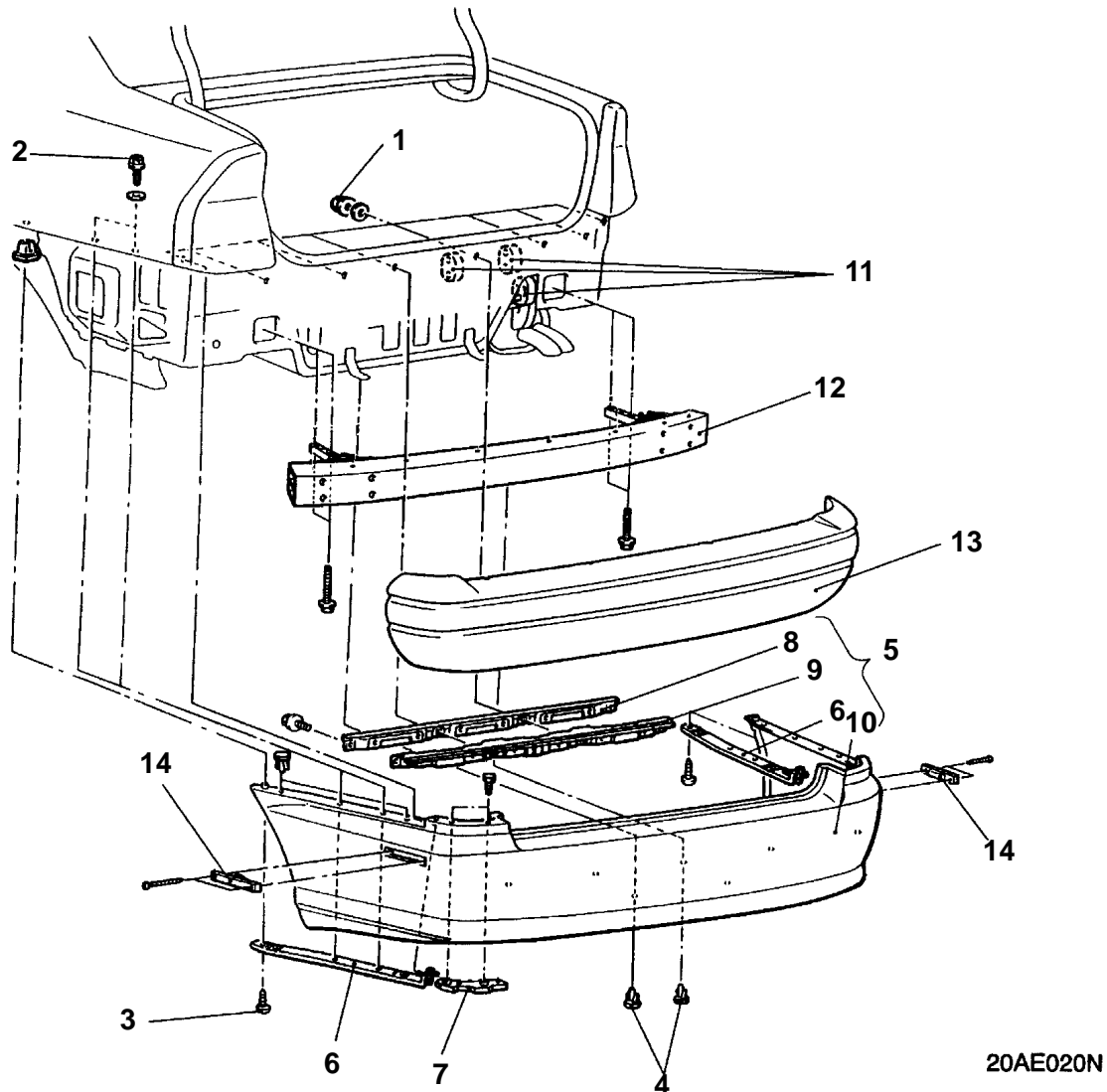
18P0106

### Removal steps

- |                         |                                    |
|-------------------------|------------------------------------|
| 1. Nut                  | 7. Side support                    |
| 2. Bolt                 | 8. Upper centre plate              |
| 3. Screw                | 9. Upper support                   |
| 4. Clip                 | 10. Bumper face                    |
| 5. Bumper face assembly | 11. Main muffler hanger connection |
| 6. Side reinforcement   | 12. Bumper reinforcement           |

**REAR BUMPER <VERADA SEDAN>****REMOVAL AND INSTALLATION****Pre-removal and Post-installation Operation**

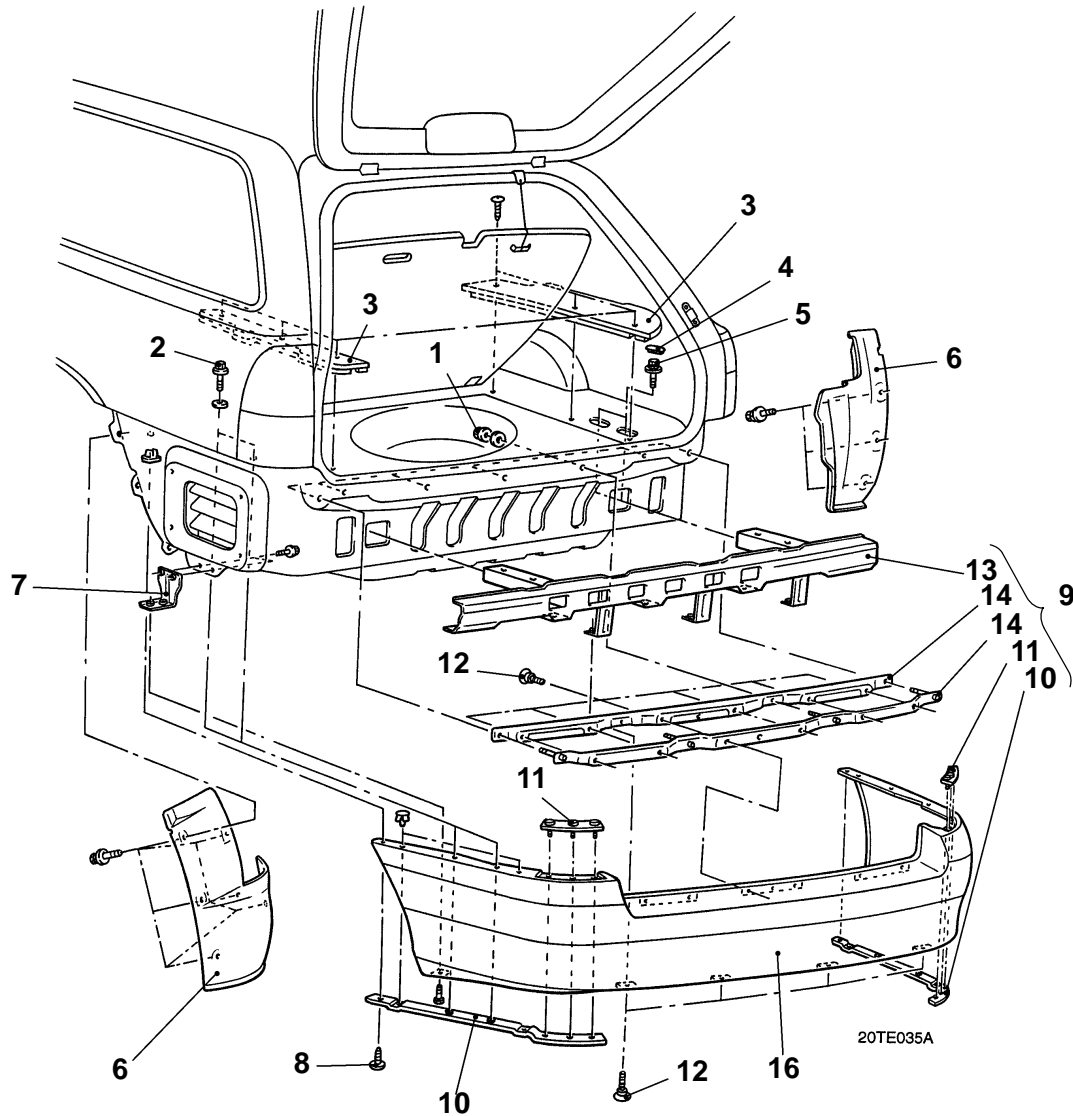
1. Trunk rear trim cover, trunk rear centre trim and trunk rear side trim Removal and Installation (Refer [Group 52A.](#))
2. Splash shield Removal and Installation

