

Body System (01.00)

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Body System (01.00)

Body Structure (01.01)

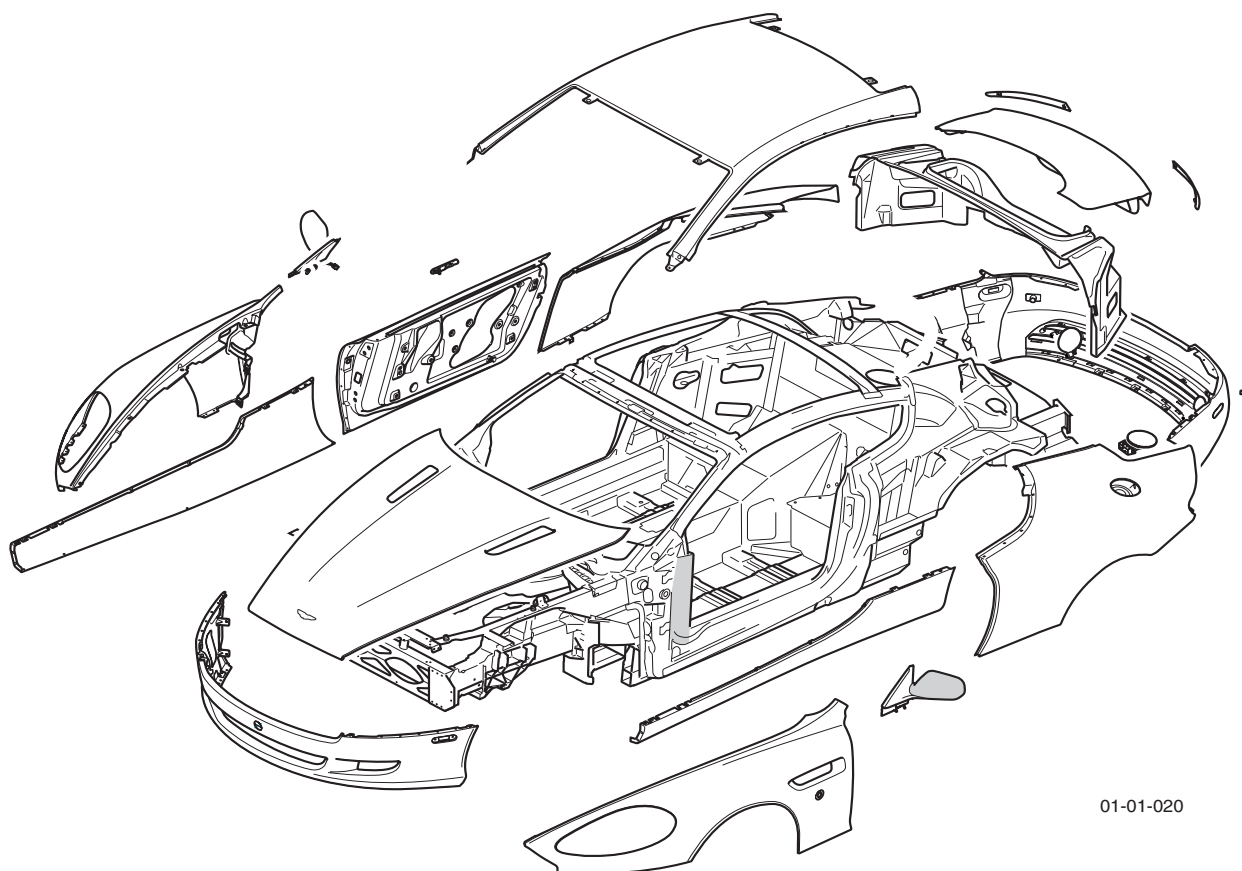
Overview

The all aluminium body underframe is bonded using an immensely strong hot-cured XD4600 red adhesive.

The rear quarter panels, roof and side mouldings are bonded to the structure using cold-cured 2810 MV adhesive. The curing cycle is improved by using a hot air impingement system. In addition, the roof panel is connected to the rear quarter panels through ultrasonic welds.

The composite front wings are bolted to the structure.

At no time should the body structure be subjected to temperatures in excess of 120°C (248°F).



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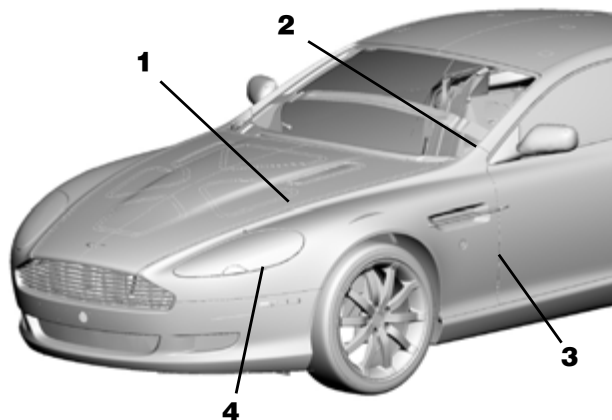


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Body System (01.00)

Front End (01.02)

Front Wings Specifications



Wing Standard (mm)

Item	1	2	3	4
Nominal gap	3.5	2.0	3.75	3.0
Tolerance	±0.75	+0.5 / -0.0	± 0.75	±0.5
Flush	-0.0	0.0	0.0	-0.5
Tolerance	±1.5	+0.0 / -0.5	±1.5	±0.5
Taper	N/A			
Symmetry	N/A			

Torque Figures

Description	Nm.	lbs / ft.
Wing Top	8	6
Wing Top Single nut	Tight with 'Threadlock'	
Lower Rear	8	6
Slam panel	8	6
PCM Bracket	10	7
Bonnet Damper	25	18

Maintenance

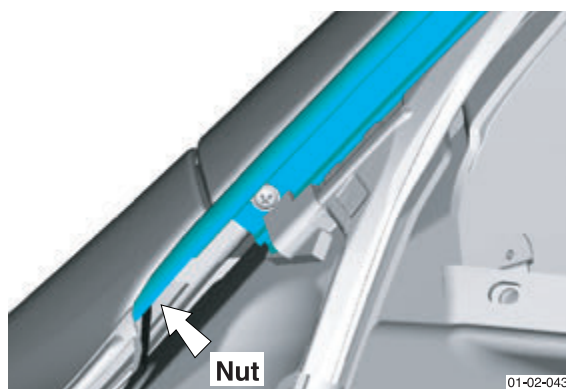
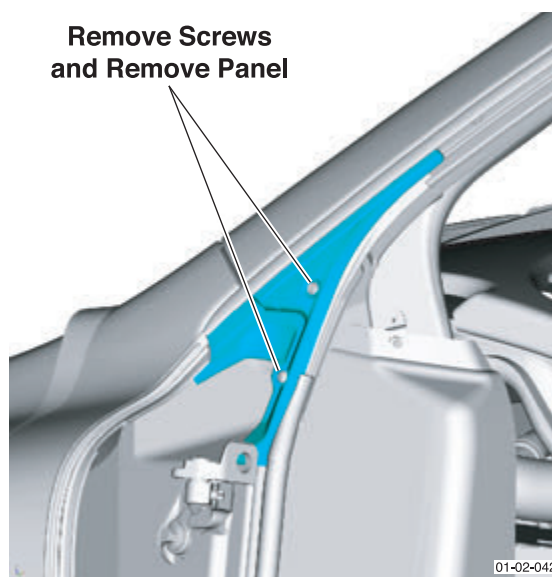
Front Wing

Repair Operation Time (ROT)	
Item	Code
Front Wing Renew	(LH) 01.02.KB
	(RH) 01.02.LB

Removal

1. Disconnect the vehicle battery.
2. Remove the wing top nut.

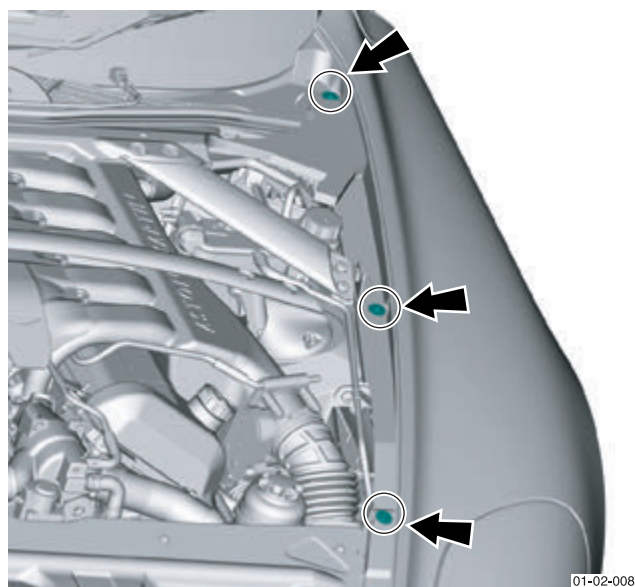
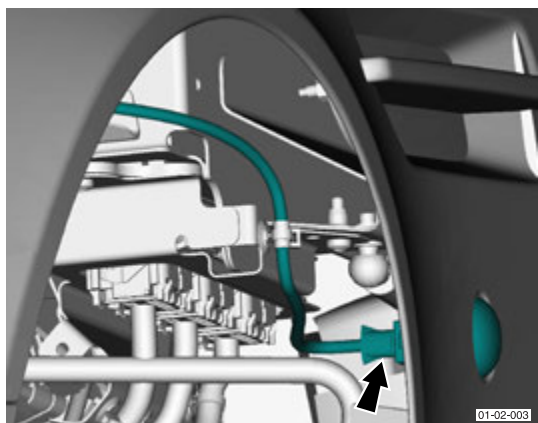
Remove Screws and Remove Panel



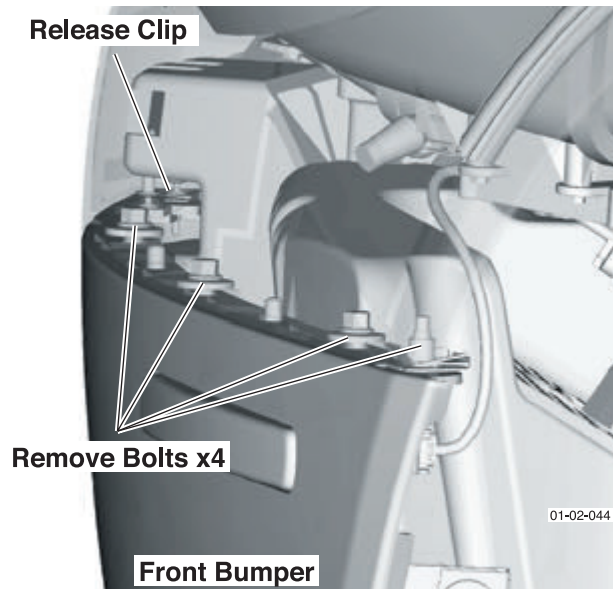
If using a two post vehicle lift, remove the screws that secure the rear section of the road wheel arch liner. Hold back the rear section of the road wheel arch liner to allow the foot of the vehicle lift to be positioned correctly. (Refer to 'Jacking Points', page I-I-IX)

3. Remove the front road wheel and road wheel arch liner.

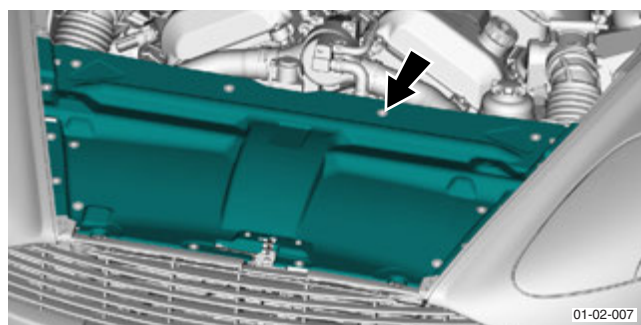
4. Disconnect the side repeater lamp wiring harness plug. 7. Remove bolts (x3).



5. Disconnect the wing from the bumper (Refer to 'Front Bumper', page 1-13-1).



6. Remove the slam panel (bolts x12). Remove the front grill bolt (x2).



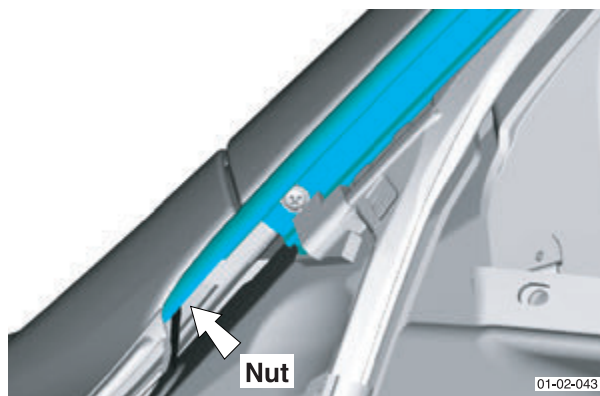
8. Loosen bolts (x2).



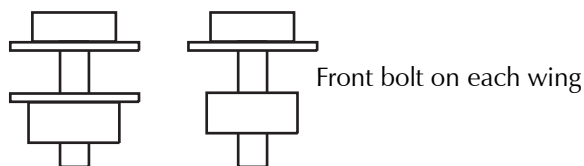
9. Lift from the rear lower edge to disengage the wing from the two loosened bolts. Pull the wing from the body.

Installation

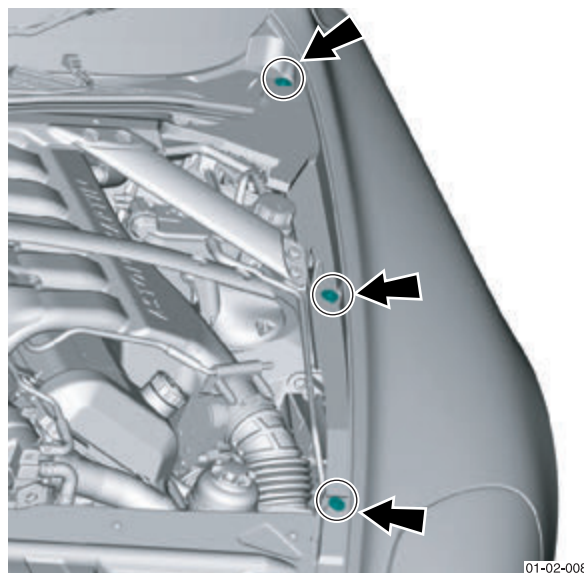
1. Place the wing to the body.
2. Locate:
 - The wing top stud



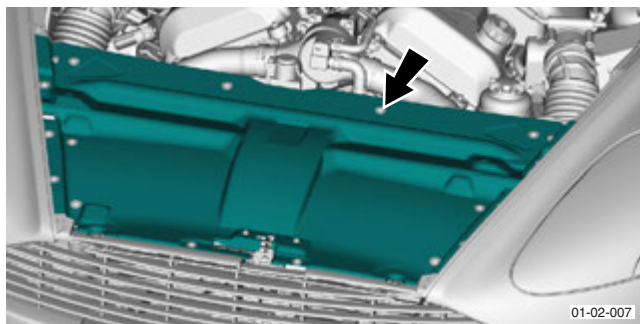
- The rear lower wing to the loosened bolts
3. Install the wing lower edge clips and bolt.
 4. Connect the wing to the bumper.
 5. Install bolts to the wing top edge. Do not tighten.



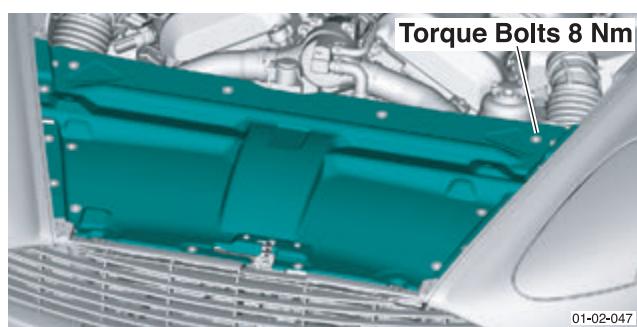
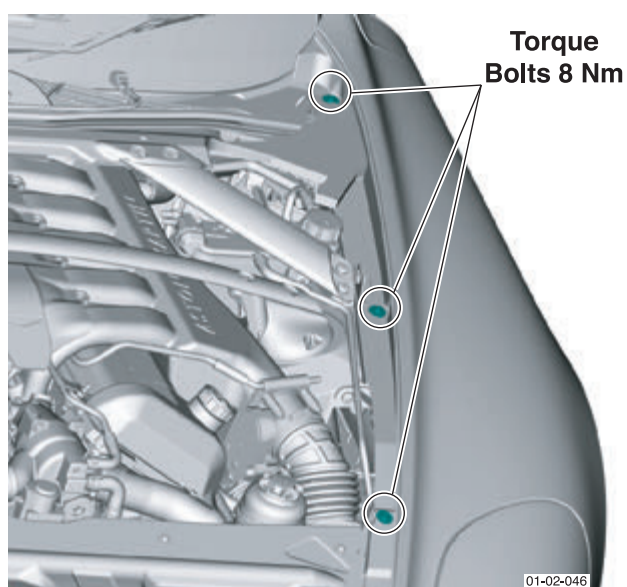
The two lower rear wing bolts have the same bolt / washer arrangement.



6. Install the slam panel.



7. Check wing alignment. Refer to specifications. Adjust if required.
8. Torque all wing fixings.



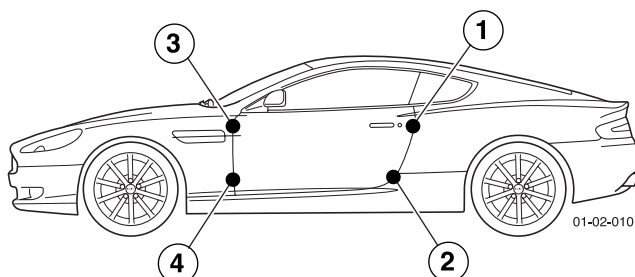
9. Connect the side repeater lamp wiring harness plug.
10. Install the road wheel and road wheel arch liner (Refer to 'Road Wheel Nut Torque Tightening', page 4-5-7).
11. Connect the vehicle battery.

Body System (01.00)

Body Closures (01.03)

Specifications

Doors



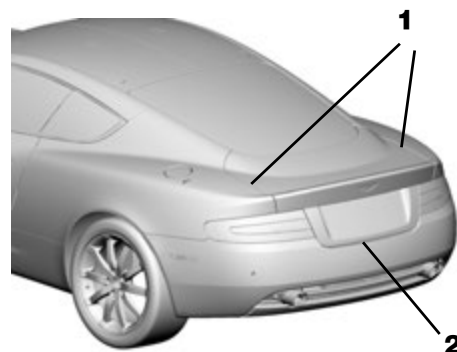
Door Standard (mm)				
Item	1	*2	3	4
Nominal gap	3.5	3.00	3.00	3.75
Tolerance	±0.75	±1.0	±1.0	± 0.75
Flush	0.0	-1.0	-1.0	0.0
Tolerance	±1.5 / 0.0	+0.0 / -1.0	±1.0	±1.5
Taper	N/A			
Symmetry	N/A			

* Flushness blends to 0.0 at the rear quarter

* Gap blends to 3.5 at rear quarter

Torque Figures		
Description	Nm.	lb. / ft.
Hinge to Door	47.5	33.5
Hinge to Body	36	26.5
Door Striker plate		

Boot Lid



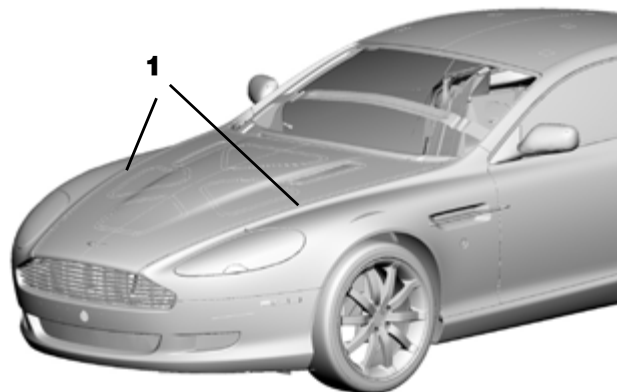
Boot Standard (mm)

Item	1	2
Nominal gap	3.5	3.5
Tolerance	±0.75	±1.0
Flush	-0.5	N/A
Tolerance	+0.5 / -1.0	N/A
Taper	1 mm Max. across the length	
Symmetry	1 mm Max. difference LH to RH	

Torque Figures

Description	Nm	lb. / ft.
Hinge to Body	25	18

Bonnet



Bonnet Standard (mm)

Item	1
Nominal gap	3.5
Tolerance	±0.75
Flush	-0.0
Tolerance	±1.5
Taper	N/A
Symmetry	N/A

Torque Figures

Description	Nm	lb. / ft.
Hinge to Body	25	18

Maintenance

Doors

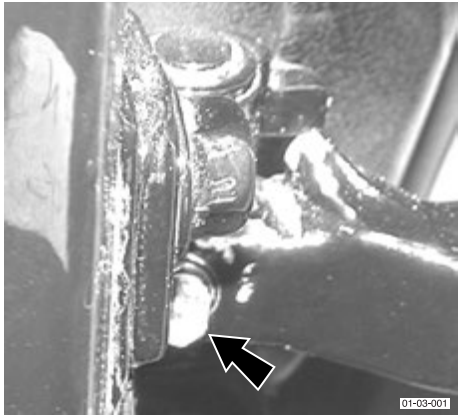
Repair Operation Time (ROT)		
Item	Code	
Remove and reinstall	LH	01.03.EA
	RH	01.03.FA

Removal

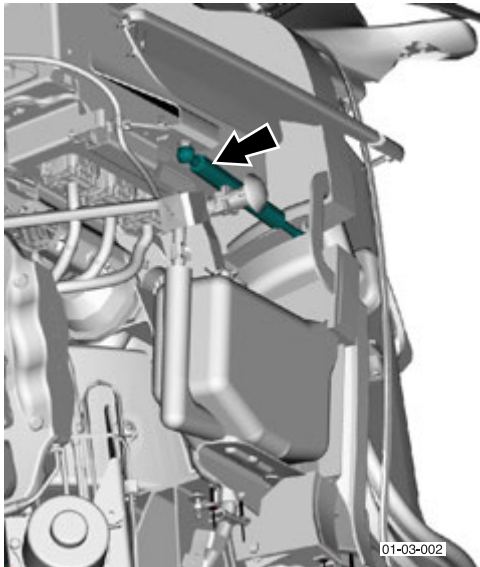
Warning
The doors are heavy. Removal is a two person operation.