**Removal steps**

- |                         |                                    |
|-------------------------|------------------------------------|
| 1. Nut                  | 8. Upper centre plate              |
| 2. Bolt                 | 9. Upper support                   |
| 3. Screw                | 10. Bumper face                    |
| 4. Clip                 | 11. Main muffler hanger connection |
| 5. Bumper face assembly | 12. Bumper reinforcement           |
| 6. Side reinforcement   | 13. Bumper core                    |
| 7. Side support         | 14. Reflector                      |

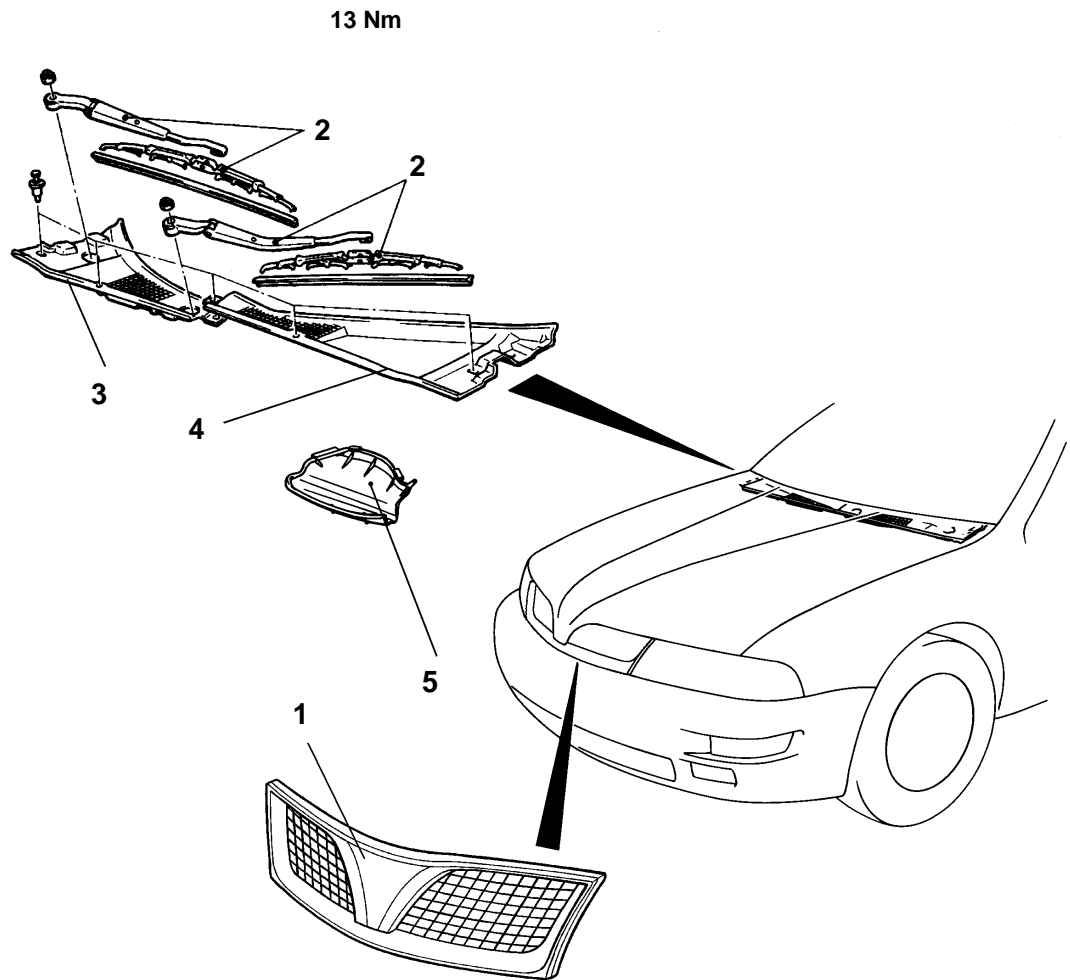
**REAR BUMPER <WAGON>****REMOVAL AND INSTALLATION****Pre-removal and Post-installation Operation**

1. Cargo compartment lower side B trim (Refer [Group 52A.](#))
2. Splash shield Removal and Installation

**Removal steps**

- |                           |                                 |
|---------------------------|---------------------------------|
| 1. Nut                    | 9. Bumper face assembly         |
| 2. Bolt                   | 10. Side reinforcement          |
| 3. Cargo floor board      | 11. Side support                |
| 4. Grommet                | 12. Bumper face retaining bolts |
| 5. Bumper retaining bolts | 13. Bumper reinforcement        |
| 6. Splash shield          | 14. Upper centre plate          |
| 7. Bumper bracket         | 15. Upper support               |
| 8. Screw                  | 16. Bumper face                 |