Caution
Before removing the door ensure that the vehicle body work is sufficiently protected from possible damage.

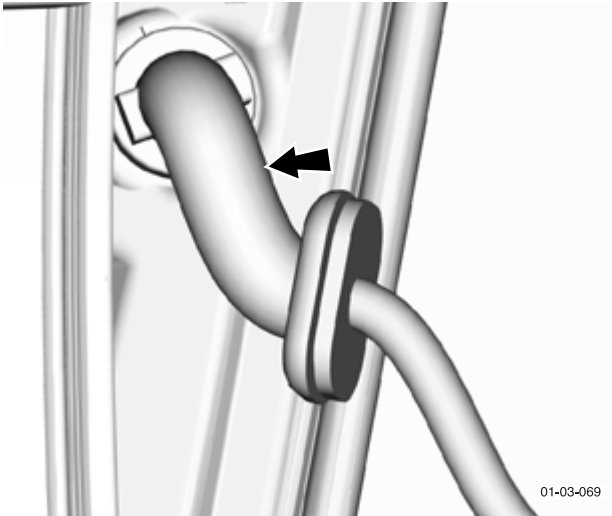
1. Disconnect the vehicle battery.
2. Open the vehicle door.
3. Slightly loosen the door hinge lock screws (x2).



4. Remove part of the roadwheel arch liner to gain access to the door check rod. Disconnect the door check rod.



5. Lift the door off the support studs and withdraw the door enough to gain access to the door wiring harness plug. Disconnect the wiring harness plug.



6. Withdraw the door from the vehicle and install on service tool (Refer to '501-F111 (Door Service Trolley)', page 20-1-8).

Installation

Warning
The doors are heavy. Replacement is a two person operation.

Caution
Before installing the door ensure that the vehicle body work is sufficiently protected from possible damage.

1. Place the door to the vehicle. Connect the door wiring harness plug.
2. Align the door to the upper and lower hinges. Install the door onto the hinges.



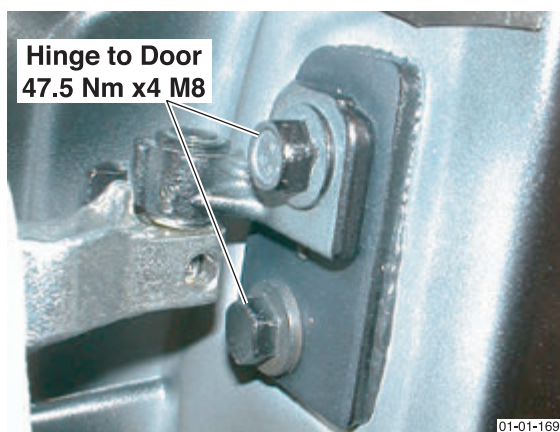
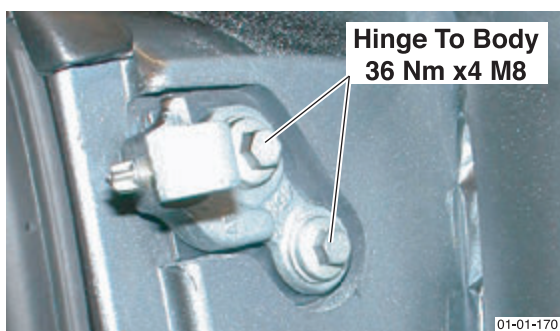
3. Connect the door check rod. Install the roadwheel arch liner.
4. Align the door. Manoeuvre the door to achieve correct gaps and flush (add / remove shims as required). Tighten the bolts. Do not torque.

5. Connect the vehicle battery.

⚠ Warning ⚠

Never touch the door lock linkage with electrical power available to the door. The window mechanism can move and trap hands, arms, etc. in door frame.

6. Check door alignment and closure of the door catch. Adjust striker plate if required.
7. When satisfied with the door install - torque the hinge bolts.
 - Hinge to Body - **36 Nm**.
 - Hinge to Door - **47.5 Nm**.



8. Check for:
 - Correct operation of all door lock functions.
 - Correct operation and sealing of the door window.

New Door Assembly

Repair Operation Time (ROT)

Item	Code
Remove and install	LH 01.03.CB RH 01.03.DB

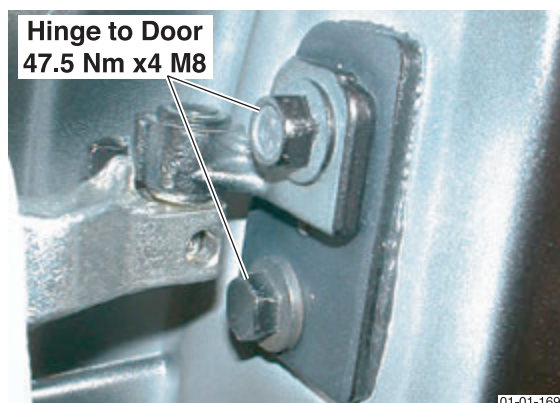
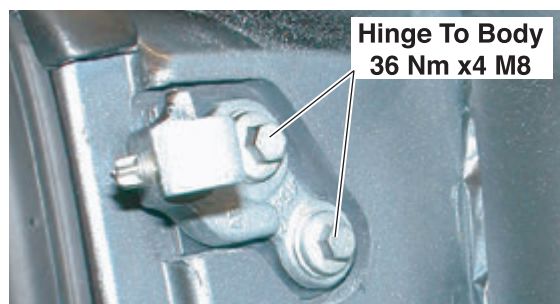
Preliminary Hinge Setup

1. Install the door onto the hinges.
2. Place a weight of 16 kg (to compensate for weight of door windows, locks etc.) hanging from inner door skin as shown.



Weight and position are critical to accurately simulate weight and distribution of door furniture. Adjustment is difficult on a fully installed door.

3. If removed, install the front wing (Refer to 'Front Wing', page 1-2-1).
4. Gently close the door. Check for an acceptable initial install.
5. Align the door. Manoeuvre the door to achieve correct gaps and flush (add / remove shims as required). Tighten the bolts. Do not torque.
6. Open the door and torque all hinge bolts. Remove the door weight.
 - Hinge to Body - **36 Nm**.
 - Hinge to Door - **47.5 Nm**.



7. Release the hinge locking screws and remove the door for installation of window, locks etc.

Boot Lid

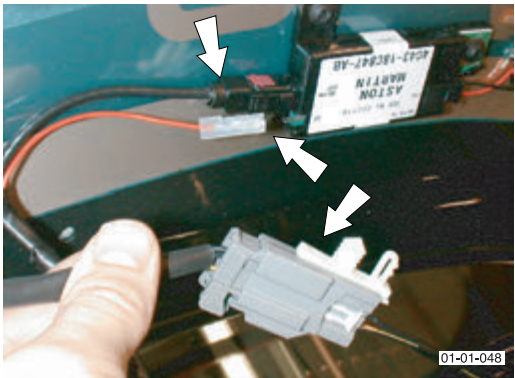
Repair Operation Time (ROT)	
Item	Code
Remove and reinstall	01.03.BB

Removal

Warning

The boot lid is heavy. Removal / replacement is a two person operation.

1. Open the boot lid.
2. Remove the boot lid trim panel (Fir trees).
3. Disconnect the boot lid harness.



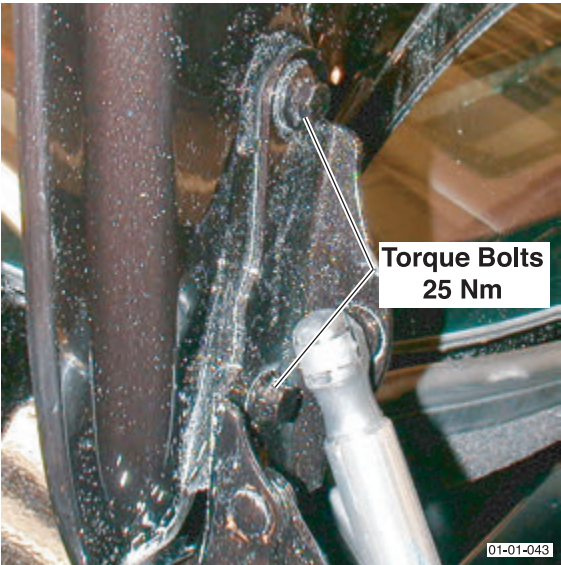
4. Slightly loosen the bolts (x4) that secure the boot lid to the boot lid hinges.
5. Support the boot lid. Remove the hinge bolts.
6. Withdraw the boot lid from the vehicle.

Installation

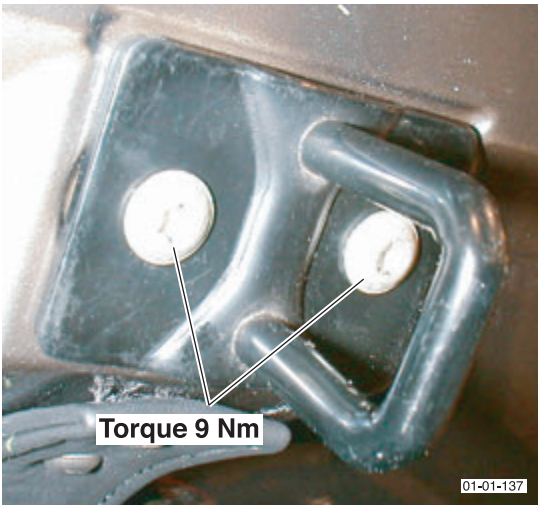
1. Align the boot lid to it's hinges. Install bolts (x4) sufficiently to manoeuvre the boot lid on it's hinges. Gently lower the boot lid rear edge, ensure the front corners do not touch the rear wings.
2. Align the boot lid front edge centrally in the boot aperture. Manoeuvre as required to achieve correct gaps.
3. Partially raise the boot lid and 'nip' up the hinge bolts.



4. Lower the boot lid. Check for correct alignment and readjust if required.
5. Fully raise the boot lid. Torque the hinge bolts to 25 Nm.



6. Gently close the boot lid. Check for correct engagement of the boot latch. Adjust the boot latch if required. Torque the boot latch bolts, to 9 Nm.

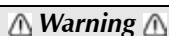


7. Connect the boot lid wiring harness plugs.
8. Fully close the boot lid. Check for correct operation of the boot release switch and remote transmitter boot lid enable.
9. Install the boot lid trim.

Bonnet

Repair Operation Time (ROT)	
Item	Code
Remove and reinstall	01.03.AB

Removal



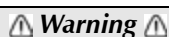
The bonnet is heavy. Removal is a two person operation.

1. Open the bonnet.
2. Disconnect the windscreen wash pipe.
3. Slightly loosen the bolts (x4) that secure the bonnet to the hinge.
4. With the bonnet supported, disconnect the gas struts and remove the hinge bolts (x4).



5. Withdraw the bonnet from the vehicle.

Installation / Realignment

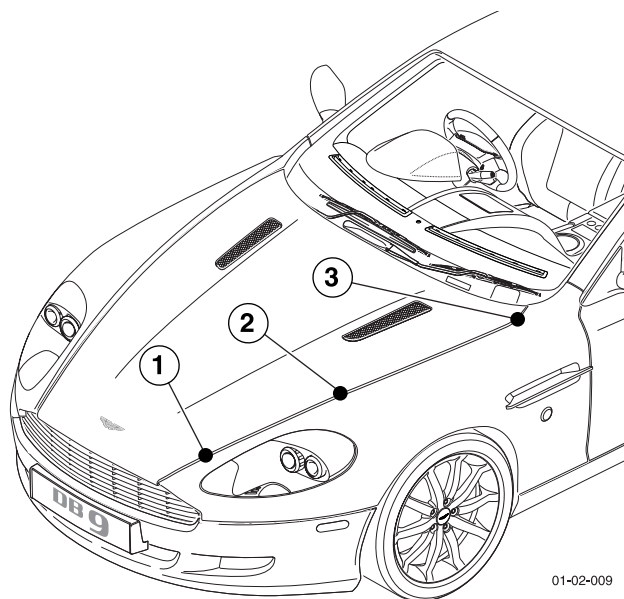


The bonnet is heavy. Replacement is a two person operation.

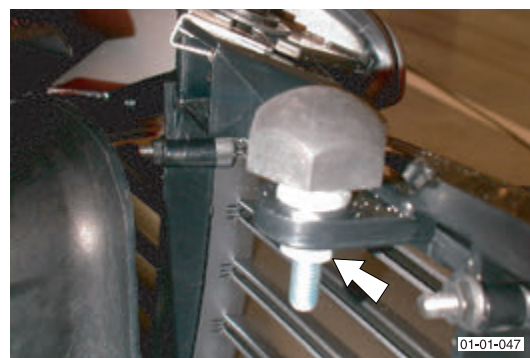
1. Align the bonnet to it's hinges. Install bolts (x4) sufficiently to manoeuvre the bonnet on it's hinges. Gently lower the bonnet. Adjust so that the corners do not touch the wings at the front and rear. Align the bonnet front edge centrally in the aperture.
4. Fully raise the bonnet. Torque all hinge bolts to **25 Nm**.
5. Install the bonnet gas struts.
6. Gently close the bonnet. Check for correct engagement of the bonnet latch. Adjust if required to achieve the flush specification.
 - Turn the nut anti-clockwise to raise or clockwise to lower the bonnet catch until the bonnet is flush with the wings when closed.



7. Fully close the bonnet. Check for correct operation of the bonnet release lever.



2. Partially raise the bonnet. 'Nip' up one hinge bolt either side.
3. Lower the bonnet. Check for correct alignment. Readjust if required.





ASTON MARTIN

Body System (01.00)

Interior Trim (01.05)

This section covers removal and installation of the interior mouldings and trim panels. In many instances, one component overlaps another component. If this condition is found, it will be necessary to loosen or remove the overlapping component before removal, to prevent damage to either component.

Specifications

Torque Figures

Description	Nm	lb. / ft.
Door Handle	9	6.5
Seat Belt Mounts	35	26

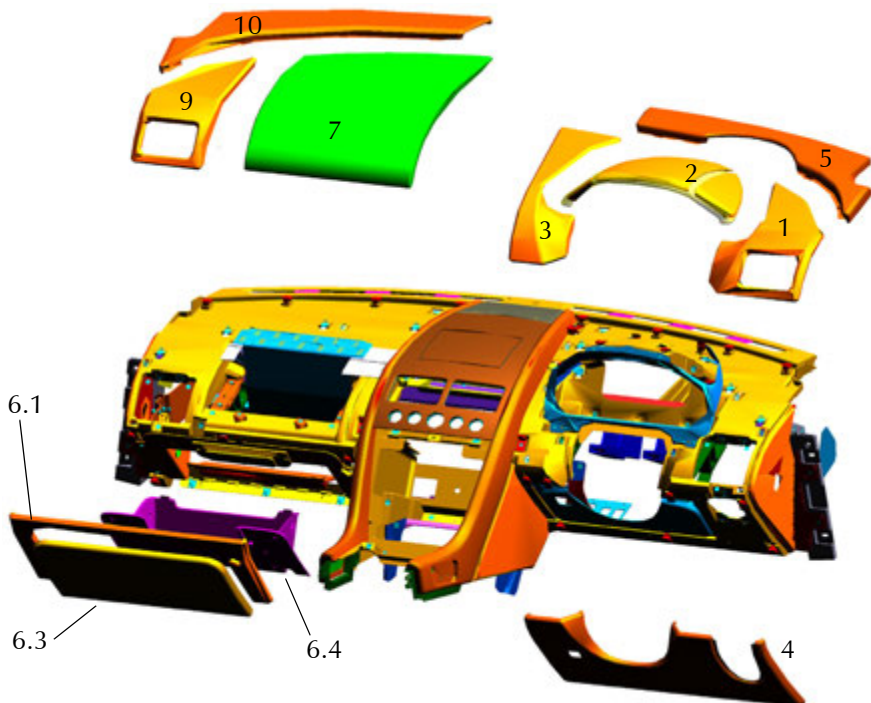
Maintenance

IP Trim

If required, removal of the IP trim can be achieved while the IP is in the vehicle.

Remove

1. Panel (1) - Pull off.
2. Hood (2) - Pull off.
3. Panel (3) - Pull off.
4. Panel (4) - Pull off. Disconnect the air temperature pipe.
5. Panel (5) - Front, screws (x3)
6. Glove box.
 - 6.1 Pull off the outer trim panel. Disconnect the glovebox release switch wiring harness plug.
 - 6.2 Release the damper cord.
 - 6.3 Remove screws (x3) from the glovebox door hinge. Remove door.
 - 6.4 Remove screws (x4) from the sight shield. Remove the sight shield and glovebox.
7. Panel, Airbag (7).



Caution

Withdraw the airbag panel carefully. The airbag panel can crease if forced out.

- 7.1 Remove screws (x3).
- 7.2 Lift from the front edge. Withdraw out of clips (x3).
8. Remove the airbag.

Warning

When removed, place the airbag in a secure container to prevent personal injuries if the airbag activates.

- 8.1 Disconnect the wiring harness plugs (x2).
- 8.2 Remove bolts (x4). Withdraw the airbag.
9. Panel (9) - Screws (x2), then pull off.
10. Panel (10) - Screws (x4).

11. If required, remove the center stack.

- 11.1 Pull off the veneer panel (Service tool No. TBA). Disconnect the wiring harness plugs.
- 11.2 Remove the speaker grill - Screws (x2).
- 11.3 Remove the center panel (Radio etc.) - Screws (x4)
- 11.4 Remove the center stack - Screws (x6).
- 11.5 Remove the media player - Screws (x2). Disconnect the wiring harness plugs.

Installation Notes

The panels, etc., are best replaced in the order they were removed. Note the following:

1. When installing the glovebox shield ensure that the tab in the top centre locates into the slot in the substrate.

Roof Trim

Removal

1. Remove (pull away) the cant rail.

The cant rail is held in by 'FirTrees'.

The front of the cant rail is held in place by the 'IP'. Pull the cant rail away from the back first then pull the front out from the 'IP'.

2. Remove the interior mirror (screw x1).
3. Remove the reading lamp pod (clips x2, screw x1, wiring harness plugs x2)
4. Remove the sun visors (screws x2 (x2)).

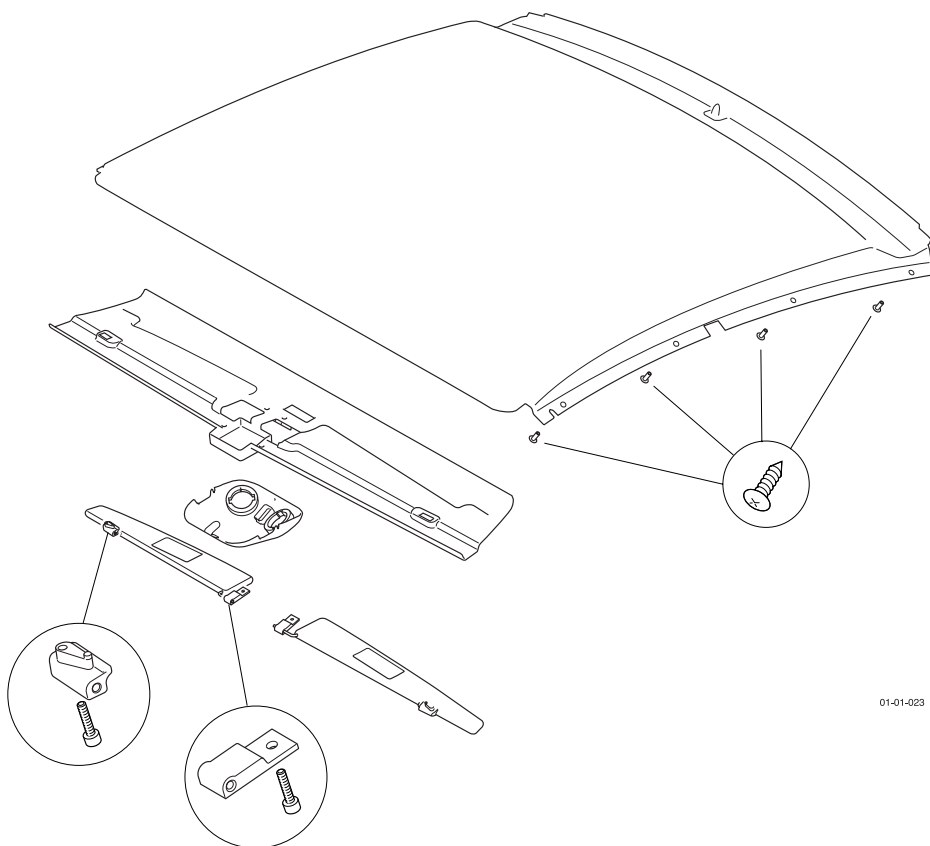
The front headlining will fall away.

5. Remove the headlining.

Held in place with 'FirTrees' and two velcro panels at the rear.

Installation

1. Install the roof lining.
2. Install the front headlining.
While holding the front headling in place install the sun visors.
3. Install the interior mirror.
4. Install the cant rails.
Place the front of the cant rail into location at the IP, and work towards the rear, locating the 'FirTrees'.



01-01-023

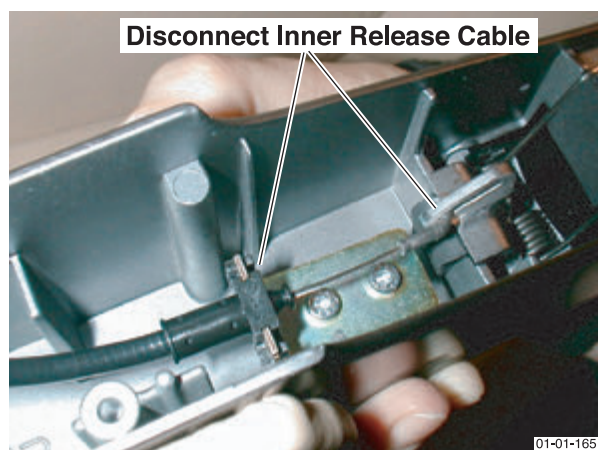
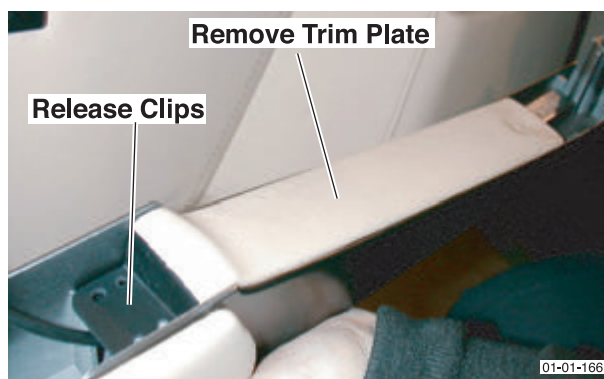
Door Trim

Removal

1. Lower the door glass fully.
2. Disconnect vehicle battery.
3. Release the door handle (Bolts x2).



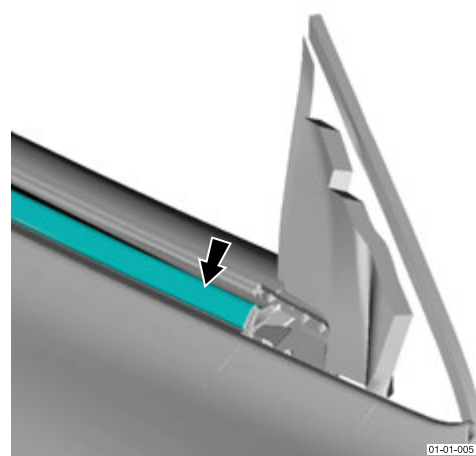
4. Remove the door handle trim plate and disconnect the release cable.



5. Remove the door mirror cheater panel.



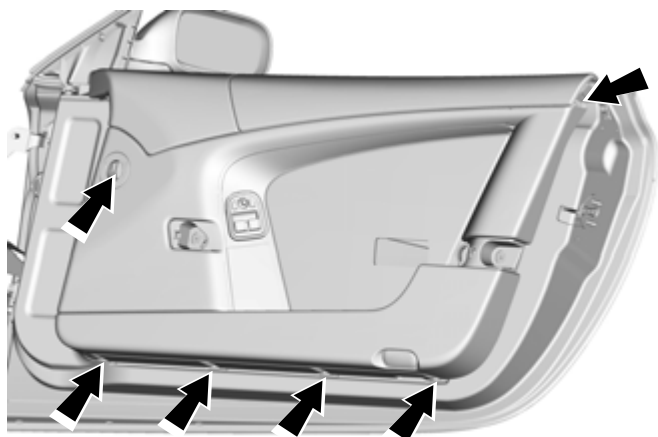
6. Remove outer chrome waist rail trim.



7. From the outside remove screws (x2).



8. Remove the door trim panel screws (x6). Withdraw the door trim panel to gain access to the window and mirror switches. Disconnect the switches.

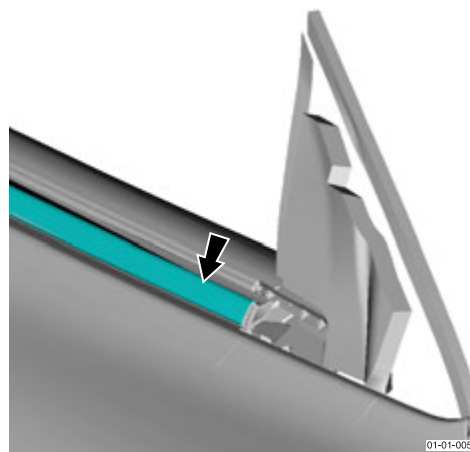


Installation

1. Place the door trim panel to the door and connect the wiring harness plugs.
2. Install the door trim panel screws (x6).
3. Install screws (x2).

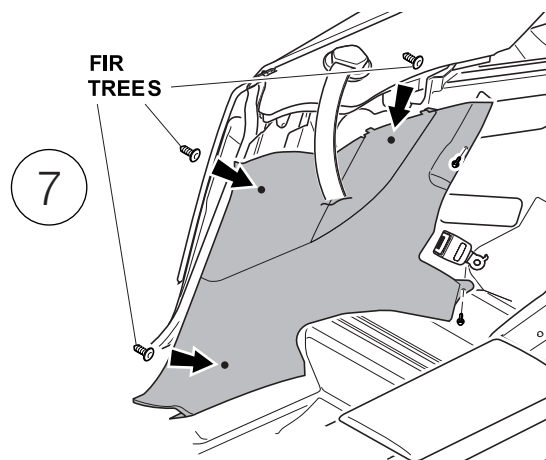
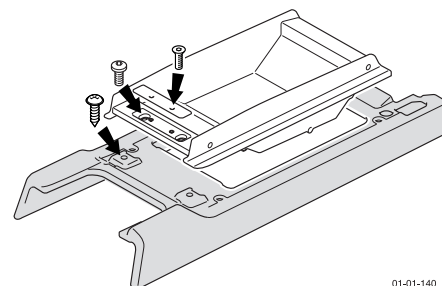
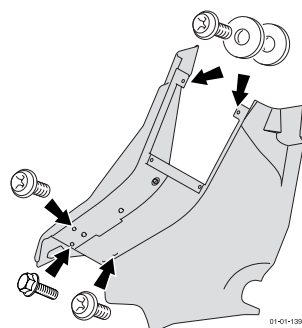
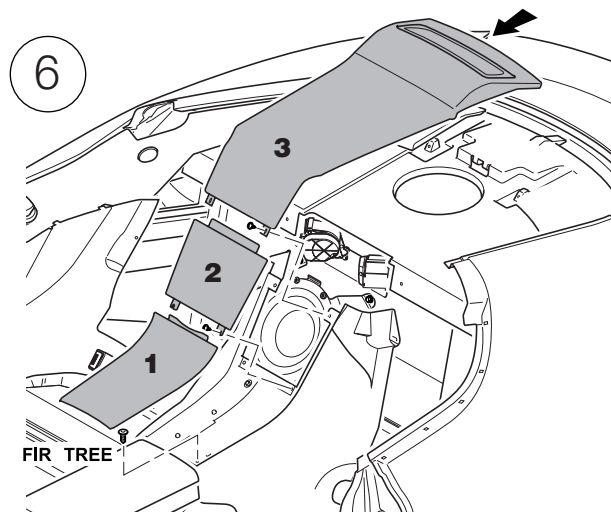
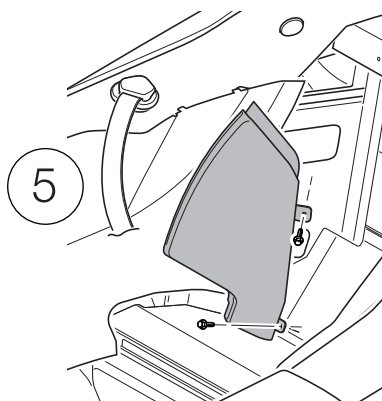
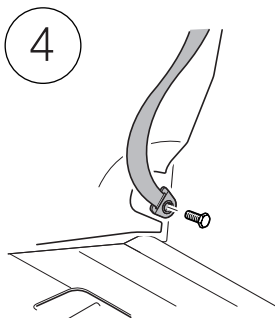
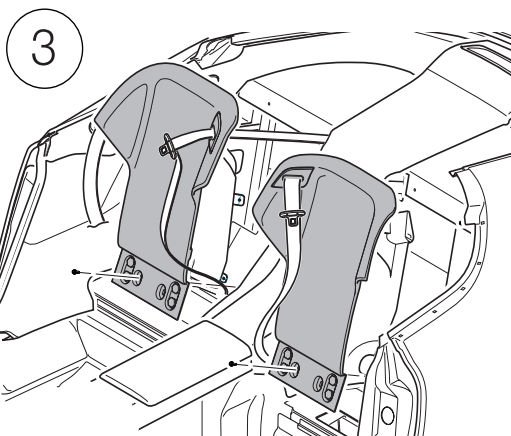
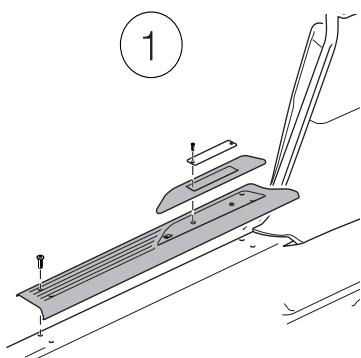


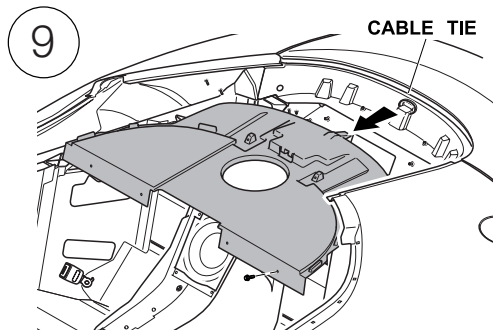
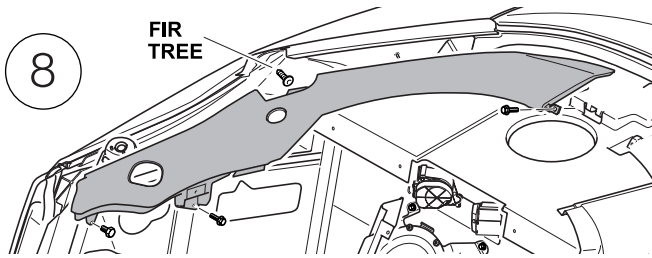
4. Install the outer weather seal strip.



5. Install the door mirror cheater panel.
6. Install the door pull
 - 6.1 Connect the door inner release cable.
 - 6.2 Install the door pull trim plate.
 - 6.3 Install the door handle. Torque to **9 Nm**.
7. Connect the vehicle battery.

Rear Trim Removal (Coupe)





Install (Coupe)

Install the trim in reverse order to remove.

Torque seat belt mounts to **35 Nm**.

Removal (Volante)

1. Remove the seat bases.
2. Remove the seat backs.
 - 2.1 Pull off and up to remove the head support.
 - 2.2 Remove screws (x2 (Bottom) and x2 (top)).
3. Remove the door 'kick' plates.
 - 3.1 Remove screws x2.
 - 3.2 Remove screws x4. Withdraw the 'kick' plate.
 - 3.3 Repeat for the second 'kick' plate.
4. Remove the rear seat belt top mounts.
5. Remove the rear quarter panels.

Screws (x2 (lower)), screw (x1 (upper)) and pull the front away (firtrees). Repeat for the second quarter panel.
6. Remove the 1st trim panel of the rear console.

Pull up at the front and lift off.
7. Remove the 2nd trim (speaker) panel of the rear console.

Remove the screws (x2).
8. Remove the 3rd trim panel of the rear console.

Remove the screws (x2) from the bottom and screws (x2) from the rear of the ROPS closure panel.
9. Remove the rear center console.

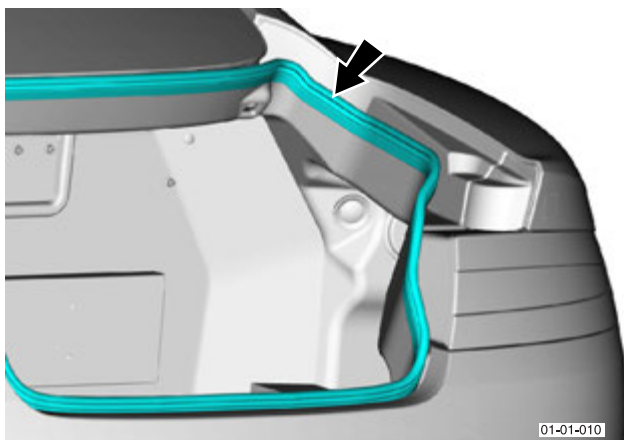
Install (Volante)

1. Install the rear center console.
2. Install the center console trim panels.
3. Install the rear quarter panels.
4. Install the door 'kick' plates.
5. Install the seat belt top mounts. Torque to **35 Nm**.
6. Install the seat backs and bases.

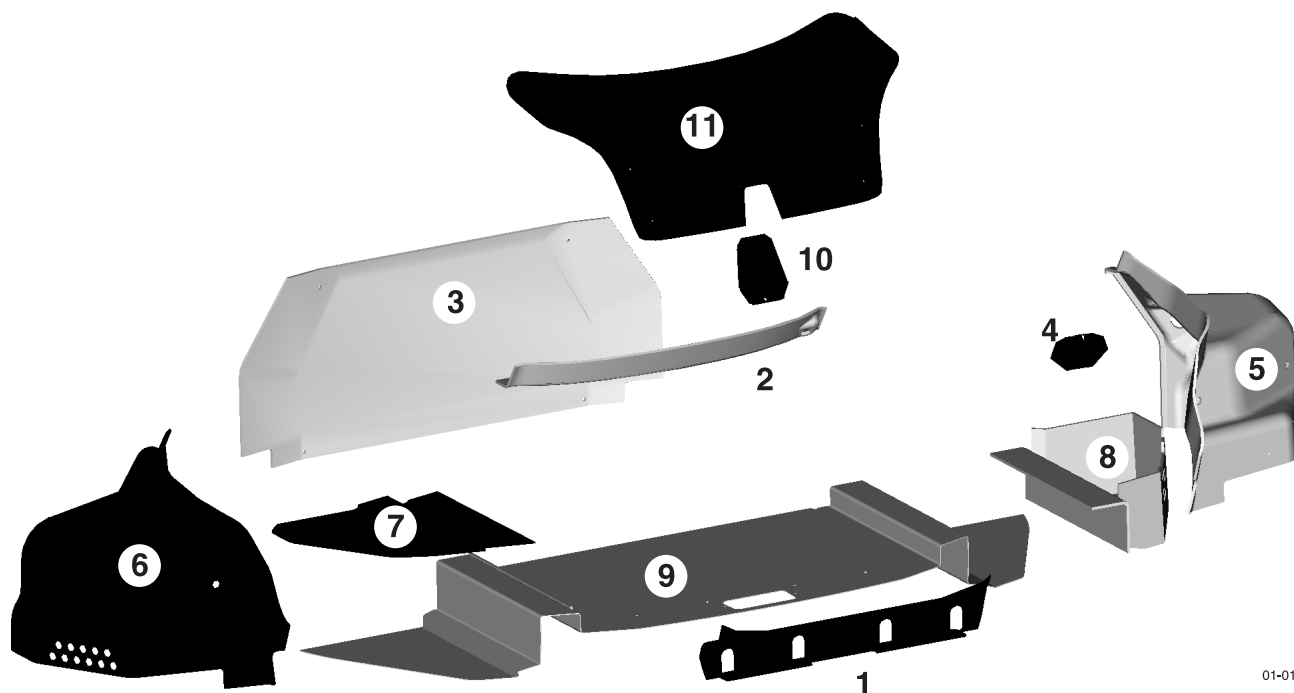
Boot Trim

Removal

1. Remove the boot weather seal.



2. Remove the boot trim in the following order detailed above.



Item	Fixings	Item	Fixings
1.	Fir trees	6.	Fir trees
2.	Fir trees	7.	Fir trees
3.	Fir trees	8.	Fir trees
4.	Fir trees	9.	Fir trees
5.	Fir trees	10.	Fir trees
		11.	Fir trees

Installation

The rear trim is best installed in reverse order of the removal procedure.



ASTON MARTIN

Body System (01.00)

Exterior Trim (01.08)

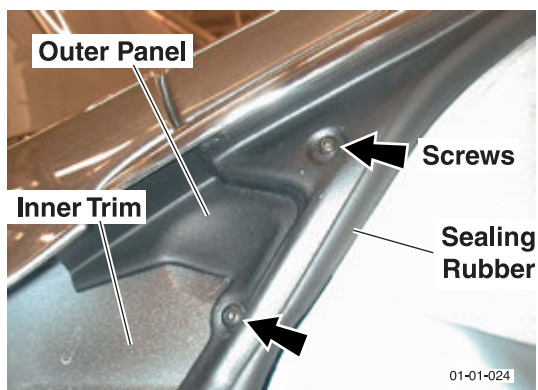
Maintenance

Side Trim

Removal

1. Remove the trim panel.
 - 1.1 Remove the top / bottom screws (x2). Remove the outer panel.

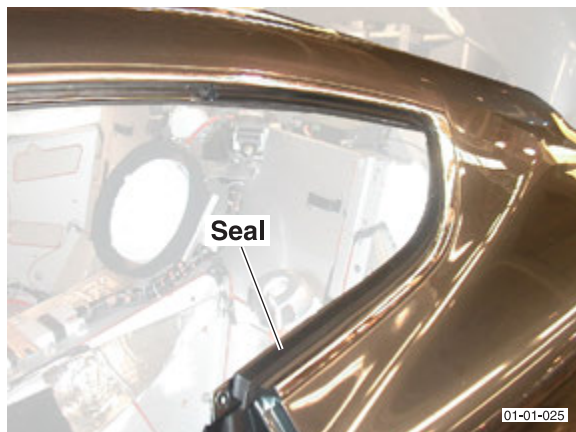
Pull the top of the outer panel away from the vehicle and slide it forward.



2. Pull the inner trim panel away from the vehicle.

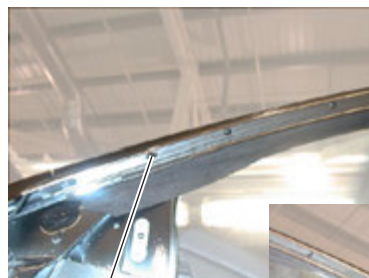
Pull the inner trim panel downwards.

3. Remove the door sealing rubber.
4. Remove the rear 1/4 glass and seal.



5. Remove the chrome trim screws (x18). Remove the chrome trim.

Support the trim as it is removed.



Installation

1. Install the chrome trim.
2. Rear 1/4 glass seal and glass.
3. Install the mirror trim panels. Insert the section of door sealing rubber as the inner and outer trim panels are installed.