**GRILLES AND GARNISHES****REMOVAL AND INSTALLATION**

20TJ071A

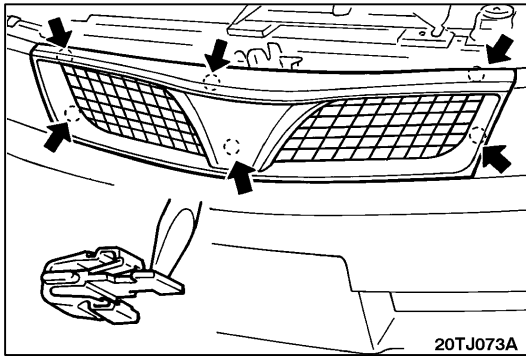
**Radiator grille removal**

1. Radiator grille

**Air inlet grille removal steps**

2. Wiper arm assembly
3. Front deck garnish (RH)
4. Front deck garnish (LH)
5. Air intake garnish

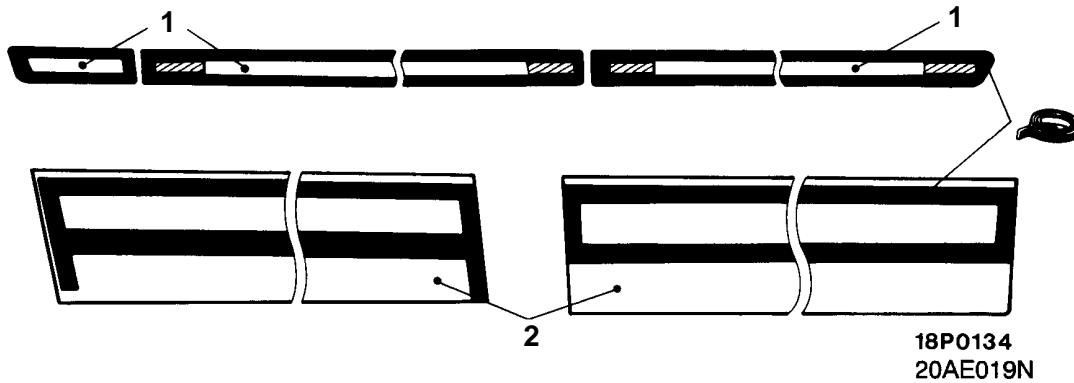
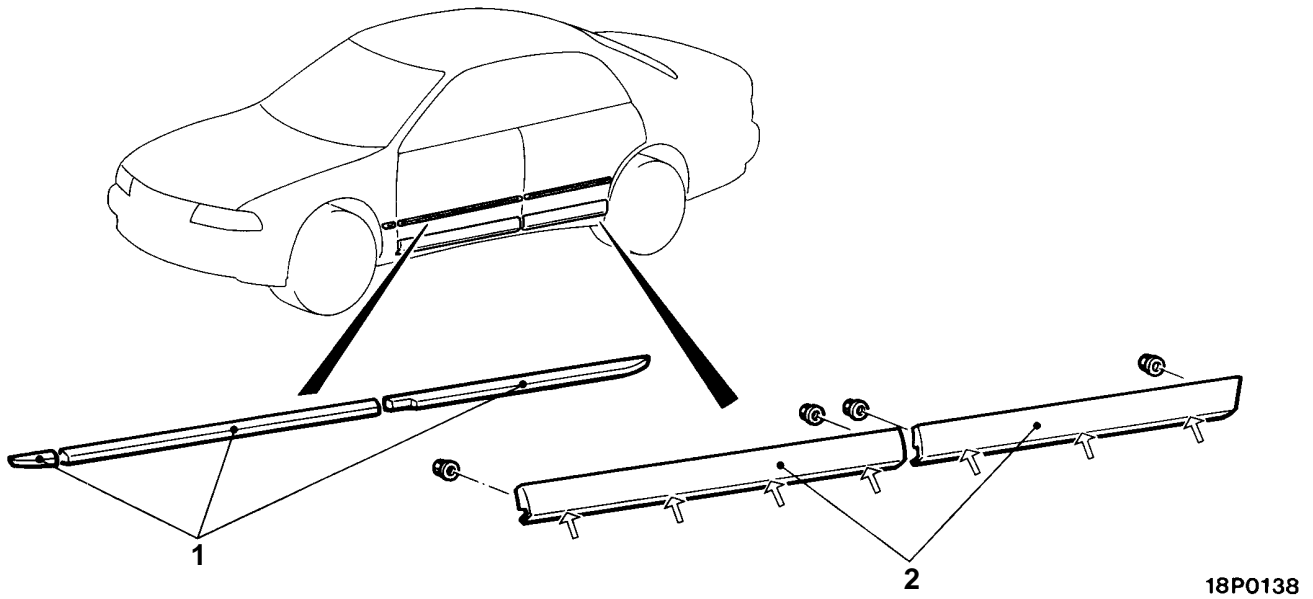


**REMOVAL SERVICE POINT****◀A▶ RADIATOR GRILLE REMOVAL**

While gently pulling the radiator grille towards you, use a flat-bladed screwdriver to push the clip catches in the direction indicated by the arrows.

# MOULDINGS

## REMOVAL AND INSTALLATION



### Adhesive tape:

- Side sill splash protector: 3M Part No. 5356 or equivalent 8 mm wide and 1.5 mm thick
- Side protector moulding: 3M Part No. 4213 or equivalent 5 mm wide and 0.8 mm thick

### Primer:

3M Part No. K500 or equivalent polypropylene primer

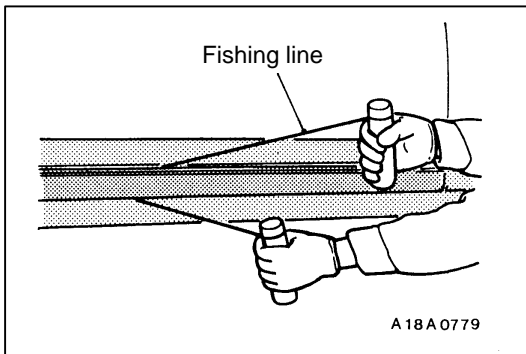
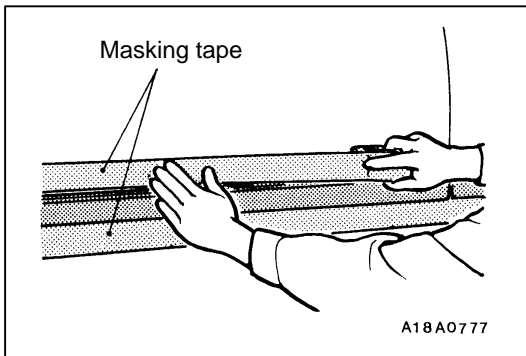


1. Side protector moulding
2. Side sill splash protector

## REMOVAL SERVICE POINTS

◀A▶ SIDE PROTECTOR MOULDING AND SIDE SILL  
SPLASH PROTECTOR REMOVAL

1. Apply masking tape along the outside edges(s) of the moulding.

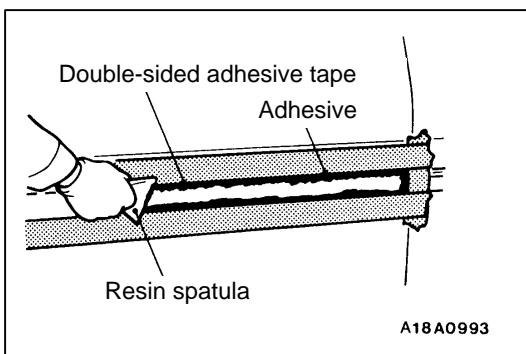
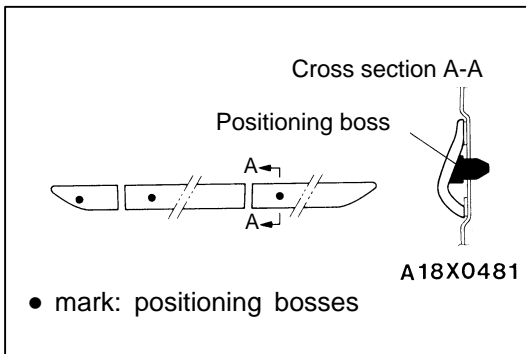


2. Insert fishing line [ø0.8 mm] in between the body and the moulding, and pull both ends alternately to cut the adhesive section and remove the moulding.

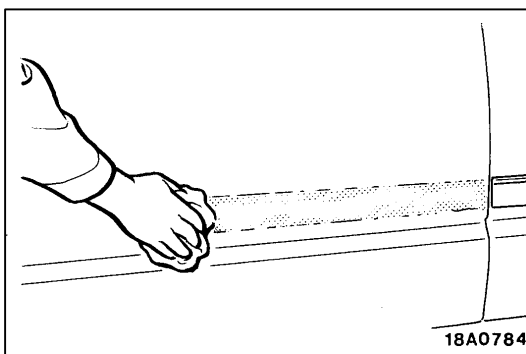
**Caution**

1. If the moulding is to be reused, pull the fishing line along the edge of the body so as not to damage the edge of the moulding.
2. If the adhesive is difficult to remove, heat it to 40°C.

3. Pull the section of the side protector moulding with the positioning bosses towards you to remove the bosses from the mounting holes.



4. Scrape off the double-sided adhesive tape with a resin spatula.
5. Pull off the masking tape.
6. Scrape off a small amount of the adhesive with a cutter knife.



7. Wipe the body surface clean with a rag moistened with isopropyl alcohol.

## INSTALLATION SERVICE POINTS

►A◄ SIDE PROTECTOR MOULDING AND SIDE SILL  
SPLASH PROTECTOR INSTALLATION

Affixing double-sided tape to the mouldings (when re-using mouldings)

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

2. Wipe the moulding adhesion surface clean with a rag moistened with isopropyl alcohol.
3. Apply the specified primer to the area where the double-sided tape is to be attached and allow to dry thoroughly.

**Specified primer: 3M Part No. K500 (or equivalent polypropylene primer)**

4. Heat the adhesive surface of the double-sided tape on the side protector moulding to about 40–60°C.
5. Affix the specified double-sided adhesive tape to the moulding.

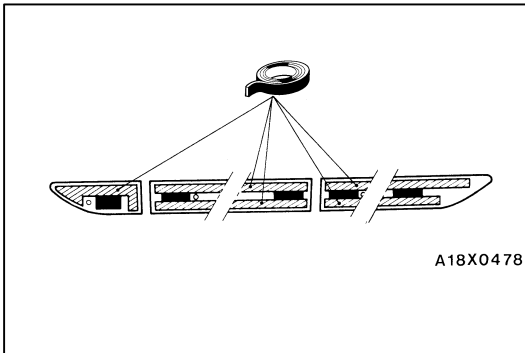
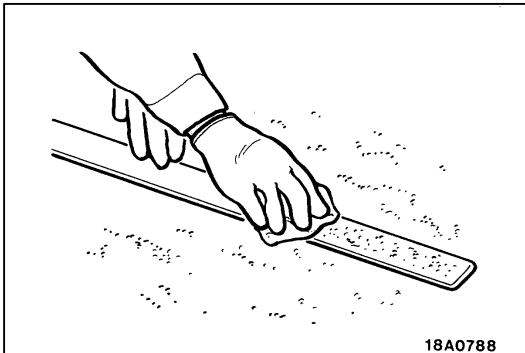
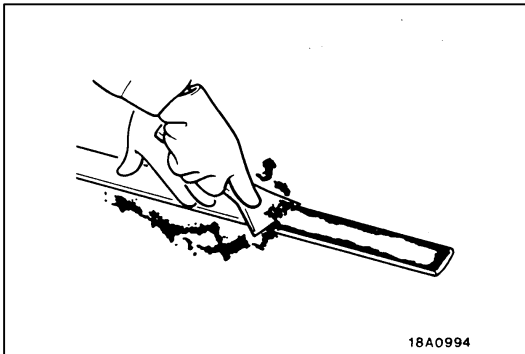
**Specified adhesive tape:**

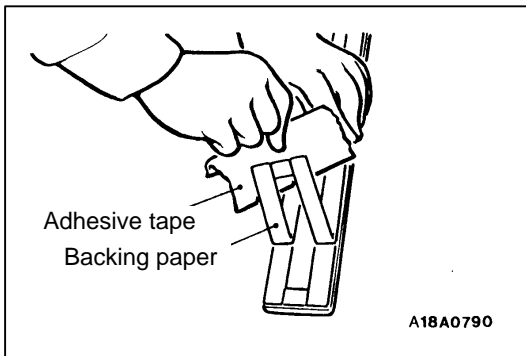
**Side protector moulding:**

**3M ATD Part No. 5357 or equivalent  
8 mm wide and 1.2 mm thick**

**Side sill splash protector**

**3M ATD Part No. 4213 or equivalent  
5 mm wide and 0.8 mm thick**



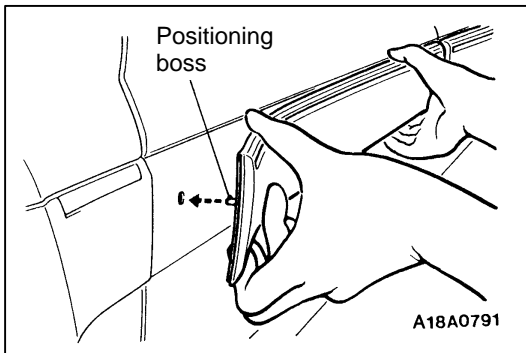


### MOULDING INSTALLATION

1. Tear off the double-sided tape backing paper.

#### NOTE

If you attach adhesive tape to the edge of the backing paper, it will be easy to tear off.



2. Install the side protector moulding so that the positioning bosses match the body holes.

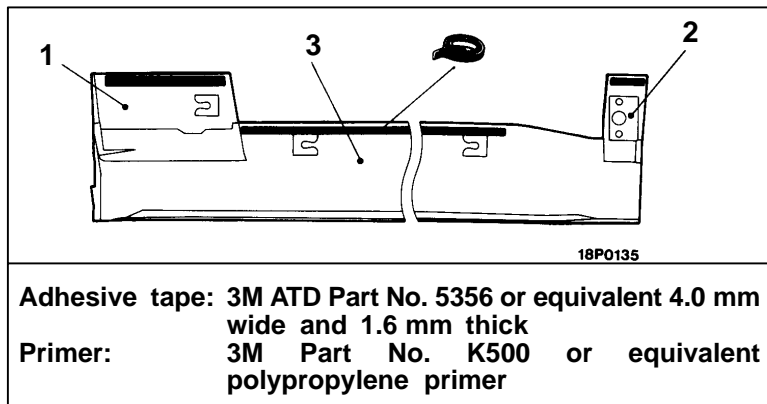
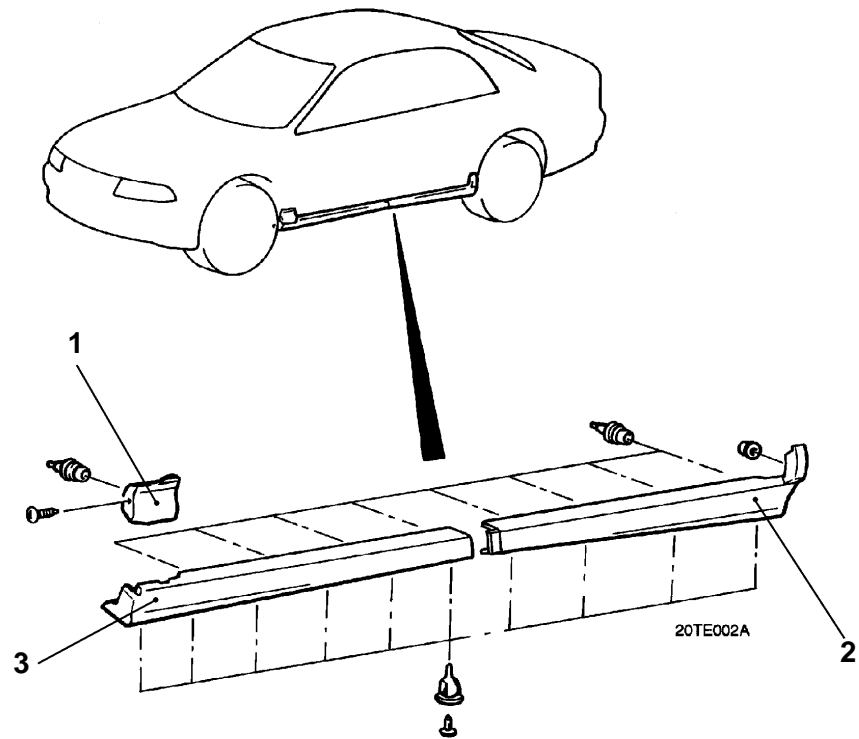
#### NOTE

If the double-sided adhesive tape is difficult to affix during winter, etc., warm the bonding surfaces of the body and the side protector moulding to about 40–60°C before affixing the tape.

3. Firmly press in the side protector moulding.

## AERO PARTS

## REMOVAL AND INSTALLATION



20AE009N

## Removal steps



1. Front side air dam
2. Rear side air dam
3. Lower side air dam

## REMOVAL SERVICE POINTS

### ◀A▶ FRONT SIDE AIR DAM/LOWER SIDE AIR DAM/REAR SIDE AIR DAM REMOVAL

Remove by following the procedure described for the side protector moulding and side sill splash protector. Refer [On vehicle service](#).