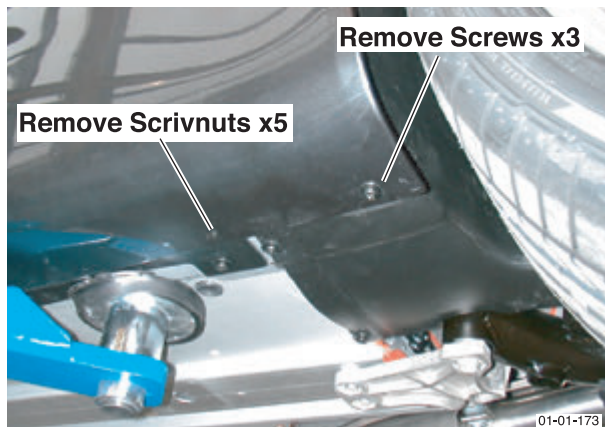
The lower screw, screws into fibre glass. Ensure that the lower screw is screwed into the original threads.

4. Install the door sealing rubber.

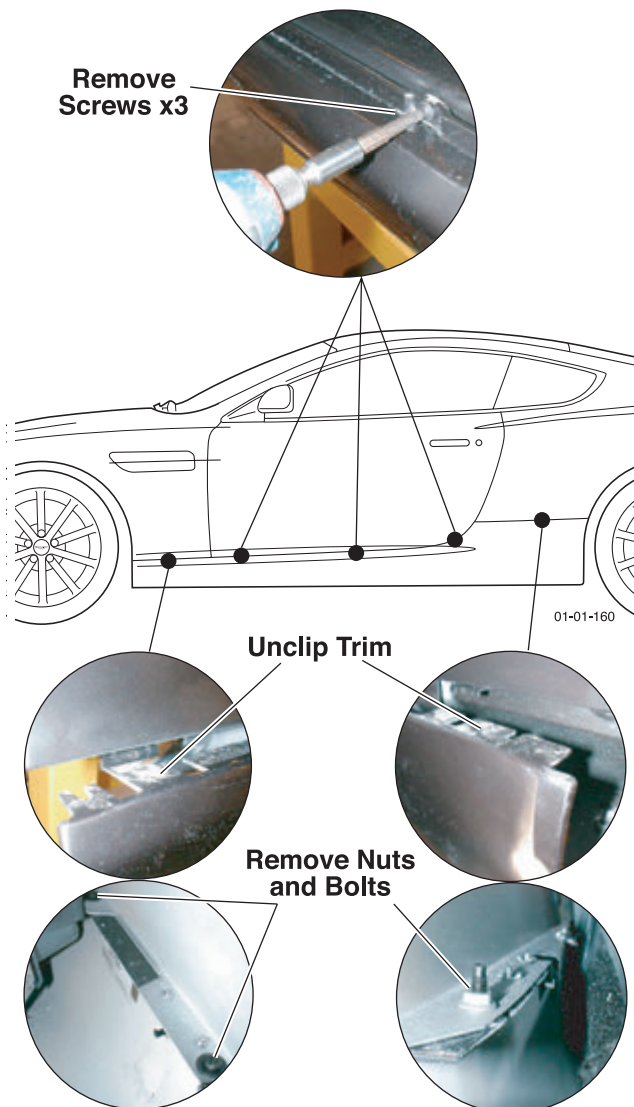
Sill Trim

Remove

1. Remove the front and rear road wheel arch liners sufficiently to gain access.
2. Remove (x3) screws and (x2) scrivenuts.



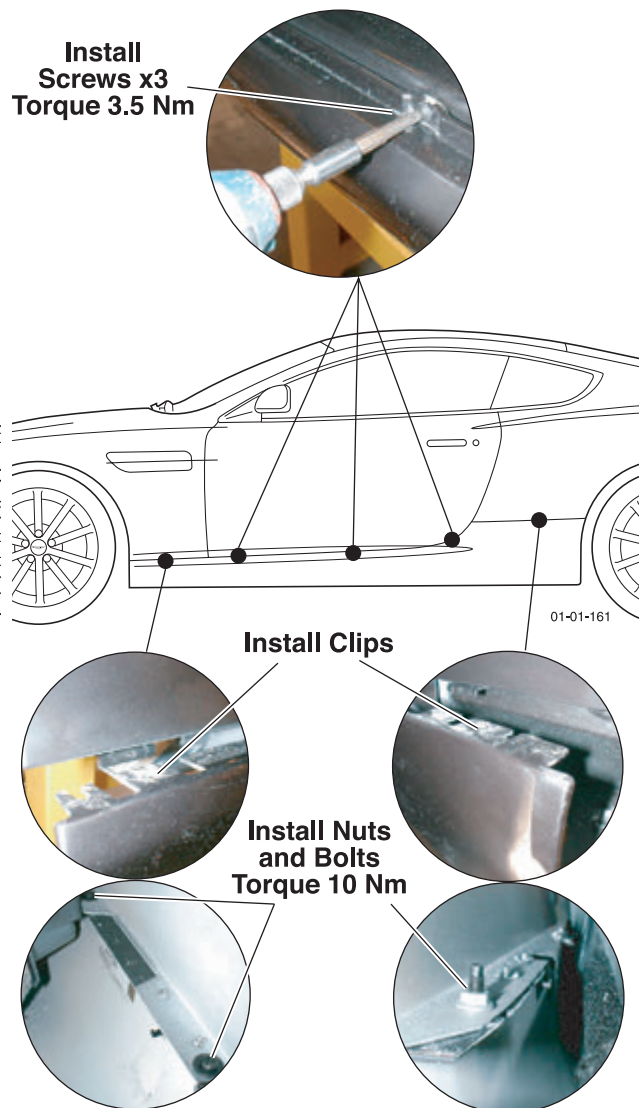
3. Remove (x3) nut and bolt (front x2, rear x1).
4. Remove the door aperture screws (x3).



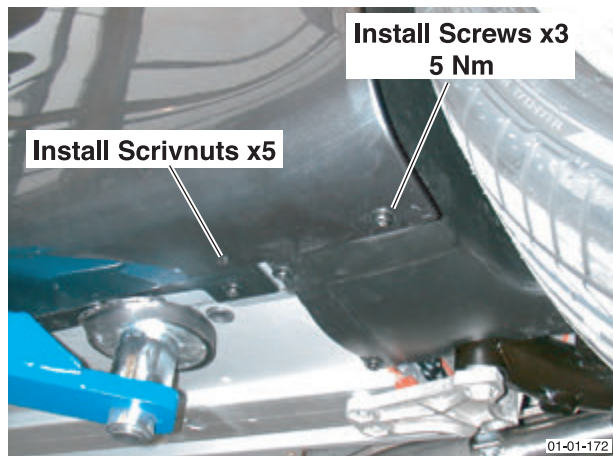
5. Unclip the sill trim from the vehicle body. Withdraw the sill trim.

Installation

1. Offer the sill trim to the vehicle.
2. Install the sill trim using 3 clips (front x1, rear x2).
3. Install the door aperture screws (x3).
4. Install (x3) nut and bolt (front x2, rear x1). Torque to 6 Nm.



5. Install (x3) screws and (x2) scrivenuts.



6. Install the front and rear road wheel arch liners.



ASTON MARTIN

Body System (01.00)

Mirrors (01.09)

Specifications

Torque Figures

Description	Nm	lb. / ft.
Mirror Mounting	20-25	15-18.5

Maintenance

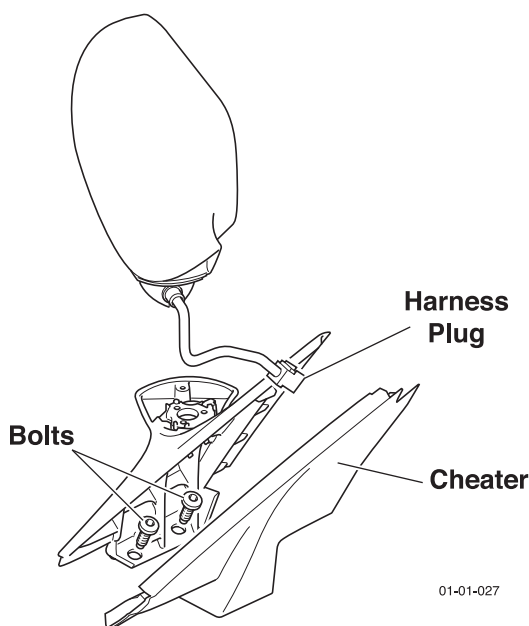
Repair Operation Time (ROT)

Item	Code	
Remove and install	LH	01.09.AB
	RH	01.09.BB

Door Mirrors

Removal

1. Remove the door trim panel (Refer to 'Door Trim', page 1-4-3).
2. Remove the door mirror 'cheater' panel (pull off).



3. Disconnect the wiring harness plug.
4. Remove bolts (x2) and withdraw mirror.

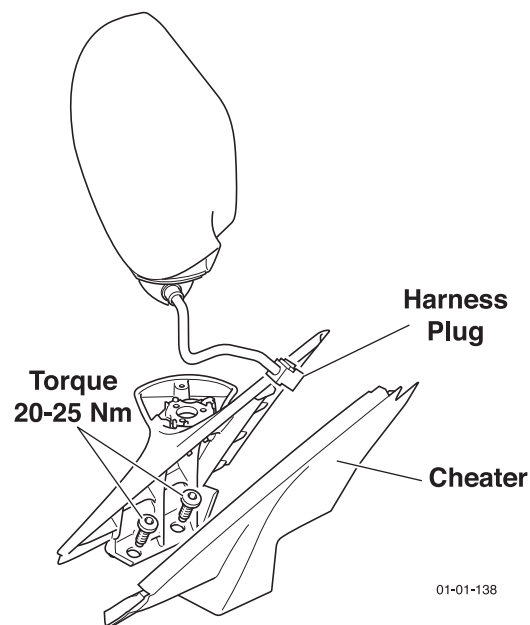
Installation

1. Place the mirror into position. Install bolts (x2).

The spring washer goes between the mirror bracket and the door. On the front bolt of each mirror, ensure that the plain washer goes between the bolt head and the mirror bracket.

Torque to **20-25 Nm**. As the front bolt is tightened ensure a flush install with the door.

The front bolt hole on each mirror has an enlarged hole, to allow a small amount of adjustment.



2. Connect the wiring harness plug.
3. Install the door mirror 'cheater' panel.
4. Install the door trim panel (Refer to 'Door Trim', page 1-4-3).



ASTON MARTIN

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Body System (01.00)

Seating (01.10)

Description

The front seats are installed with the following features:

- Integral side airbags
- Head restraints
- Safety belt buckle / pretensioner
- Electrically adjustable seat positioning and lumbar support
- Heated seat (optional)

Heated Seats

The heated seat system comprises:

- Heated seat switches
- Backrest heater element
- Cushion heater element and thermostat

The heated seat function permits the electrical heating of the seat back and cushion on the driver and front passenger seats. The heating system of each seat is selected by separate switches located on the inside of each seat base.

Once the heated seat function has been activated, it will operate until one of the following conditions have been satisfied:

- A fixed period of time has expired (10 minutes)
- If the engine is not running and the ignition key is removed
- A malfunction is detected by the heated seat module

Confirmation that the heated seat function is active is indicated by the illumination of an amber light in the instrument cluster.

Seat Module

The seat module is located under the front edge of the seat.

Specifications

Torque Figures		
Description	Nm.	lb. / ft.
Seat mountings	20-25	15-18.5
Seat Belt Mounts	35	26

Maintenance

Repair Operation Time (ROT)		
Item	Code	
Remove and install	LH	01.10.AA
	RH	01.10.BA

Front Seat

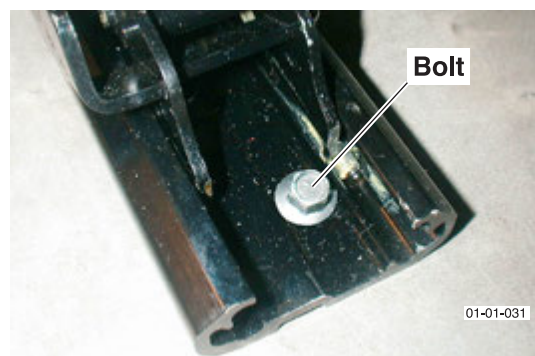
Removal

The front and rear seat rail mountings are positioned on four washers. Ensure the washers are collected during seat removal.

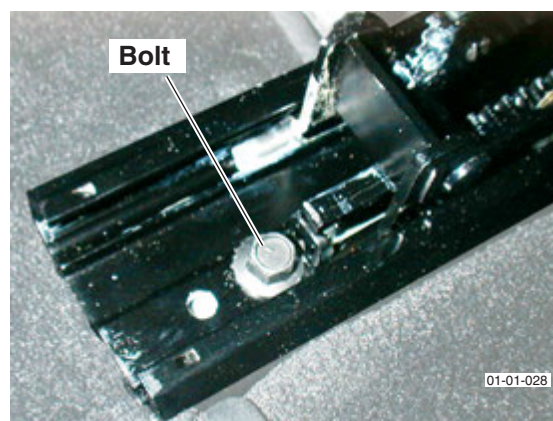
1. Motor the seat forward.

To power the drivers seat the ignition switch must be in the 'II' position

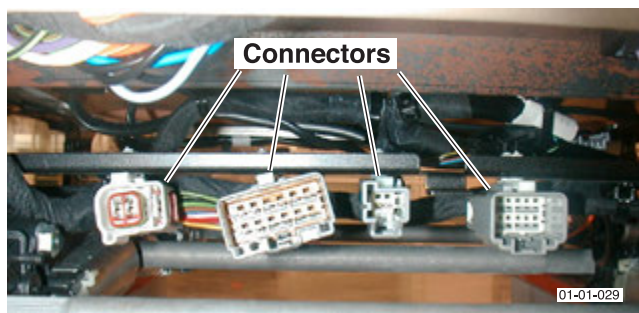
2. Remove bolts (x2) that secure the rear of the seat rails.



3. Motor the seat to the rear. Remove bolts (x2) that secure the front of the seat rails.



4. Tip the seat rearwards and disconnect the wiring harness plugs (x4).



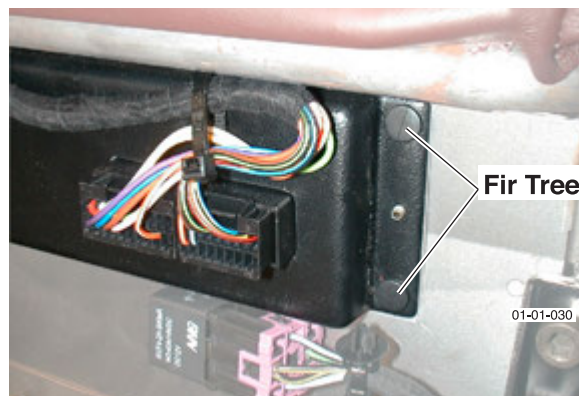
Seat Base Control Motors

The seat base control motors are an integral part of the seat base.

Seat Module

Removal

1. Remove seat from vehicle.
2. Remove the seat module. The seat module is held in by fir trees (x4).



Installation

1. Remove seat from vehicle.
2. Remove the seat module. The seat module is held in by fir trees (x4).

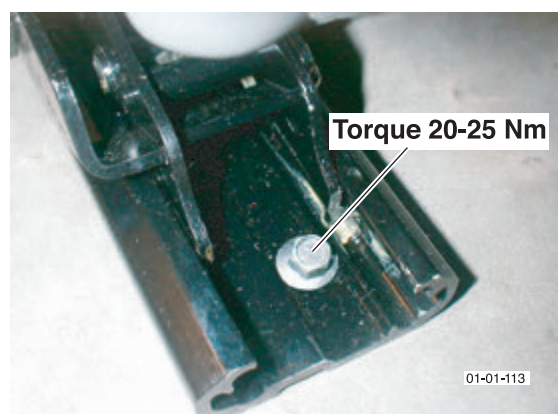
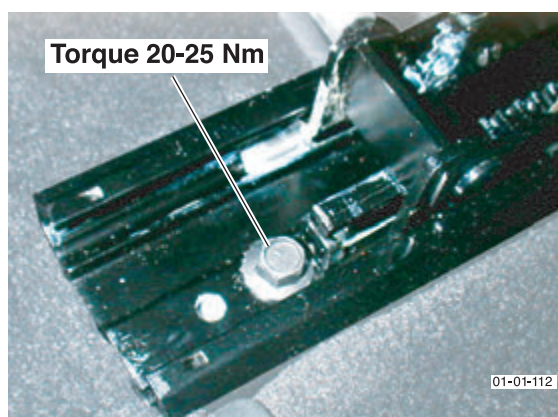
5. Remove the seat assembly.

Installation

1. Place the seat in the vehicle.
2. Connect the wiring harness plugs (x4).
3. Place the two spacers in position. Locate the seat over the seat mountings.



4. Install the front bolts, power the seat forwards and install the rear bolts. Torque bolts (x4) to **20-25 Nm**.



Seat Module Calibration

This mode allows the seat module to learn its position. The seat needs to know exactly where it is to electronically prevent seat movement into certain areas within the mechanical seat movement envelope.

Once the seat has been put in to calibration mode it will remain in this mode until it has been re-taught its position. There is no physical indication that the seat is in calibration mode, the seat could be left in this mode for some time before a user notices.

There is nothing wrong with the seat being in calibration mode for extended periods of time, it will only be apparent to the user when a rearward / downward seat movement is required.

The seat must be calibrated before rearward / downward movement is allowed.

Calibration mode is activated by a diagnostic command or by switching on the BDS while holding up the seat height switches.

1. With the Interior light relay 'On', i.e. door open, move the seat forwards or backwards, then disconnect the vehicle battery (either physically or via the BDS) before the interior light relay switches 'Off' (five minutes unlocked, 30 second locked).

The seat module is now in calibration mode.

The seat will not go into calibration mode if the interior light relay has been allowed to switch off since the last seat movement.

2. Drive the seat fully forward, allow the motors to stall against the seat's mechanical end stops.
3. Drive the seat fully upwards, allow the motors to stall against the seat's mechanical end stops.

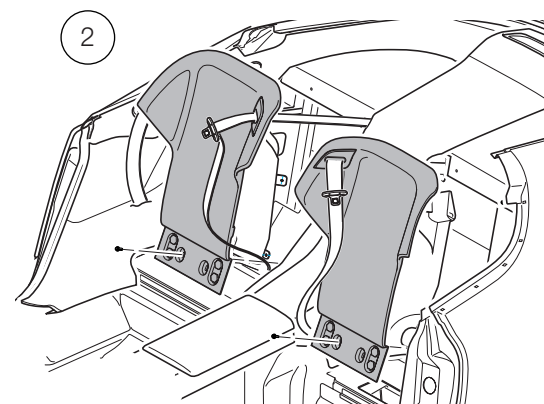
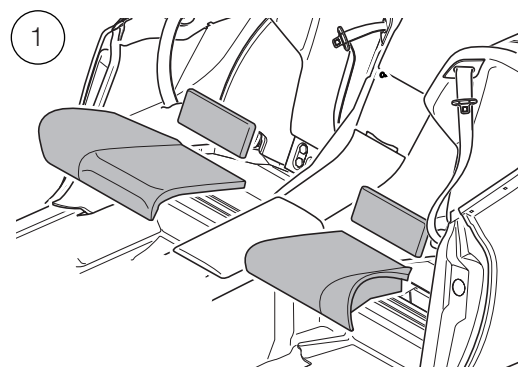
The seat up switch needs to be operated front up then back up.

When each end stop is reached the motor will know where it is on that particular axis, the seat will only allow forward or upward movement until each axis position has been learnt

4. The seat module is now out of calibration mode.

Rear Seats

Removal (Coupe)



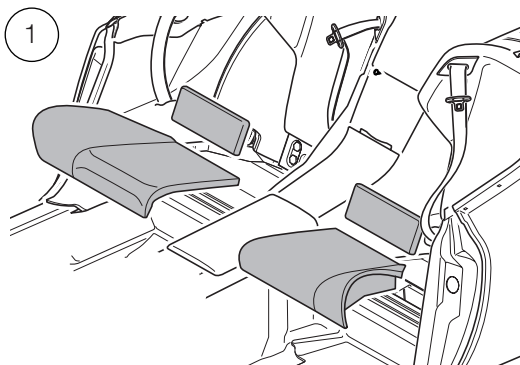
Installation (Coupe)

Install the rear seat in reverse order.

Torque seat belt mounts to **35 Nm**.

Removal (Volante)

1. Remove the seat bases. Pull off.



2. Remove the headrest panel. Pull off at the top and pull up to remove.
3. Remove screws (x4) that secure the seat back. Withdraw the seat back.



Installation (Volante)

- Install the rear seat in reverse order.
Torque seat belt mounts to **35 Nm**.

Body System (01.00)

Glass, Frame and Mechanism (01.11)

Description

Power to the door window regulator motor is available when the ignition switch is at position '0' and is supplied, through a thermal cut-out, to the left and right window switches. The switches are double pole earth so that the current through a window regulator motor may be switched in either direction to raise or lower the glass.

Frameless doors

To avoid damaging the body seals during door opening, the door glass must be lowered before the door can be opened. This function is controlled by the door modules.

The door module senses the rotation of the latch claw as the door opens, the door module then drives the door window regulator motor briefly to lower the door glass until it clears the glass seals. After closing a door, the window regulator motor operates to raise the door glass to seat against the body seals.

Specifications

Torque Figures			
Description		Nm	lb. / ft.
Door regulator	M6	9	7
	M10	10-15	7.5-11.5
Glass grip screws		5-6	4-4.5
Door Handle		9	7
Rear quarter regulator	M6	9	7
	M10	10-15	7.5-11.5
Seat belt and speaker plate		8-10	6-7.5

Maintenance

Glass Regulator

Repair Operation Time (ROT)			
Item		Code	
Door Glass Motor	LH	01.11.LH	
	RH	01.11.RH	
Door Glass Regulator	LH	01.11.FB	
	RH	01.11.GB	

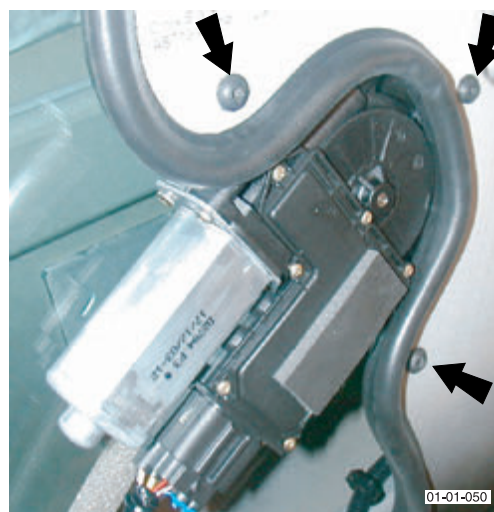
Removal

1. Remove the door trim panel (Refer to 'Door Trim', page 1-4-3).
2. Power the door glass to a 'half open' position.

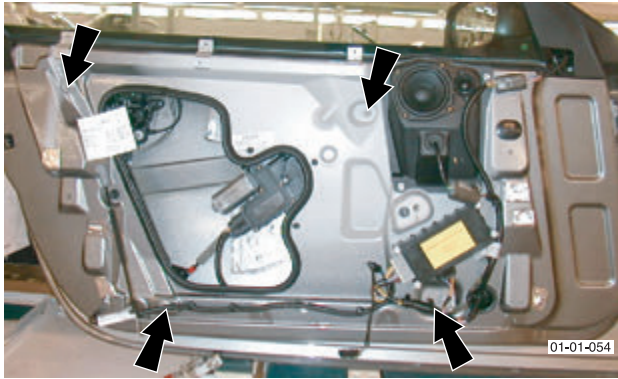
To enable access to the screws which secure the door glass.



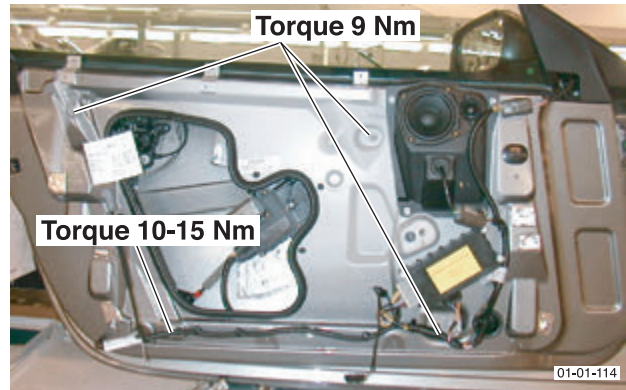
3. Disconnect the vehicle battery.
4. Remove the door glass grip screws. Withdraw the door glass from the door.
5. Release the window regulator motor from the door.



6. Release nuts (x4). Withdraw the window regulator from the door.



2. Install nuts. Torque nuts (x3) M6 to **9 Nm.** and (x1) M10 **10-15 Nm.**

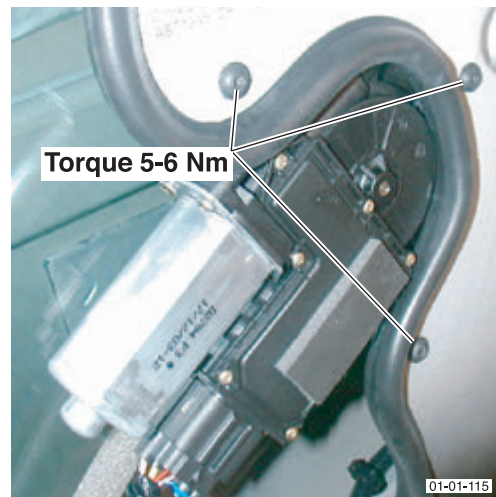


Installation

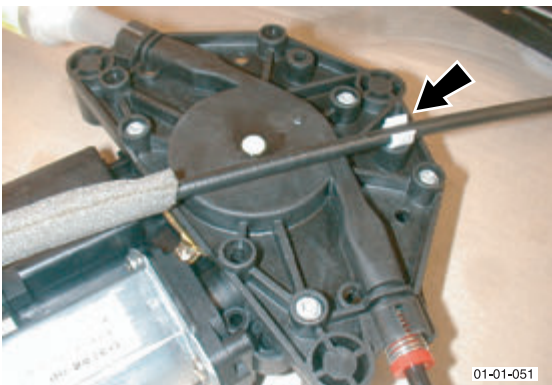
1. Install the window regulator assembly.



3. Install the window regulator motor (screws x3). Torque to **5-6 Nm.**



Ensure the window regulator cable remains in place during installation.



Ensure that the wiring harness running by the adjuster bolt locates above the adjuster bolt.

Ensure the wiring harness does not get 'trapped'.

Window regulators are 'Handed' (L/H and R/H). The adjuster is always located at the bottom rear of the door.

Place the window regulator unit into position and locate the four mountings through the door inner skin.

Ensure the window regulator motor wiring harness clips to the window regulator motor.

4. Install the weather strips (x2). If removed.
5. Lower the door glass into the door.

Insert the front end of the door glass first then lower the door glass and insert the rear end.

- 5.1 Locate the rear end of the door glass into it's grip.
5.2 Locate the front end of the door glass into it's grip.

The front grip has to be located by feel alone.

- 5.3 Line up the holes in door glass with the openings in the grips (x2).

6. Install the grip screws (x2). Do not tighten.

The grip screws are, apart from length, the same as the latch unit screws (x3). Do not install the, shorter, latch unit screws to the grips.

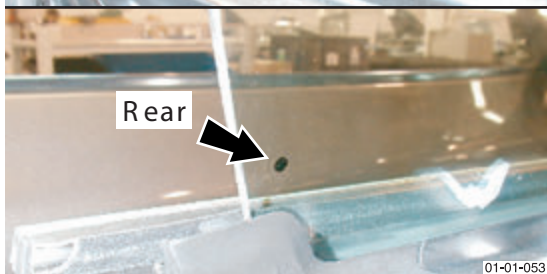
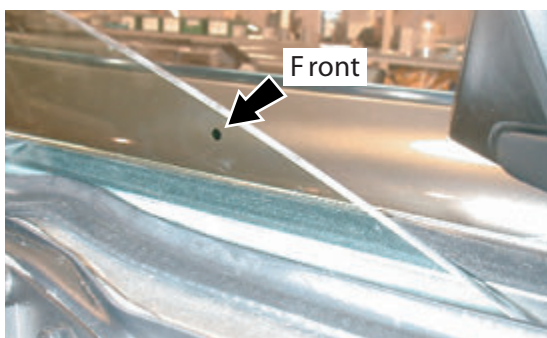
7. Align the door glass. Ensure the following when installing a new door glass.

- The glass is flush with the mirror trim edge



01-01-052

- The two dots on the door glass are equal distance from the door edge.



01-01-053

8. Install the door module (if removed).

Warning

Danger of hands being trapped in the window regulator mechanism. Do not put your hands through the door glass aperture with the door harness connected.

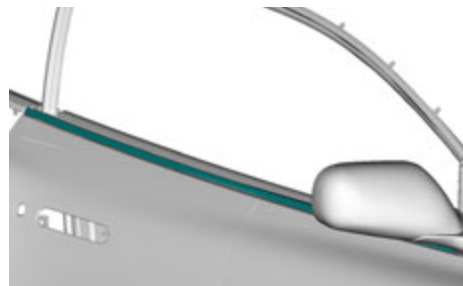
- Connect the vehicle battery.
- Check alignment of the door glass to the door seals.
If required, disconnect the power to the door and realign the door glass.
Once satisfactory alignment is achieved, torque both grip screws to **5-6 Nm**.
- Install the door mirror. If removed.
- Install the outer weather strip. If removed.
- Install the door trim.

Door Glass

Repair Operation Time (ROT)		
Item	Code	
Door Glass Renew	LH	01.11.BB
	RH	01.11.HB
Door Glass Adjust	LH	01.11.CD
	RH	01.11.JD

Removal

- Remove the door outer weather strip.

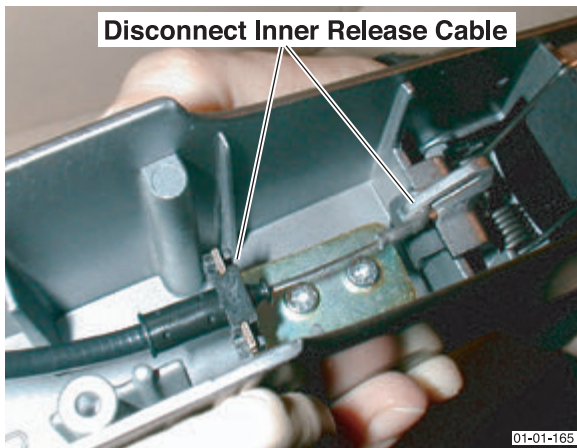
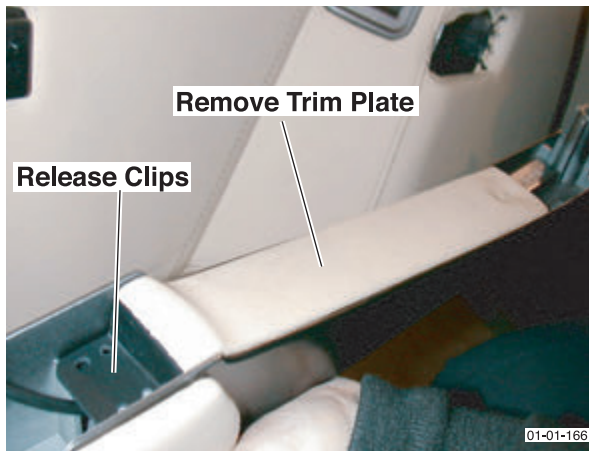


- Release the door handle (Bolts x2).



01-01-167

3. Remove the door handle trim plate and disconnect the release cable.



4. While looking through the access holes provided by removing the door handle, power the door glass to show the glass grip screws.



5. Disconnect the vehicle battery.
6. Remove the door glass grip screws. Withdraw the door glass from the door.

Installation

1. Lower the door glass into the door.

Insert the front end of the door glass first then lower the door glass and insert the rear end.

- 1.1 Locate the rear end of the door glass into it's grip.
1.2 Locate the front end of the door glass into it's grip.

The front grip has to be located by feel alone.

- 1.3 Line up the holes in door glass with the openings in the grips (x2).

2. Install the grip screws (x2). Do not tighten.

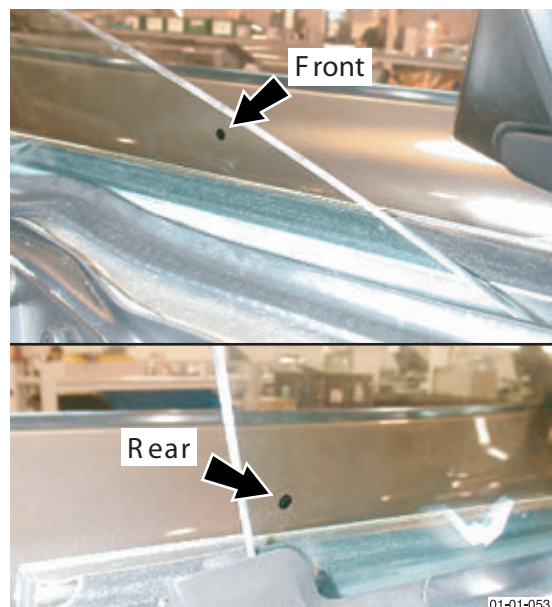
The grip screws are, apart from length, the same as the latch unit screws (x3). Do not install the, shorter, latch unit screws to the grips.

3. Align the door glass. Ensure the following when installing a new door glass.

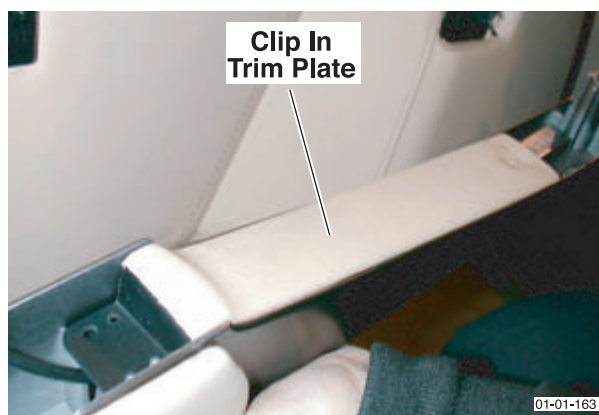
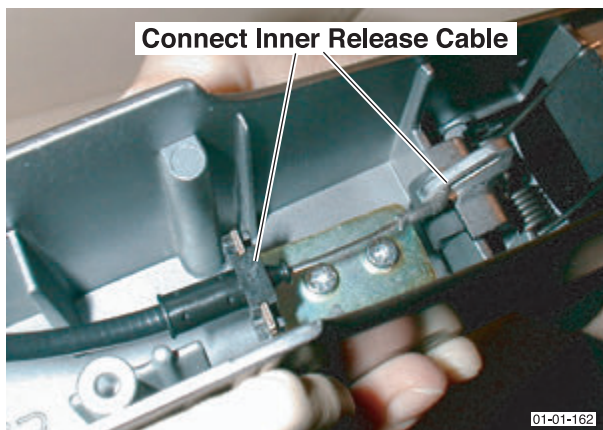
- The glass is flush with the mirror trim edge



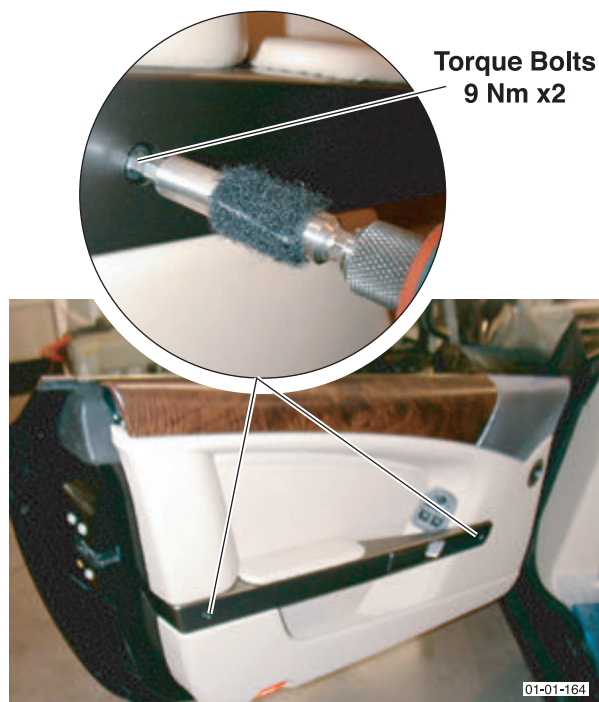
- The two dots on the door glass are equal distance from the door edge.



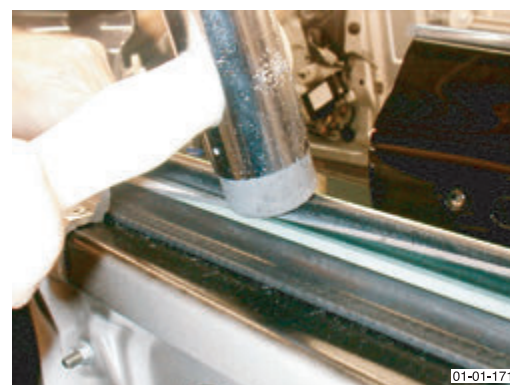
4. Connect the inner release cable and install the door handle trim plate.



5. Install the door handle Torque bolts (x2) to 9 Nm.



6. Install the door outer weather strip.



7. Connect the vehicle battery.
8. Check that the door glass operates correctly. Perform the 'Door glass Setup' procedure.

Door Glass Setup

1. Sit in the driver's seat.
2. Ensure both doors are closed and switch the ignition to '0'.
3. Press firmly and hold the window switch until the window is at the maximum down position. Continue to hold the button for 5 seconds then release.
4. Pull back and hold the window switch until the window is in the maximum up position. Continue to hold the switch for a further 5 seconds, then release.
5. The window is now reset. Repeat for the second window.

Rear Quarter Glass (Coupe)

Repair Operation Time (ROT)		
Item	Code	
Rear Quarter Glass Renew	LH	01.11.LB
	RH	01.11.MB

Remove

1. Pull the door sealing rubber away from the rear quarter glass.
2. Remove screws (x2).
3. Pull the rear quarter glass away from the body.

Installation

1. Install the rear quarter glass.
2. Install screws (x2).



3. Install the door sealing rubber.

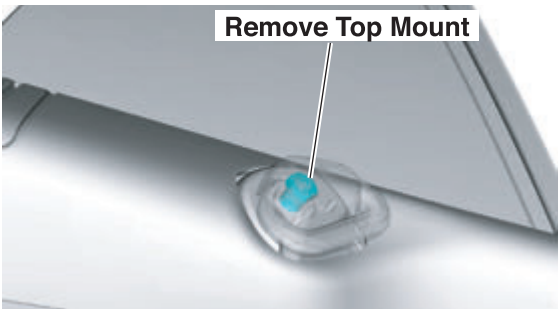
Rear Quarter Glass (Volante)

Repair Operation Time (ROT)		
Item	Code	
Rear Quarter Glass Renew	LH	
	RH	

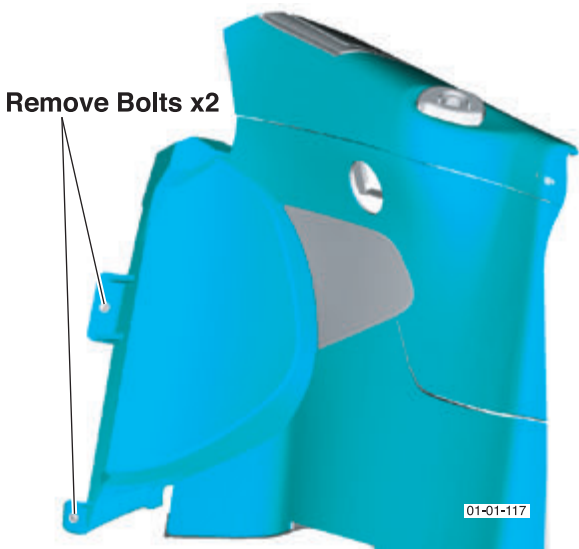
Remove

1. Power the front seat forward.
2. Lower the convertible roof.
3. Remove the rear seat back and seat base.
4. Disconnect the vehicle battery.

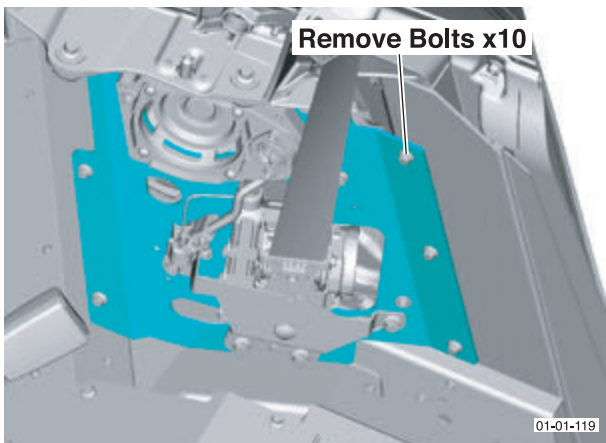
5. Remove the seat belt top mount.



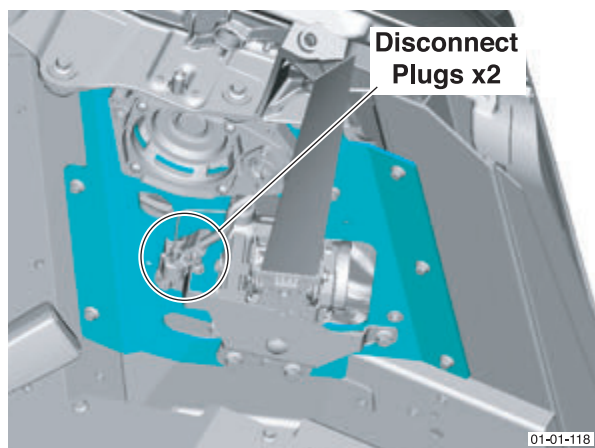
6. Remove the rear 1/4 panel.
 - 6.1 bolts x2
 - 6.2 fir trees x3



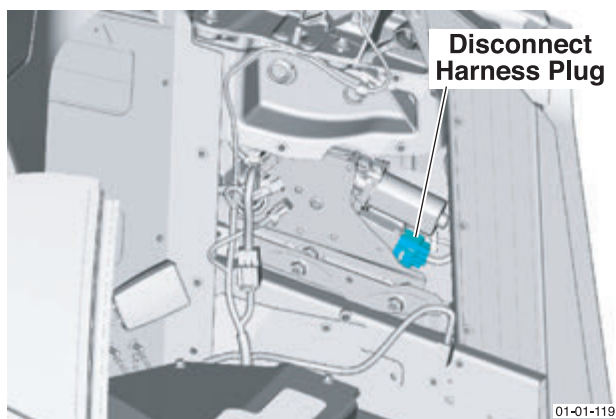
7. Remove bolts (x10) that secure the seat belt and speaker plate. Withdraw the plate.