## INSTALLATION SERVICE POINTS

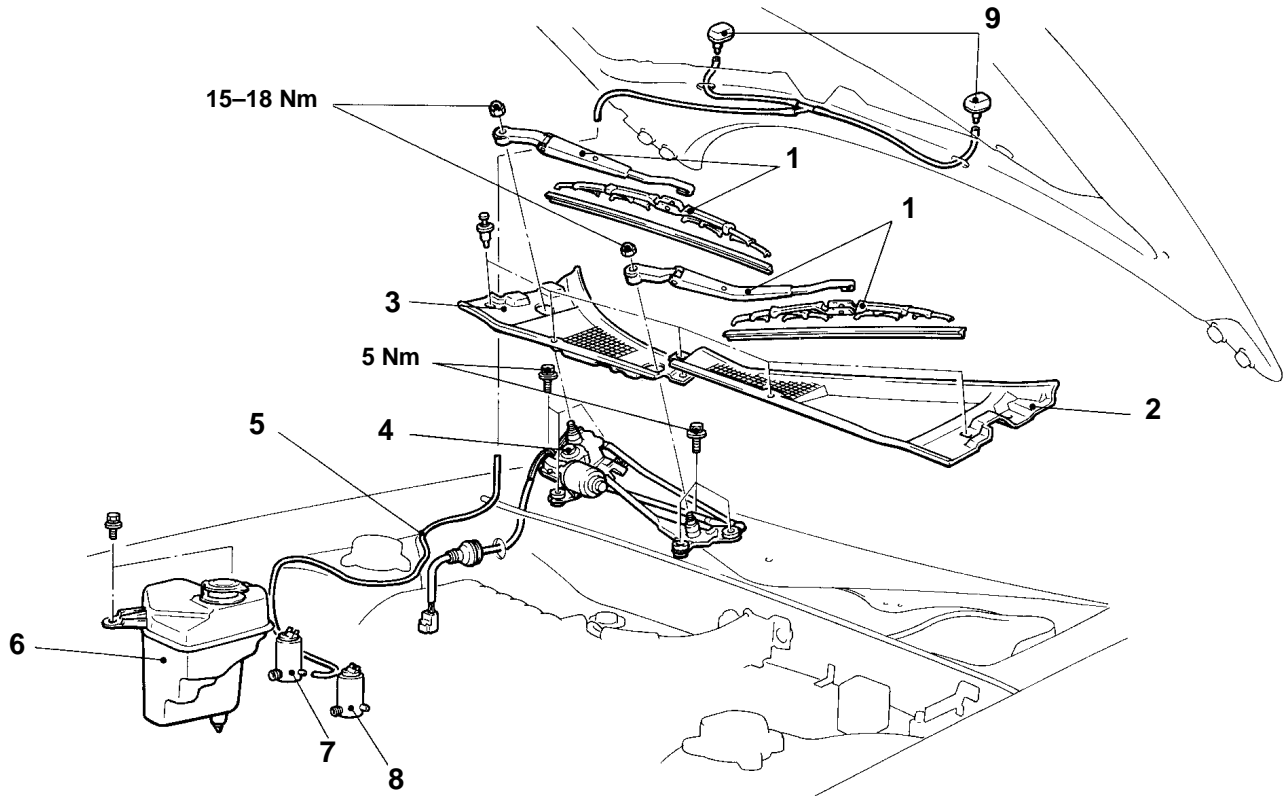
### ▶A◀ FRONT SIDE AIR DAM/LOWER SIDE AIR DAM/REAR SIDE AIR DAM INSTALLATION

Install by following the procedure described for the side protector moulding and side sill splash protector. Refer [On vehicle service](#).



# WINDSHIELD WIPER AND WASHER

## REMOVAL AND INSTALLATION



18P0141

### Wiper motor and linkage removal steps

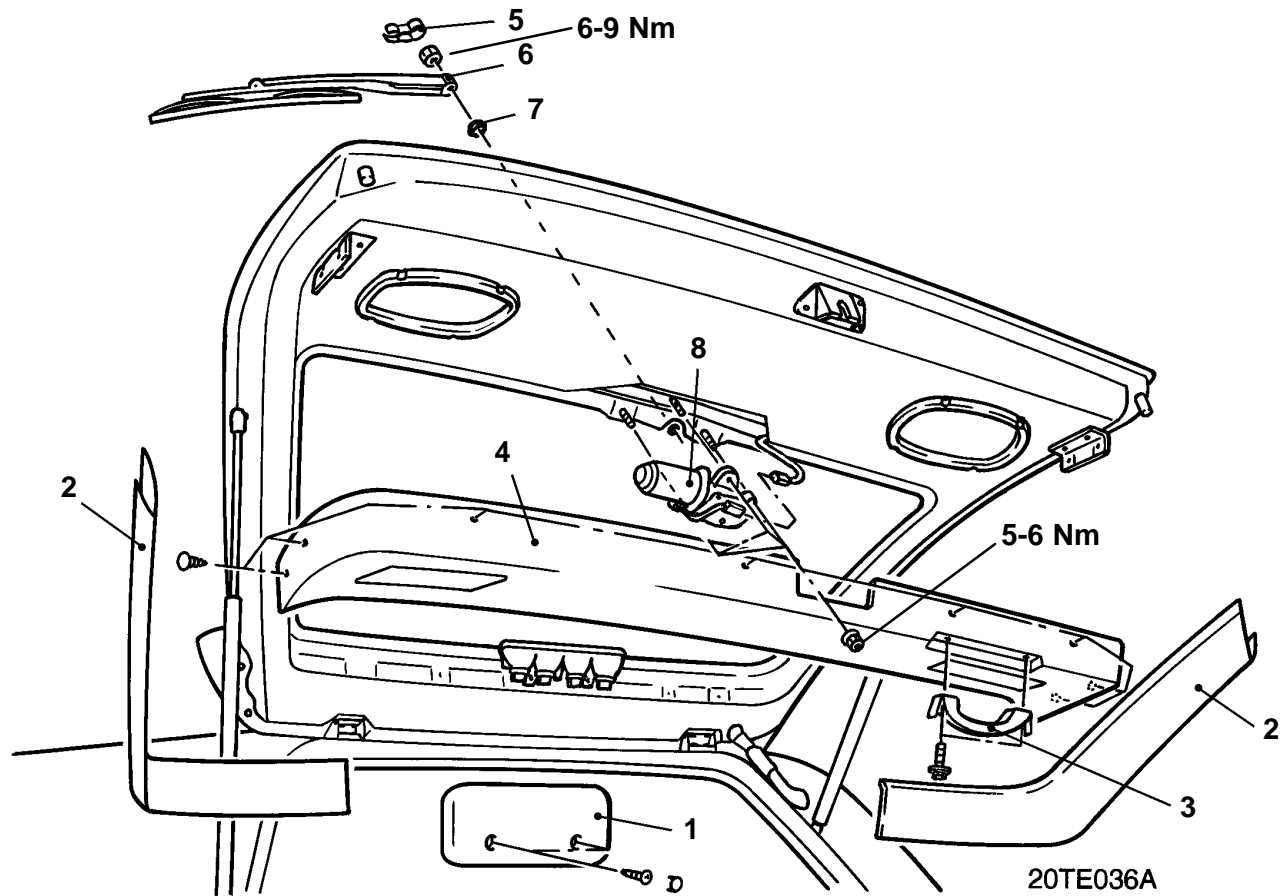
- **A** ◀
1. Wiper arm and blade assembly
  2. Front deck garnish (LH)
  3. Front deck garnish (RH)
  4. Wiper motor and linkage

### Washer nozzle removal steps

5. Washer hose
9. Washer nozzle

### Washer tank removal steps

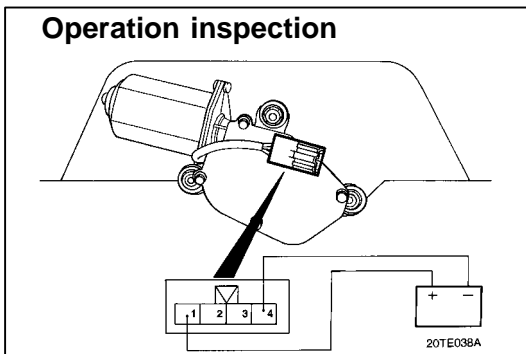
5. Washer hose
6. Washer tank
7. Washer motor
8. Rear washer motor <Wagon>
9. Washer nozzle