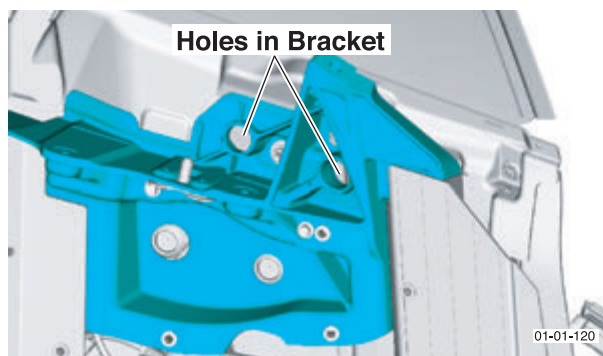
8. Disconnect the wiring harness plugs (x2).



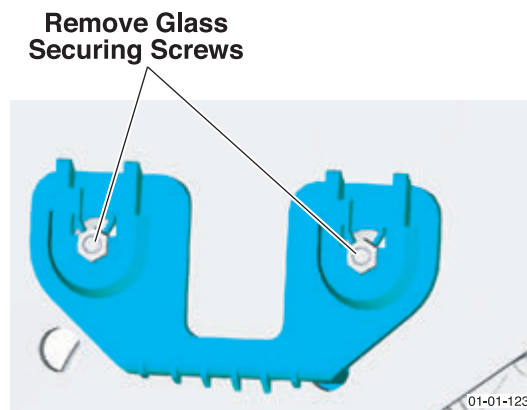
9. Disconnect the glass regulator wiring harness plug.



10. Power up the glass regulator to line up the two glass securing screws through the two holes in the top bracket.

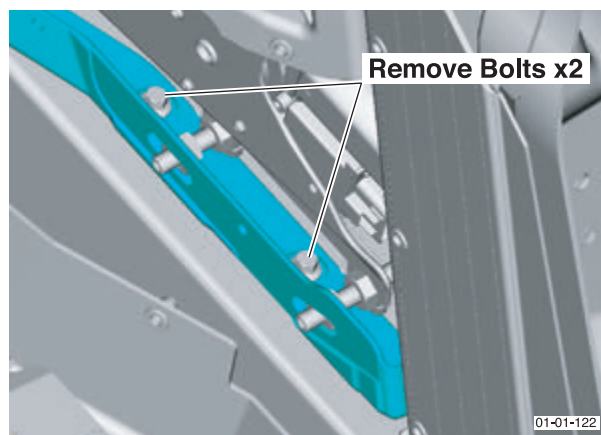
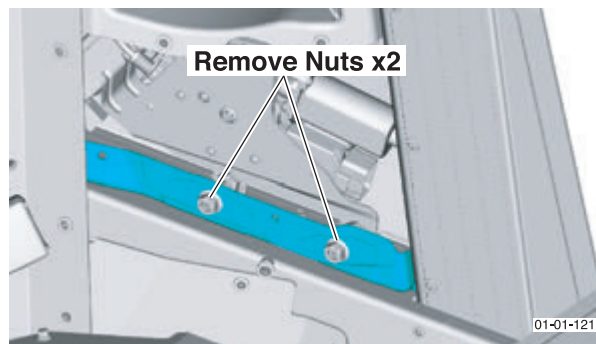


11. Remove the two glass securing screws and withdraw the glass.



12. Power the glass regulator down.

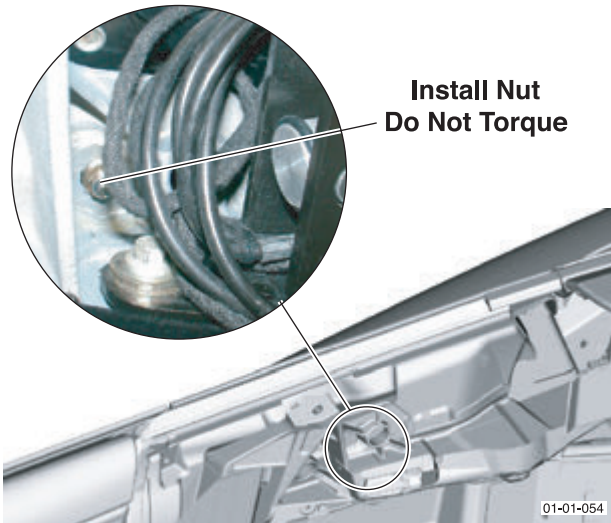
13. Remove the nuts (x2) that secure the bottom of the glass regulator. Pull the bottom of the glass regulator to reveal bolts (x2). Remove the bolts (x2).



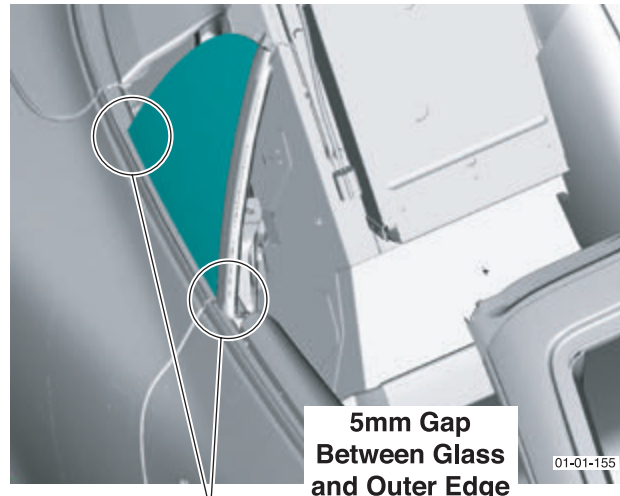
14. Remove the nut from the top of the glass regulator and withdraw the glass regulator.

Installation

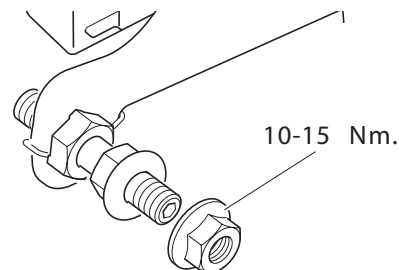
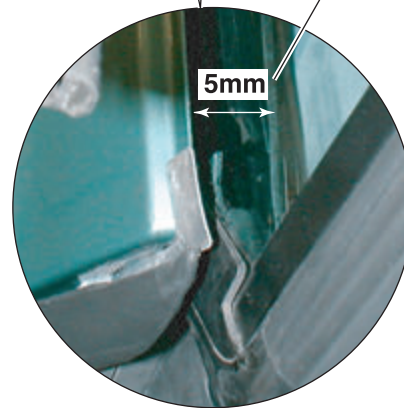
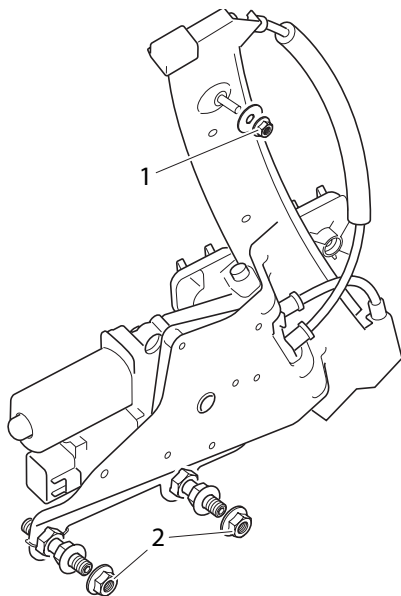
1. Install the glass regulator. Install the nut to the top of the glass regulator. Do not torque.



7. Adjust the lower mountings (2) to achieve the 5 mm gap between the glass and the edge of the vehicle body.



2. Install the lower bolts (x2). Push the bottom of the glass regulator into place and install nuts (x2).
3. Power up the glass regulator to line up the two glass securing screw holes through the two holes in the top bracket.
4. Install the glass. Secure with screws (x2). Do not torque.
5. Remove the outer chrome trim.
6. Torque the upper nut (1) of the glass regulator to **9 Nm**.



- When adjusted, torque the outer nuts to **10-15 Nm**.
8. Secure the quarter glass. Torque the screws to **5-6 Nm**.
 9. Connect the glass regulator wiring harness plug.
 10. Check glass alignment.
 - 10.1 Raise the convertible roof.
Check the alignment of the glass to the door glass.
Check the alignment of the glass with the convertible roof seals.
 11. Install the seat belt and speaker plate. Torque bolts to **8-10 Nm**.
 12. Connect the wiring harness plugs (x2).
 13. Install the rear 1/4 panel.
 14. Install the seat belt top mount. Torque bolt to **35 Nm**.
 15. Install the rear seat back and seat base.
 16. Power the front seat forward.

Body System (01.00)

Instrument Panel (IP) (01.12)



Specifications

Torque Figures

Description	Nm	lb. / ft.
IP Mountings	22.5	17
Glue pot bolts	8	6
Blower motor to bulkhead	10-14	7.5-10.5

Maintenance

IP

Repair Operation Time (ROT)	
Item	Code
IP Renew	01.12.AA

Removal

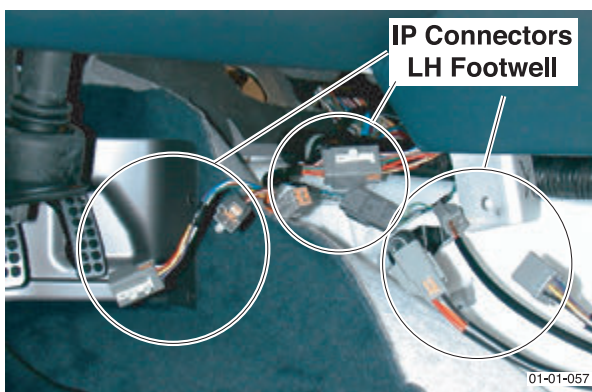
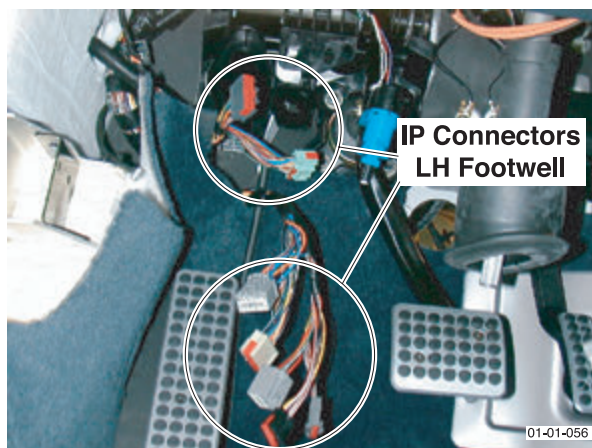
1. Evacuate the A/C system (Refer to 'Air Conditioning (A/C) System (12.03)', page 12-3-1).
2. Remove both doors (Refer to 'Body Closures (01.03)', page 1-3-1).
3. Remove both seats (Refer to 'Seating (01.10)', page 1-7-1).
4. Disconnect the vehicle battery.
5. Remove the passenger side road wheel and arch liner.
6. Remove the cant rails (pull off) (Refer to 'Roof Trim', page 1-4-2).
7. Remove the steering column (Refer to 'Steering Wheel', page 11-5-1).
8. Remove the rear trim panels (Refer to 'Rear Trim', page 1-4-5). Including the centre arm rest and surround.
9. Remove / Pull back the front carpet (allowing access to the IP mounts and wiring harness plugs).
10. Remove the engine bay fusebox and fusebox mounting bracket.

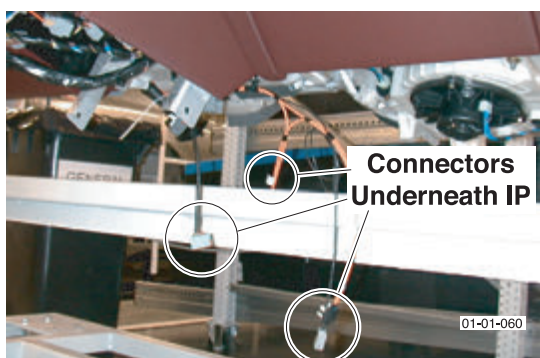
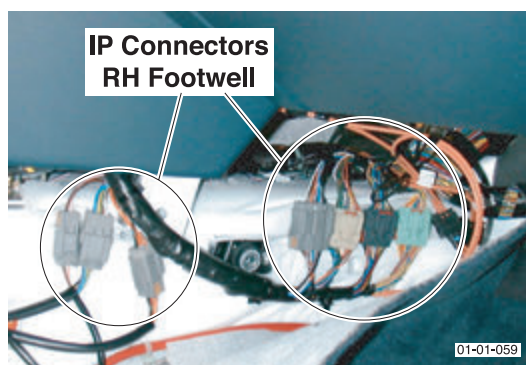
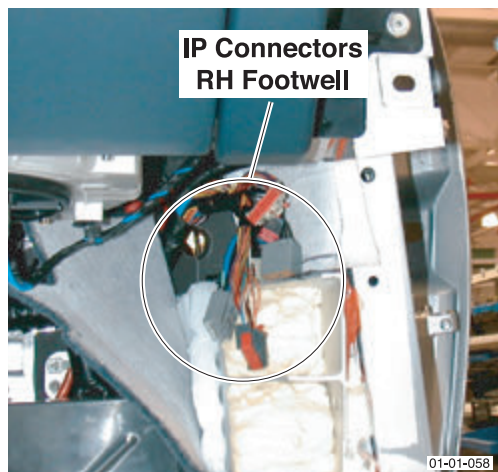
11. Remove the A/C evaporator pipes.
Cap the open ends of all pipes.



12. Disconnect the wiring harness plugs.

Remove the bonnet pull lever to gain access to L/H harness plugs.



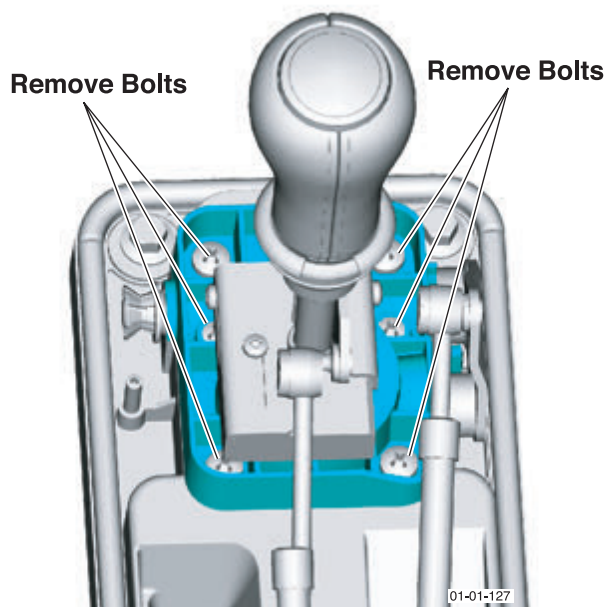


13. Manual Gearbox Only.

Remove the gear-lever.

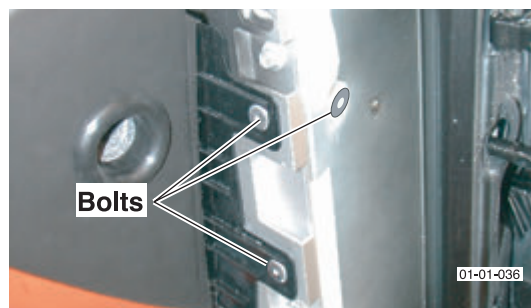
13.1 Disengage the manual shift control cables (x2).

13.2 Remove screws (x6) that secure the gear lever pivot block. Withdraw the gear lever.

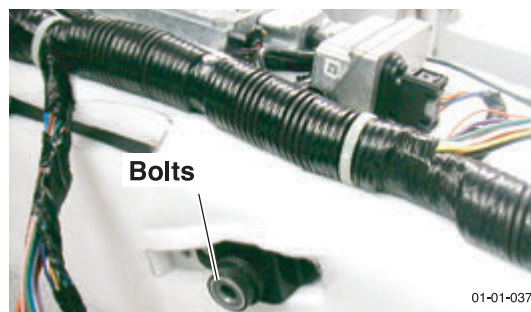


14. Remove, L/H and R/H, bolts securing the IP to vehicle.

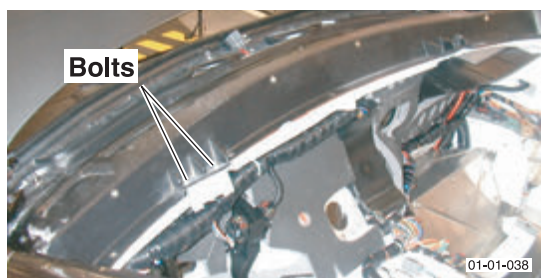
14.1 Bolts (x6 L/H and R/H).



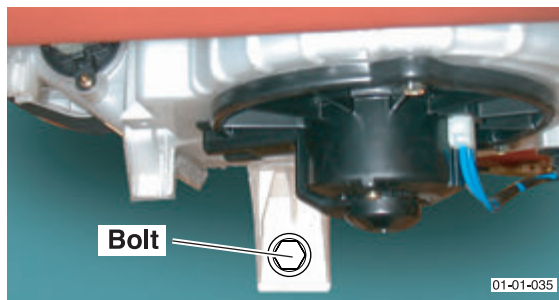
14.2 Bolts (x2).



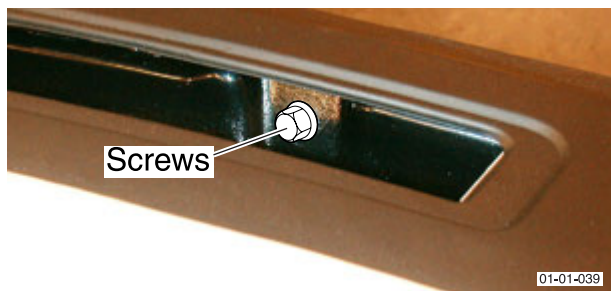
14.3 Glue pot bolts (x2).



14.4 Bolt (x1) from heater blower.



15. Remove the window defrost air duct screws (x3 each side).

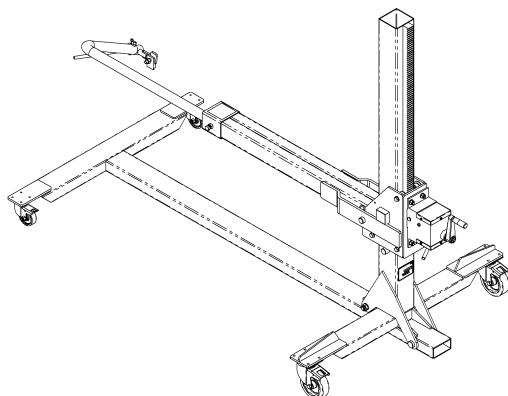


To prevent the screws falling down the air ducts - place a rag / cloth into the air ducts.

15.1 Disengage clips (x3) from each window defrost air duct) to release the window defrost air ducts from the IP.

15.2 Remove screws (x3 for each duct).

16. Manoeuvre the service tool (Refer to '501-F116 (IP Removal)', page 20-1-8) into position, through the passenger side opening, and attach to the IP.

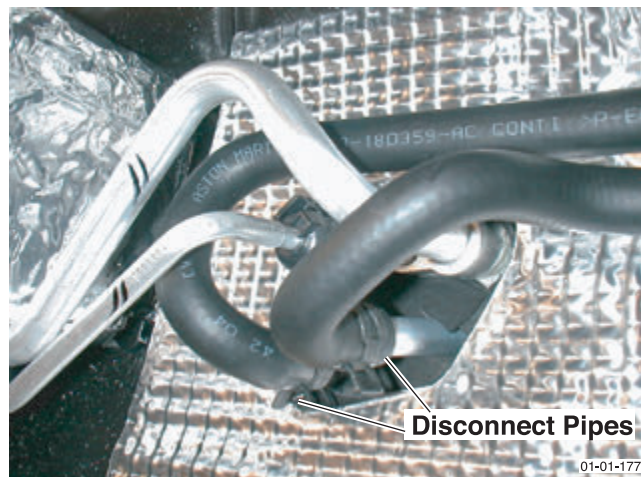


17. Move the IP rearwards sufficient to gain access to the heater pipes. Disconnect the heater pipes.

One person to open the spring clip from inside the vehicle and one person to pull the pipes off from inside the engine bay.

Caution

Take care not to let coolant drip onto the vehicle carpet.



18. Withdraw the IP from the vehicle.

As the IP is withdrawn from the vehicle the evaporator drain pipe will come with it.

Take care not to break the blower motor bracket when manoeuvring over the vehicle tunnel.

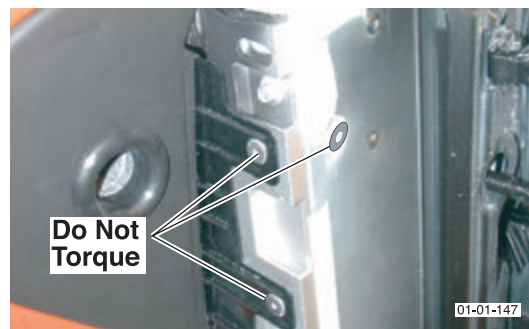
Installation

1. Manoeuvre the IP, attached to service tool, through the passenger side opening.
2. Place the A/C Evaporator drain pipe through the opening provided.

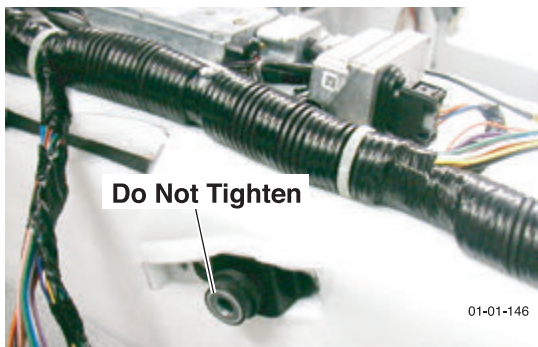
Ensure A/C breather pipe is secure and correctly located. It is not accessible once the IP is installed.

3. Install the heater pipes.
4. Raise the IP and locate into position.
5. Install the following bolts

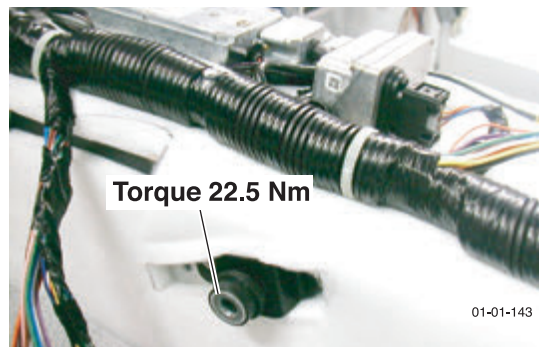
5.1 Bolts (x6 (L and R/H)). Do not torque.



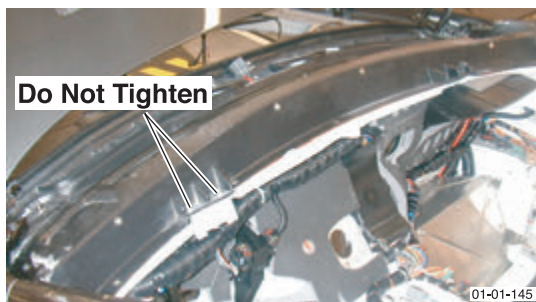
- 5.2 Install bolts (x2 L and R/H). Do not tighten.



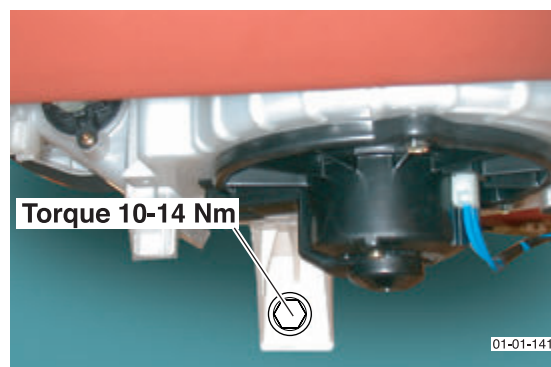
- 6.3 Bolts (x2 L and R/H). Torque bolts to **22.5 Nm**.



- 5.3 Install the glue pot bolts (x2). Do not tighten.



7. Install the heater blower to the bulkhead bolt. Torque to **10-14 Nm**.

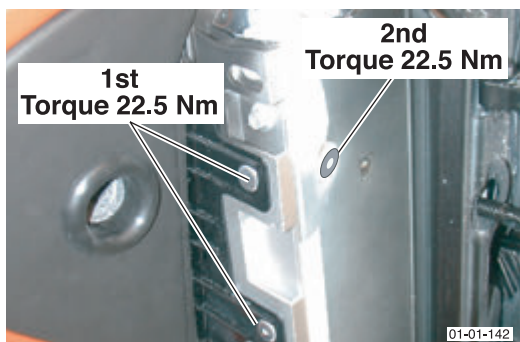


6. Torque the bolts in the following order.

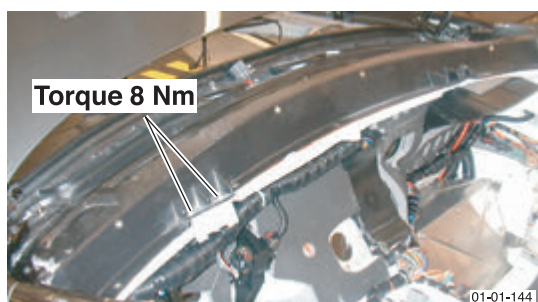
- 6.1 Bolts (x6 (L and R/H)).

Torque bolts (1) to **22.5 Nm**

Torque bolts (2) to **22.5 Nm**.



- 6.2 The glue pot bolts (x2). Torque bolts to **8 Nm**.



8. Connect the wiring harness plugs.

If removed, install the bonnet pull lever.

9. Install screws (x3 each) that secure the window defrost air ducts.

10. Engage clips (x3) for each window defrost air duct vent panel.

11. Install the steering column (Refer to 'Steering Column', page 11-3-1).

Note the steering rack to steering column position from removal.

12. Install the cant rail (Refer to 'Roof Trim', page 1-4-2).

13. Connect the A/C pipes.

14. Install the fusebox mounting bracket, fusebox and fusebox wiring harness blocks.

15. Install the rear trim (Refer to 'Rear Trim', page 1-4-5), front carpets and centre arm rest.

16. Manual Gearbox Only.

Install the gear-lever.

17. Install the road wheel arch liner.

18. Install the road wheels (Refer to 'Road Wheel Nut Torque Tightening', page 4-5-7).

19. Install the seats (Refer to 'Seating (01.10)', page 1-7-1).

20. Install the doors (Refer to 'Body Closures (01.03)', page 1-3-1).

21. Connect the vehicle battery.

22. Charge the A/C system (Refer to 'Air Conditioning (A/C) System (12.03)', page 12-3-1).

Body System (01.00)

Handles and Lock Mechanisms (01.14)

Description

Vehicle Key / Remote Transmitter

The vehicle key operates the ignition and the door lock, the remote transmitter operates the central locking and alarm systems.

Do not leave them in the vehicle.

Central Locking System

The Central Locking system consists of lock actuators in both doors, the boot and the fuel flap. Central locking control is through the door modules.

Each lock actuator incorporates a microswitch which signals a change of state when any motor runs to drive the actuator. The microswitches are of the change over type and provide an earth for lock / unlock signals to the door module.

The boot will remain locked or will be unlocked simultaneously with the doors dependant on the boot lock position. The boot lock can be enabled at any time using the remote transmitter irrespective of the Central Locking status.

Remote Transmitter

The remote control system consists of a transmitter and an antenna (radio frequency system). The remote control transmitter for the radio frequency system will operate without the transmitter being directed at the vehicle. The normal range between the transmitter and the antenna is up to 5 meters. Before the remote control system can be used, each transmitter must be initialized to the vehicle. A maximum number of four transmitters can be initialized to any vehicle. All remote transmitters must be initialized at the same time. The keyless entry / remote operated locks will not operate when the ignition key is in the ignition switch.

(A) Lock - One step vehicle locking and alarm enable.

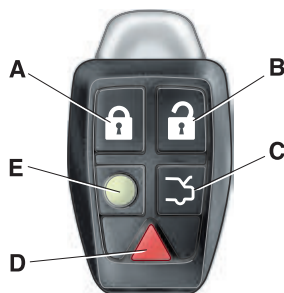
The vehicle will deadlock after 25 seconds.

(B) Un-lock - One step vehicle unlocking or two step vehicle unlocking and alarm disable.

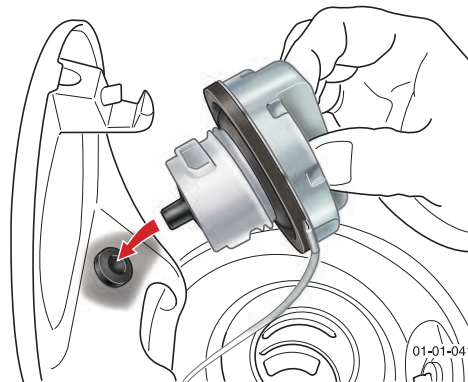
(C) Boot Open - Press to enable the boot catch.

(D) Panic Alarm - Activates / deactivates the panic alarm.

(E) Approach Light - Activates the front and rear side lights.



Fuel Filler Assembly



Manual Boot Release

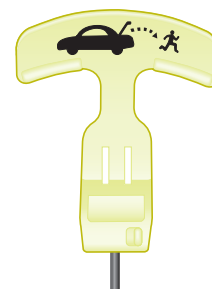
In the event of a total loss of vehicle power the boot can be opened by pulling the manual boot release handle.

Remove the LH rear seat base and undo the two knurled bolts that secure the cover. Remove the cover and pull the boot release.

**Boot release assembly
Image to follow**

Boot Emergency Release

The boot can be opened from inside the boot by pulling the luminous emergency release handle.





Specifications

Torque Figures		
Description	Nm	lb. / ft.
Door handle	5	4
Latch	9	7

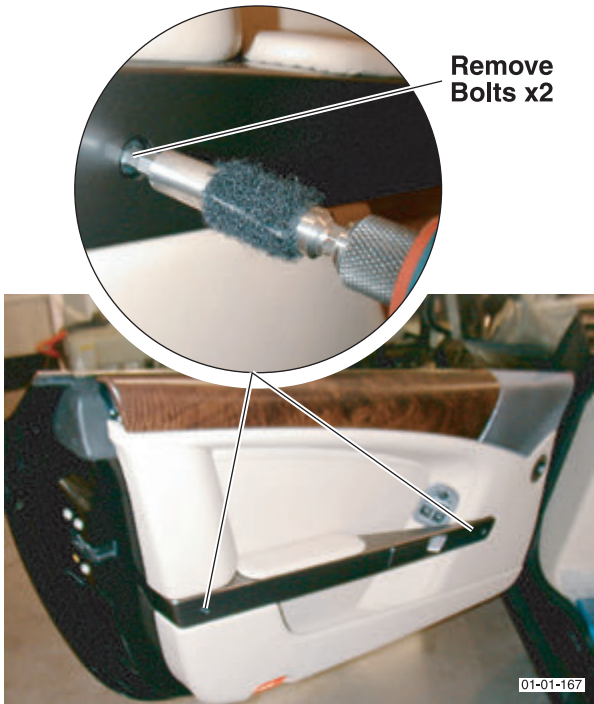
Maintenance

Door Handle / Latch Unit

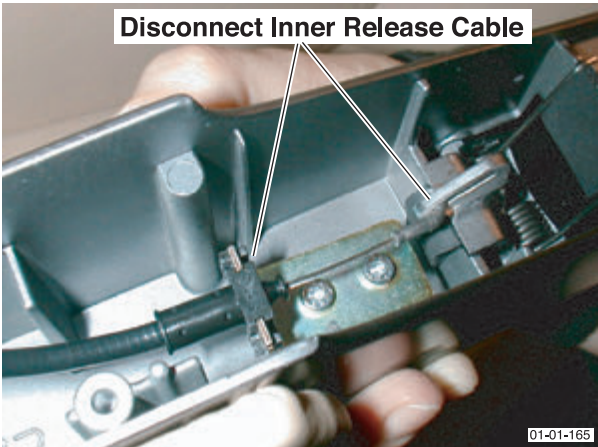
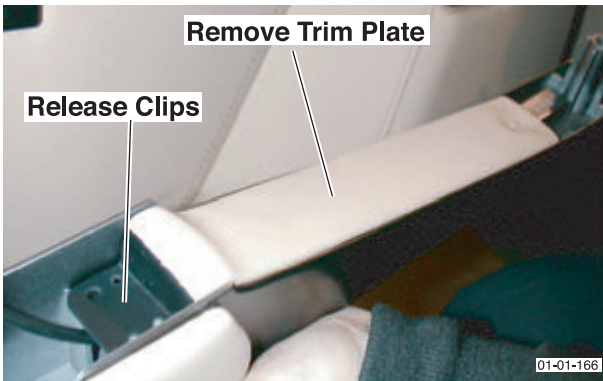
Repair Operation Time (ROT)		
Item	Code	
Door Catch and Outer Lock	LH	01.14.MB
	RH	01.14.NB

Removal

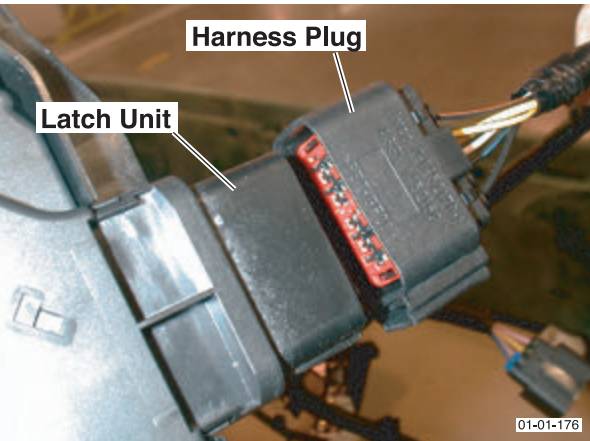
1. Disconnect the vehicle battery.
2. Remove the door handle (Bolts x2).



3. Remove the door handle trim plate and disconnect the inner release cable.

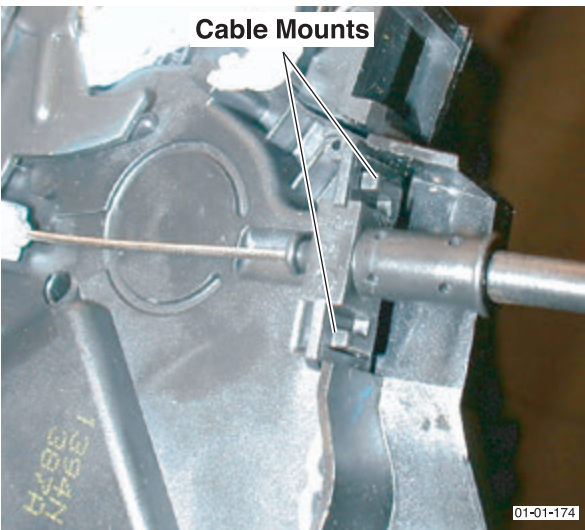


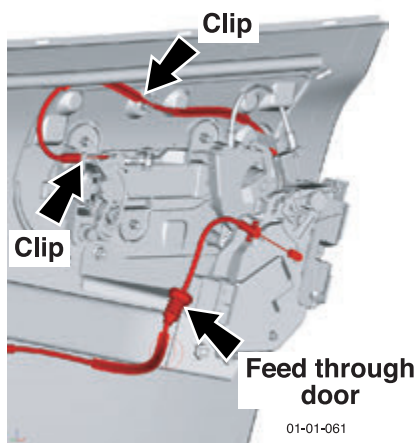
4. Remove the door trim (Refer to 'Door Trim', page 1-4-3).
5. Remove the door glass and regulator (Refer to 'Glass Regulator', page 1-8-1).
6. Disconnect the wiring harness plug.



7. Disconnect the outer release cable from the outer handle and feed the inner release cable back through the door.

Take care not to break the cable mounts.

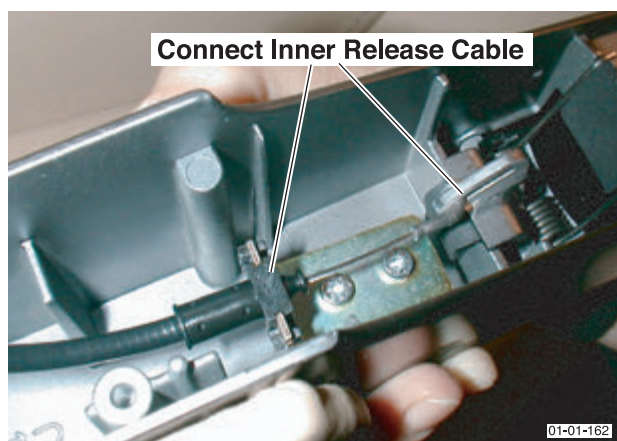




Ensure that the fir tree on the release cable is removed.

8. Remove the lock and latch assembly.

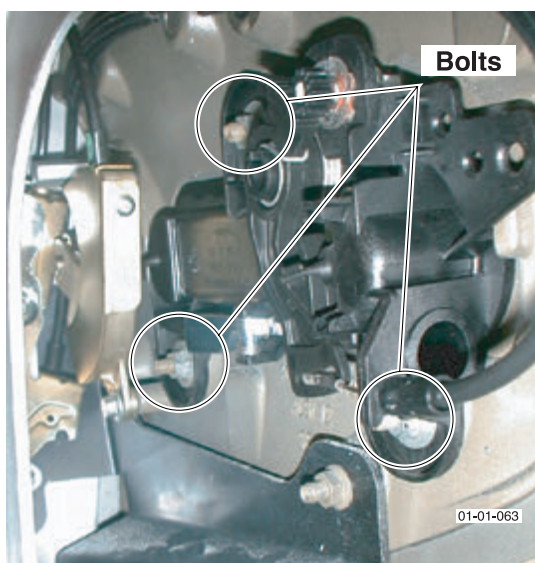
8.1 Remove the latch screws (x3).



8.2 Remove the lock lower bolt and loosen the top nut.

8.3 Rotate and withdraw the lock along with latch assembly.

9. Remove the nuts (x3) from the outer handle. Withdraw the outer handle from the door.



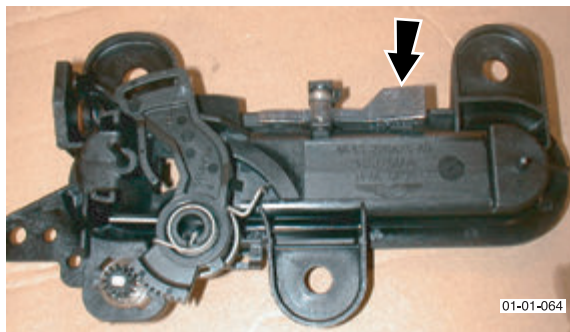
Installation

1. Install the outer door handle.

The outer door handle is reversible (installs to L/H and R/H).

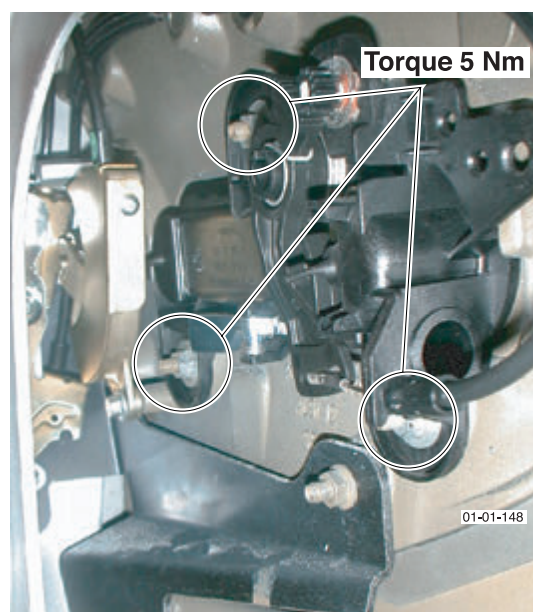
Caution

Ensure the Inertia block is in the 'Floating' position.



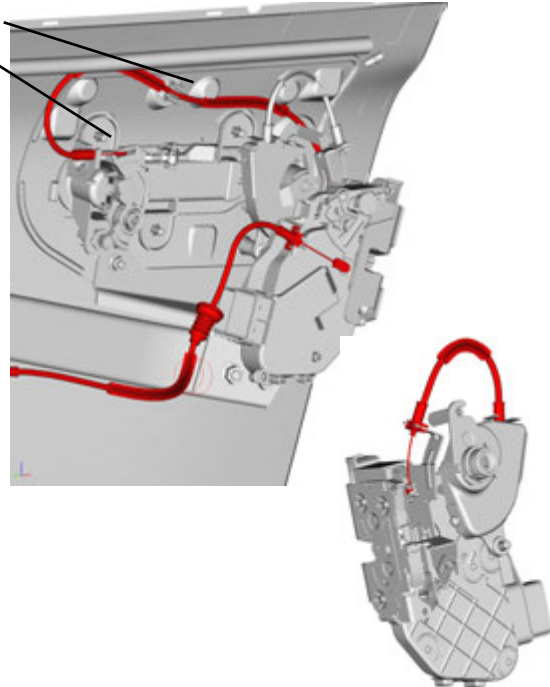
Secure with nuts (x3). Torque to **5 Nm**.