**REAR WIPER AND WASHER****REMOVAL AND INSTALLATION****Removal steps**

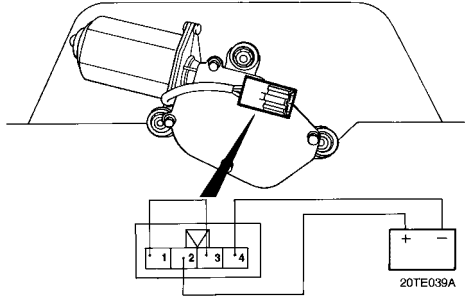
1. High mount stop lamp cover
2. Tailgate side trim
3. Grab handle



4. Tailgate trim
5. Wiper arm cover
6. Wiper arm assembly
7. Grommet
8. Wiper motor

**Operation inspection****INSPECTION****REAR WIPER MOTOR OPERATION**

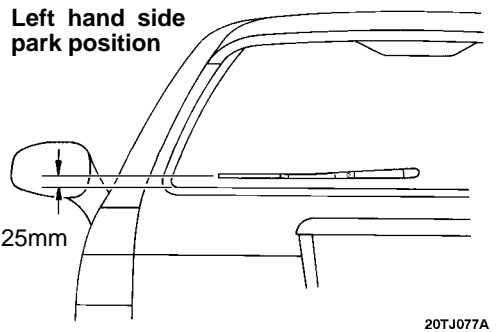
1. Connect the battery to the wiper motor as illustrated, and check the operation of the wiper motor.

**Stop position inspection****STOP POSITION OF THE WIPER MOTOR**

1. Connect the battery to the wiper motor as illustrated under the operation inspection and after running the wiper motor, disconnect the battery to stop the wiper motor.
2. Connect the battery and terminals as illustrated in stop position inspection, run the wiper motor and confirm that the motor stops at the automatic stop position.

**REAR WASHER MOTOR**

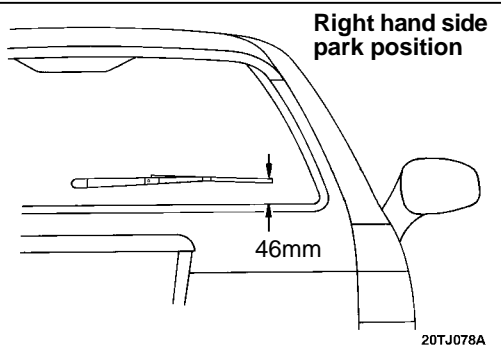
1. When checking the washer motor, check with water added to the washer tank, with the tank still installed.
2. Confirm that the water is pumped at an adequate pressure when the battery is connected as illustrated.

**Left hand side  
park position****INSTALLATION SERVICE POINTS****►A◄ WIPER ARM AND BLADE ASSEMBLY**

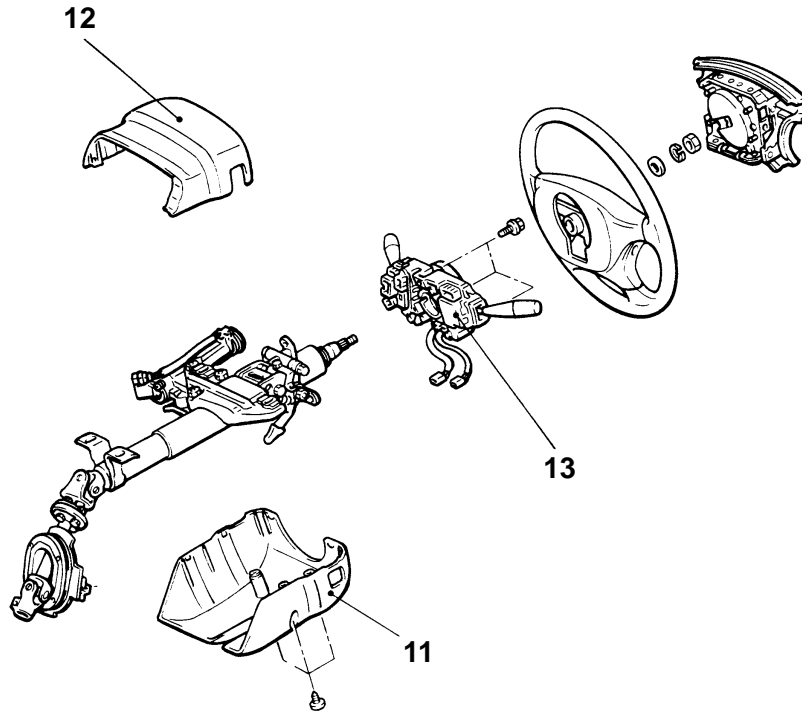
1. Set the wiper arm and blade assembly position to the specification as shown in the illustrations.

**Caution:**

**Ensure that the wiper arm is installed on the correct side. The park position will depend on the type of rear wiper motor assembly fitted to the vehicle.**

**Right hand side  
park position**

**CAUTION: SRS**  
Before removal of air bag module and clock spring, refer to the following:  
Group 52B – [SRS Service Precautions](#), [Air Bag Module and Clock Spring](#).



20AE010N

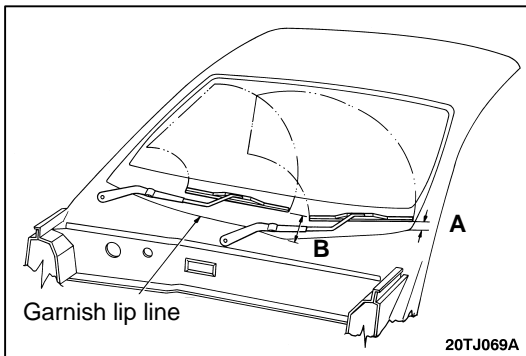
**Column switch removal steps**

- Horn pad (Refer [Group 37A.](#))
- Air bag module (Refer [Group 52B.](#))
- Steering wheel (Refer [Group 37A.](#))
- 11. Column cover lower
- 12. Column cover upper
- 13. Column switch assembly  
(with built-in wiper and washer switch)

- Clock spring\*  
(Refer [Group 52B.](#))

**NOTE**

Parts marked with \* should not be removed from the column switch except when removal is absolutely necessary.



## 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 (A): 20–35 mm**

**Standard value (B): 65–80 mm**

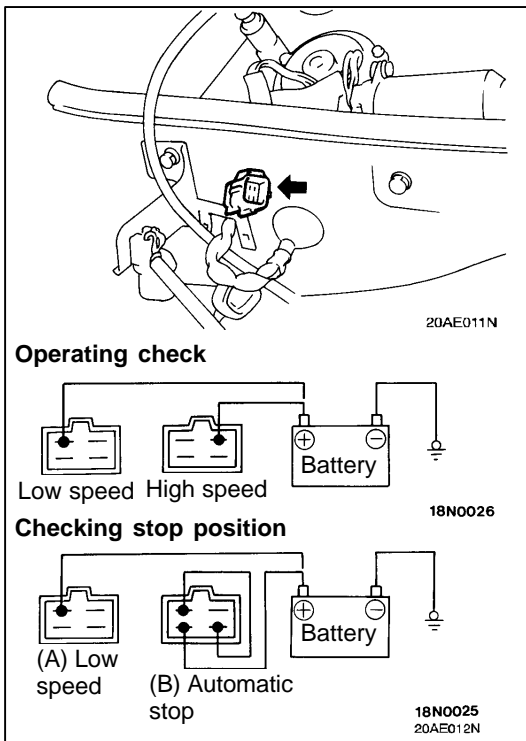
## INSPECTION

### WIPER MOTOR CHECK

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

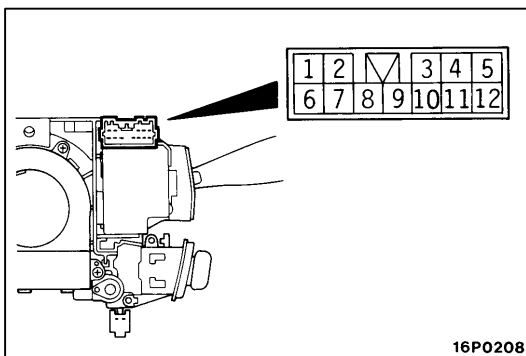
#### Wiper Motor Low Speed and High Speed Operation

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



#### Wiper Motor Stop Position Operation

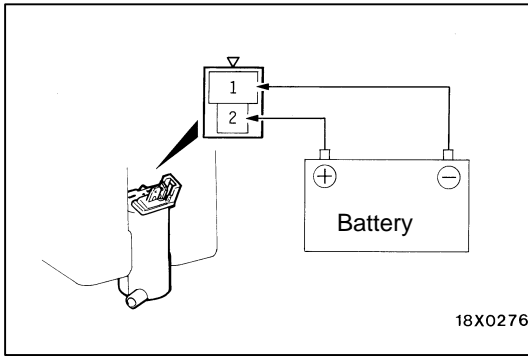
1. Run the wiper motor at low speed, disconnect the battery, and stop the motor.
2. Reconnect the battery as shown in the illustration, and confirm that after the motor starts turning at low speed, it stops at the automatic stop position.



## COLUMN SWITCH CHECK

### Wiper and Washer Switch Continuity check

Switch position		Terminal Numbers				
		8	9	10	11	12
Wiper switch	OFF			○—○		
	INT			○—○		
	LO	○—		○		
	HI	○—	○			
Washer switch ON		○—				○

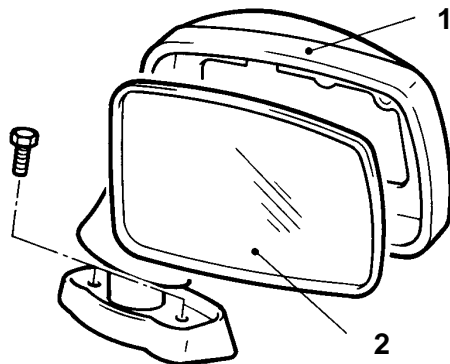


### WASHER MOTOR CHECK

1. With the washer motor installed to the washer tank, fill the washer tank with water.
2. When the battery is connected as shown in the figure, check that the water squirts out strongly.

# DOOR MIRROR

## REMOVAL AND INSTALLATION



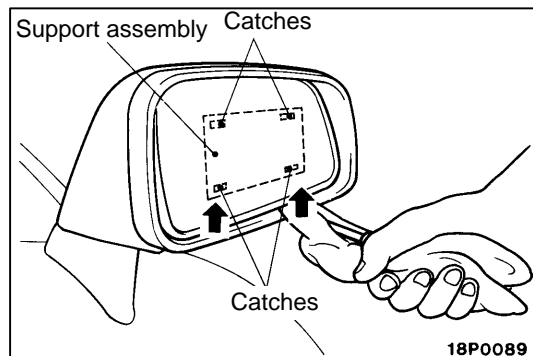
18P0131

### Door mirror removal steps

1. Door mirror assembly



2. Mirror glass

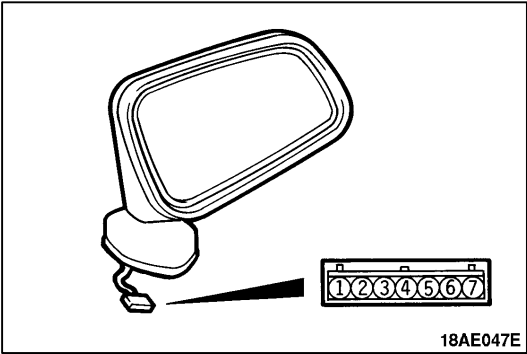


18P0089

### REMOVAL SERVICE POINT

#### ◀A▶ MIRROR GLASS 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 to release the mirror from the bottom catches. Remove the mirror from the upper catches by pulling downwards.



**INSPECTION**  
**REMOTE CONTROL MIRROR ASSEMBLY CHECK**

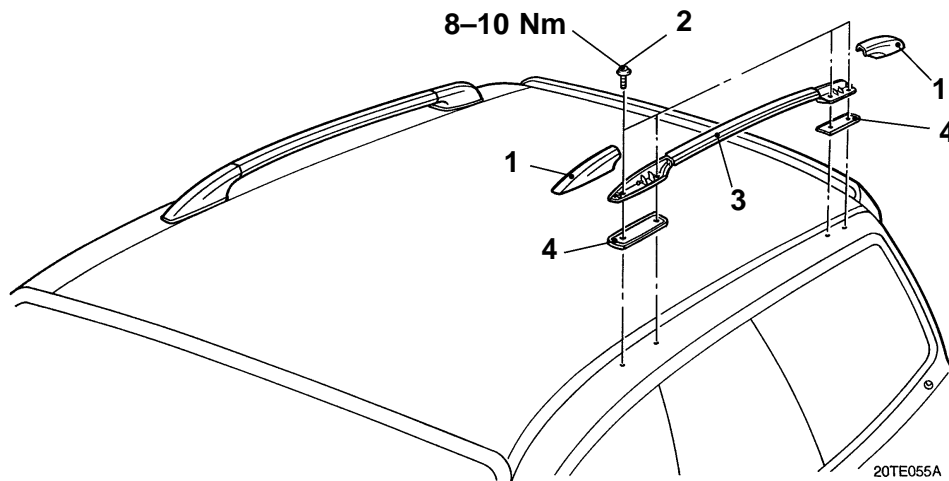
Check to be sure that the mirror moves as described in the table when each terminal is connected to the battery.

Direction of operation	Terminal No.		
	3	4	5
UP	⊖ - - - -	- - - - -	- - - - ⊕
DOWN	⊕ - - - -	- - - - -	- - - - ⊖
LEFT	⊕ - - - -	- - - - ⊖	
RIGHT	⊖ - - - -	- - - - ⊕	



# ROOF RACK

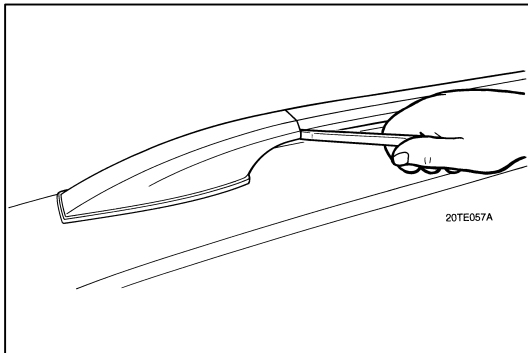
## REMOVAL AND INSTALLATION



### Removal steps

- ◀A▶ ▶B▶
1. Stanchion cover
  2. Retaining bolts

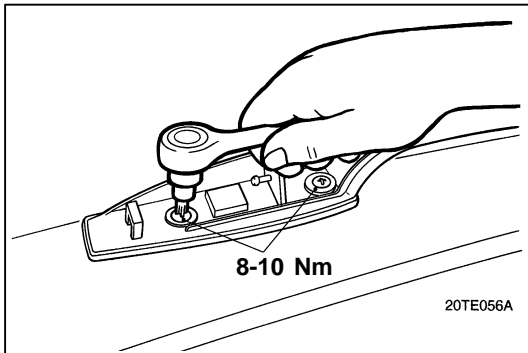
- ▶A▶
3. Roof rail and stanchion assembly
  4. Gasket



### REMOVAL SERVICE POINT

#### ◀A▶ STANCHION COVER

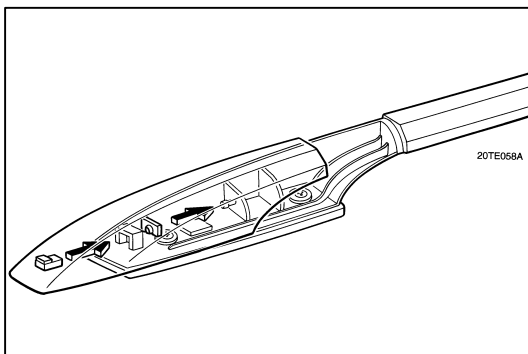
1. Insert a nylon stick between the stanchion cover and roof rail and prise the stanchion cover off.



### INSTALLATION SERVICE POINT

#### ▶A▶ ROOF RAIL AND STANCHION ASSEMBLY

1. Insert the front bolt of the rear stanchion first to locate the assembly.
2. Insert the remaining bolts and tighten to the specified torque.



#### ▶B▶ STANCHION COVER

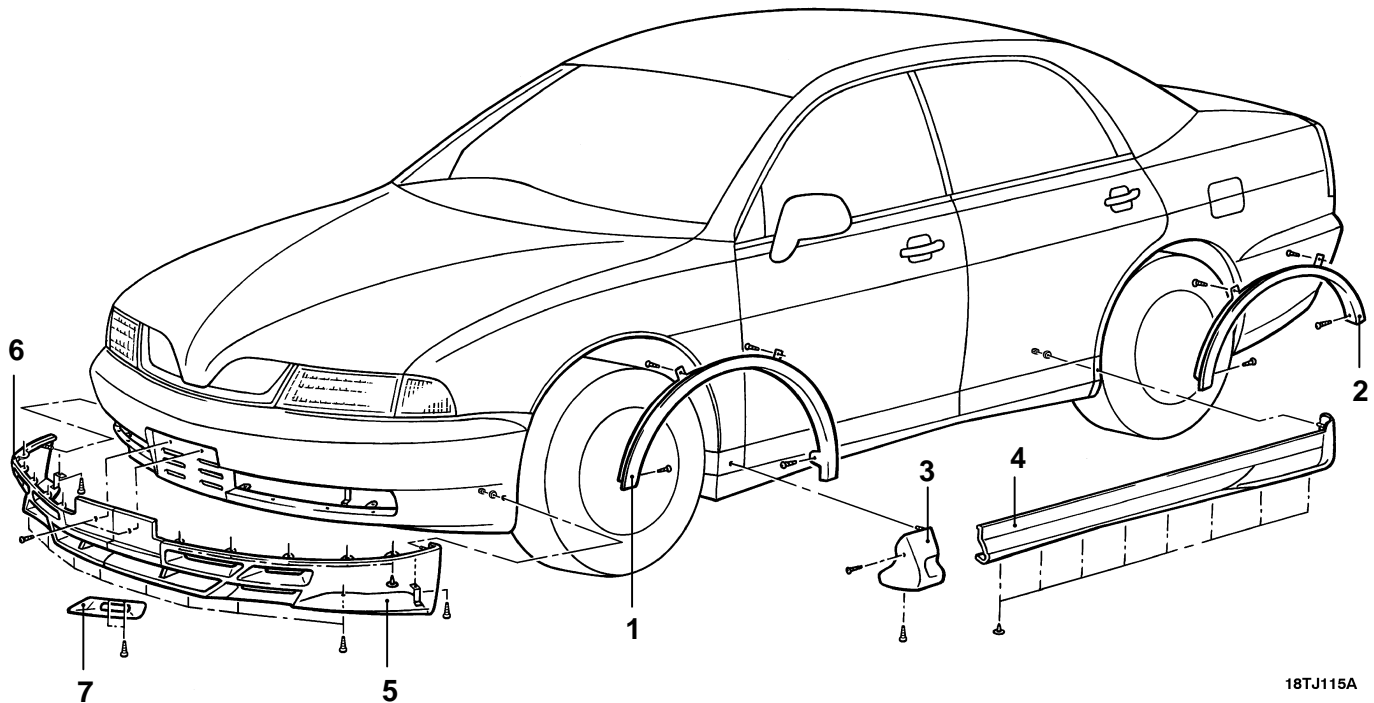
1. Align the two retaining clips of the stanchion cover and slide the cover onto the stanchion.

# VR-X BODY KIT FRONT AND SIDE

## REMOVAL AND INSTALLATION

**Note:**

- Front bumper must be removed to enable front air dam removal (Refer [on vehicle service.](#))
- Side air dam service points (Refer [on vehicle service.](#))



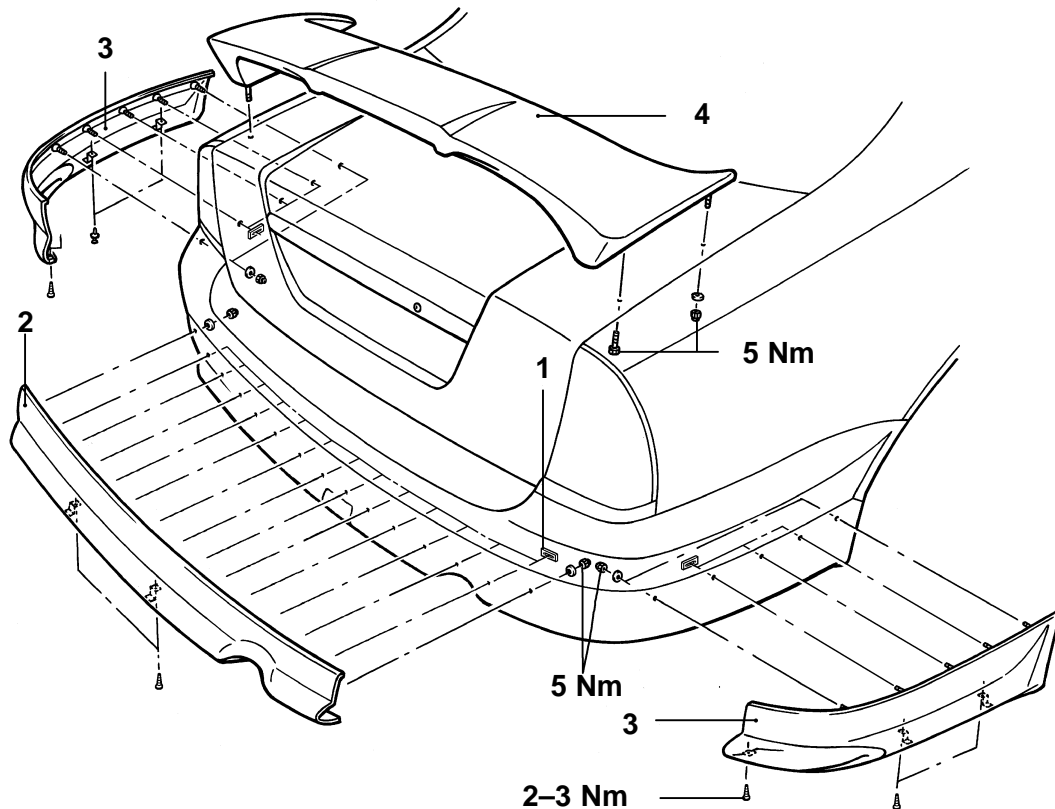
18TJ115A

1. Wheel arch flare front
2. Wheel arch flare rear
3. Side air dam - front
4. Side air dam - rear

5. LH air dam
6. RH air dam
7. Fog lamp cover

## VR-X BODY KIT REAR

### REMOVAL AND INSTALLATION

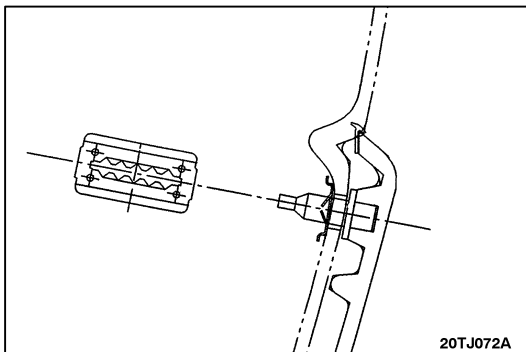


18TJ114A



1. Clips  
1. Rear air dam

3. Side air dams  
4. Spoiler



20TJ072A

### INSTALLATION SERVICE POINT

#### ►A◄ AIR DAM CLIP FITMENT

While holding air dam against bumper, install clip horizontally and push firmly to base (19 places on rear and side air dams).