Do not over tighten. If over tightened the studs may pull from their mounts.



2. Connect the outer, inner and lock cables to the latch. Insert the lock and latch assembly into position. Feed the inner cable through the hole provided in the door.

Do not push the inner cable when it is hanging from the door. This may disconnect the link at the latch end.



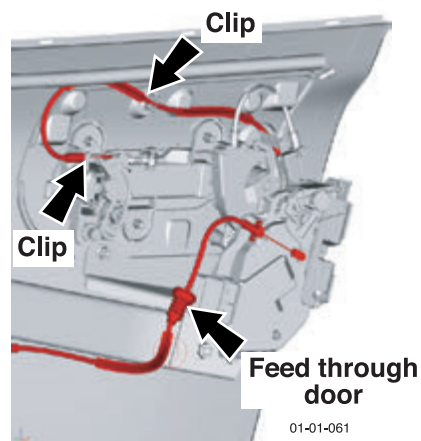
4. Install the latch (screws x3). Torque to **9 Nm**.



5. Install the outer release cable to the outer release handle.

Ensure that both the release and lock cables locate behind the lock and barrel unit top nut (rear of door).

Ensure that the fir tree on the release cable is installed.



3. Install the lock.

- 3.1 Locate the barrel through the door and rotate the lock into position.
3.2 Install nut on lower mount.
3.3 Tighten both nuts.



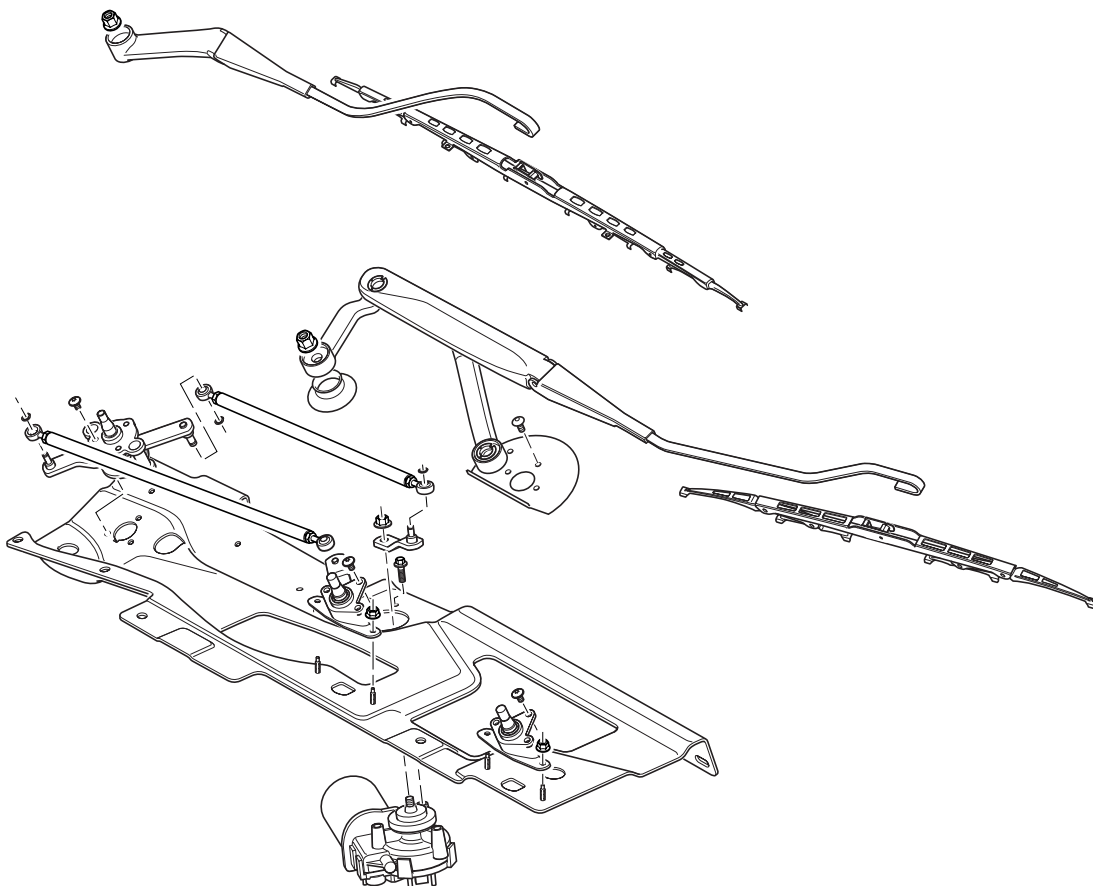
6. Connect the wiring harness plug.
7. Install the door glass and regulator (Refer to 'Glass Regulator', page 1-8-1).
8. Install the door trim and the inner release handle (Refer to 'Door Trim', page 1-4-3).
9. Connect the vehicle battery. Check operation of the door latches.

Body System (01.00)

Wipers and Washer System (01.16)

The wipers and washer system consists of the following components:

- Wipers and washers
- Mounting arm and pivot shaft
- Wiper motor
- Reservoir and washer pump
- Headlamp washing system

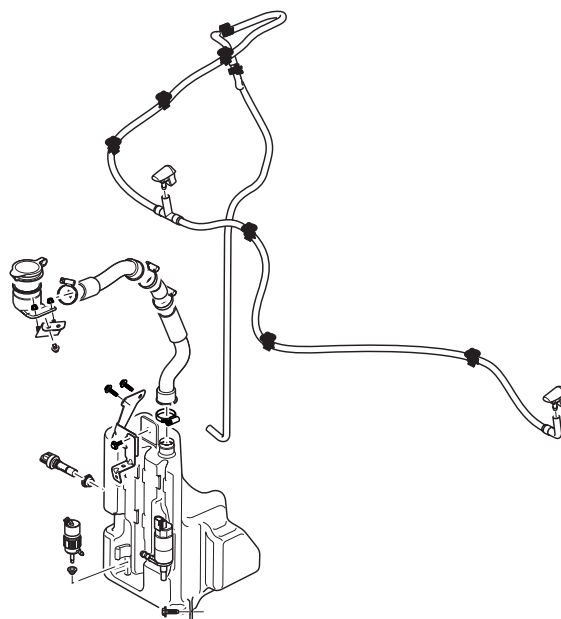


The wipers have a two speed control (low and high) and an intermittent wipe mode. The wipers will park automatically irrespective of their position when the 'Off' position of the ignition or control switch is selected or the bonnet is opened.

Within the wiper and washer system the following features can be attained:

- Adjustable interval intermittent wiping
The intermittent wiping has six speed settings, 3, 6, 9, 12, 15, 18 seconds.
- Programmable wash and wipe sequences
The programmable wash and wipe sequence is driver controlled. With a depression of the wash / wipe switch between 40 milliseconds and 1.2 seconds the wash pump will be activated for a duration of 1.2 seconds. When the wash/wipe switch is depressed for longer than 1.2 seconds the wash pump will be activated for the duration of switch depression, a 10 second duration is the maximum available.

The wiping system is automatically activated with a depression of the wash switch of **more** than 0.5 seconds. If the wash switch is only pressed for 0.5 seconds **or less** then only the water pump will operate.

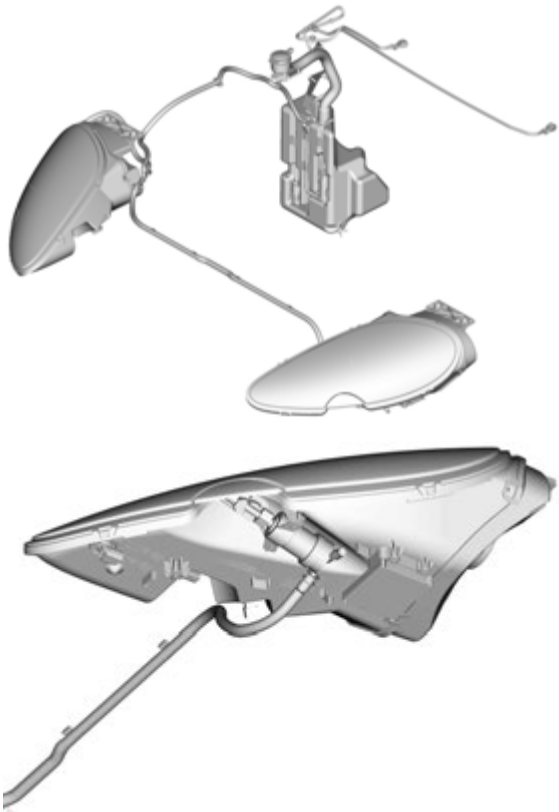




Headlamp Washing

The headlamp washers operate once per ignition cycle and are activated the first time the window washers are operated.

Headlamp washing is only available when the headlamps are switched on.



Specifications

Torque Figures			
Description		Nm	lb. / ft.
Wiper link to wiper motor		35-42	26-31
Wiper motor mounting bolts		7-10	5.5-7.5
Wiper assembly plate	M6 Torx	6	4.5
	M6 bolt	8	6
Brake servo nuts		21-24	15.5-18
Brake master cylinder nuts		25	18.5
Wiper arm (Driver)		17	13
Wiper arm (Passenger)	M10	24	18
	M6	6	4.5

Maintenance

Windscreen Wiper Motor

Repair Operation Time (ROT)	
Item	Code
Wiper Motor Renew	01.16.HB

Removal

1. Disconnect the vehicle battery.
2. Remove the inlet manifolds (Refer to 'Inlet Manifold', page 3-2-7).
3. Remove the wiper arms. Note the position of the wiper arms on the glass for installation.

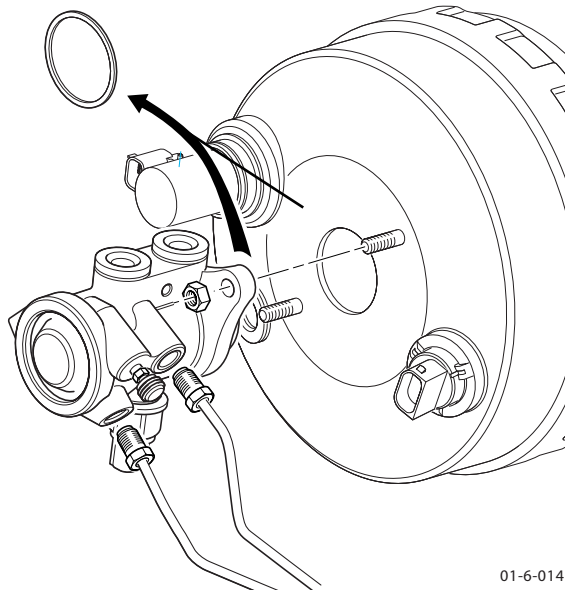
Do not remove the nut that secures the idle arm to the wiper spindle. Remove the 4 bolts securing the idle arm mounting plate.

Image to follow

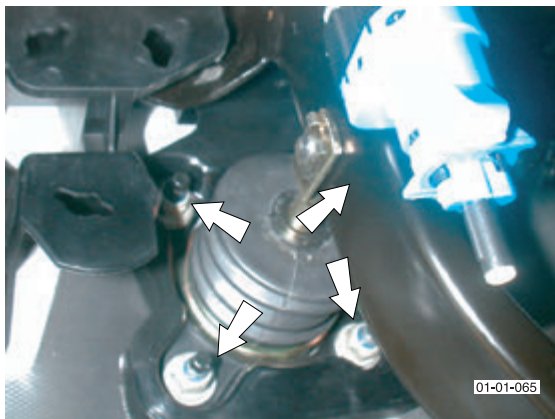
4. Remove the wiper box to scuttle panel bolts (x6).



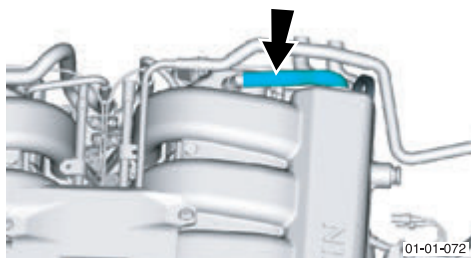
- Remove the brake master cylinder. Lay the master cylinder to one side.



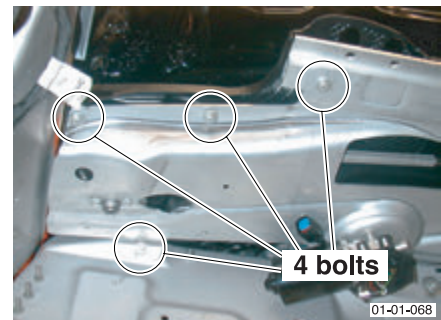
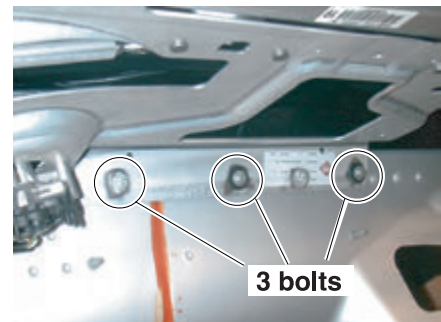
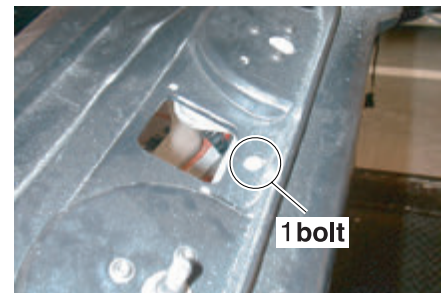
- From inside remove the brake booster fixings. Allow the brake booster to drop slightly.



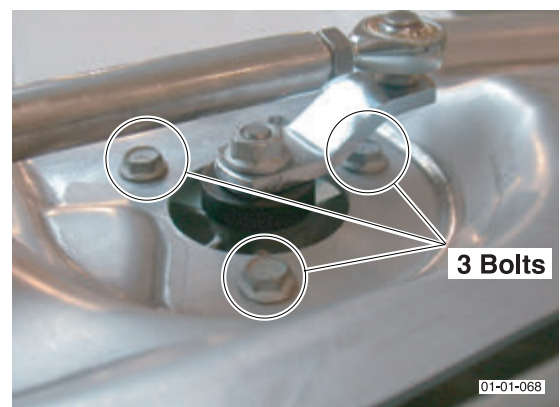
- Disconnect the engine breather hose from the rear of the camshaft cover.



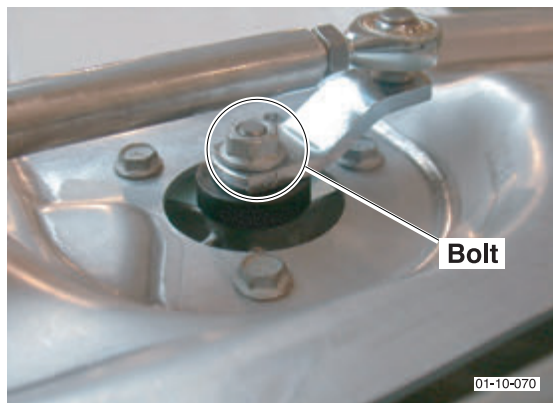
- Remove the wiper assembly mounting bolts and allow the wiper assembly drop sufficiently to access the wiper motor bolts.



- Remove the wiper motor bolts (x3).



10. Disconnect the wiper linkage from the wiper motor (bolt x1). Withdraw the wiper motor.
3. Install the wiper assembly plate
- 3.1 Torque bolts to **8 Nm**.

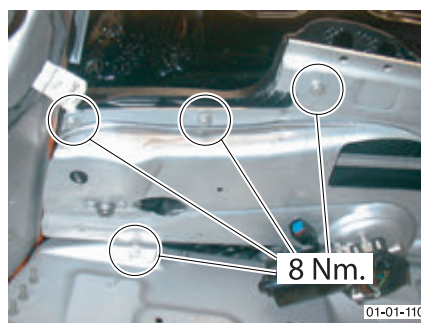
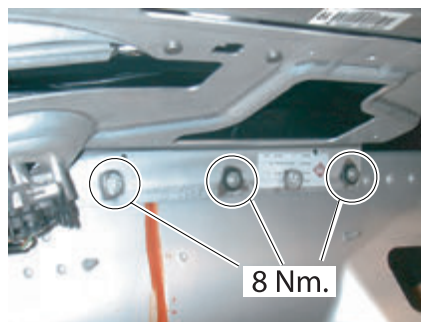


Installation

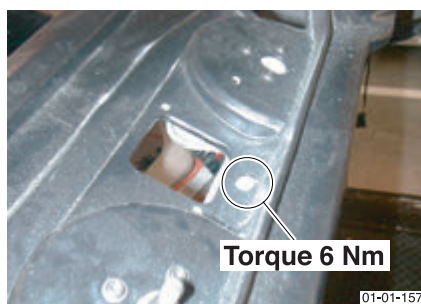
1. Connect the wiper linkage to the wiper motor (bolt x1) using service tool (Refer to '501-112 (Wiper Linkage to Wiper Motor)', page 20-1-8). Torque nut to **35-42 Nm**.



2. Install the wiper motor bolts (x3). Torque bolts to **7-10 Nm**.



- 3.2 Torque bolt to **6 Nm**.



4. Connect the engine breather hose to the rear of the camshaft cover.
5. From inside the vehicle install the brake servo fixings. Torque to **21-24 Nm**.
6. Install the brake master cylinder. Torque to **25 Nm**.
7. Install the wiper box. Torque bolts to **7-10 Nm**.

- Install the wiper arms. Position the wiper arms as per their position on removal.

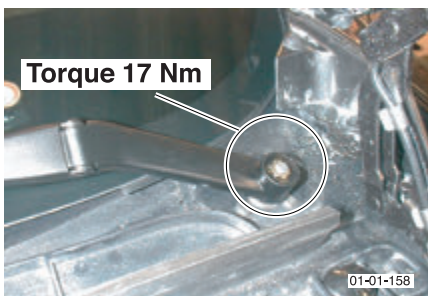
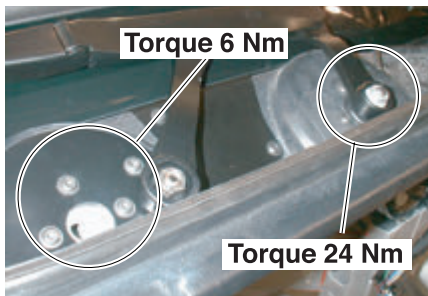
Passenger Arm

Torque M10 nut to **24 Nm**.

Torque M6 (x4) nuts to **6 Nm**.

Driver Arm

Torque M8 nut to **17 Nm**.



- Install the inlet manifolds (Refer to 'Inlet Manifold', page 3-2-7).
- Connect the vehicle battery.

Wiper Arms

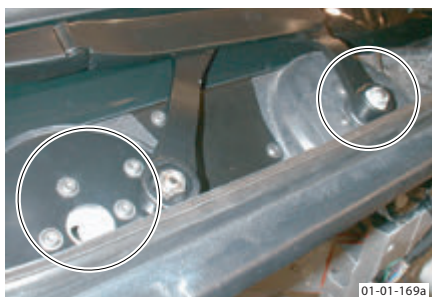
Repair Operation Time (ROT)	
Item	Code
Wiper Arm Renew	LHF 01.16.KG
	RHF 01.16.LB

Removal

Note the position of the wiper arms on the glass for installation.

Do not remove the nut that secures the idle arm to the wiper spindle. Remove the 3 bolts securing the idle arm mounting plate.

- Remove the following screws and nuts.



Installation

- Install the wiper arms. Position the wiper arms as per their position on removal.

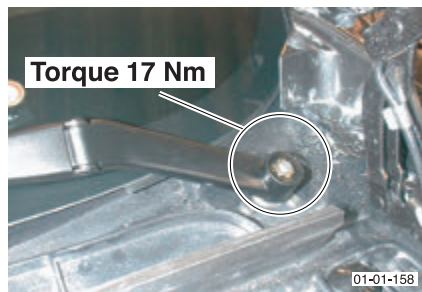
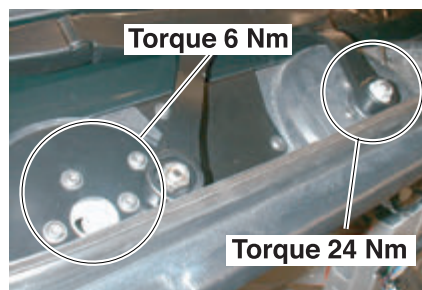
Passenger Arm

Torque M10 nut to **24 Nm**.

Torque M6 (x4) nuts to **6 Nm**.

Driver Arm

Torque M8 nut to **17 Nm**.





ASTON MARTIN

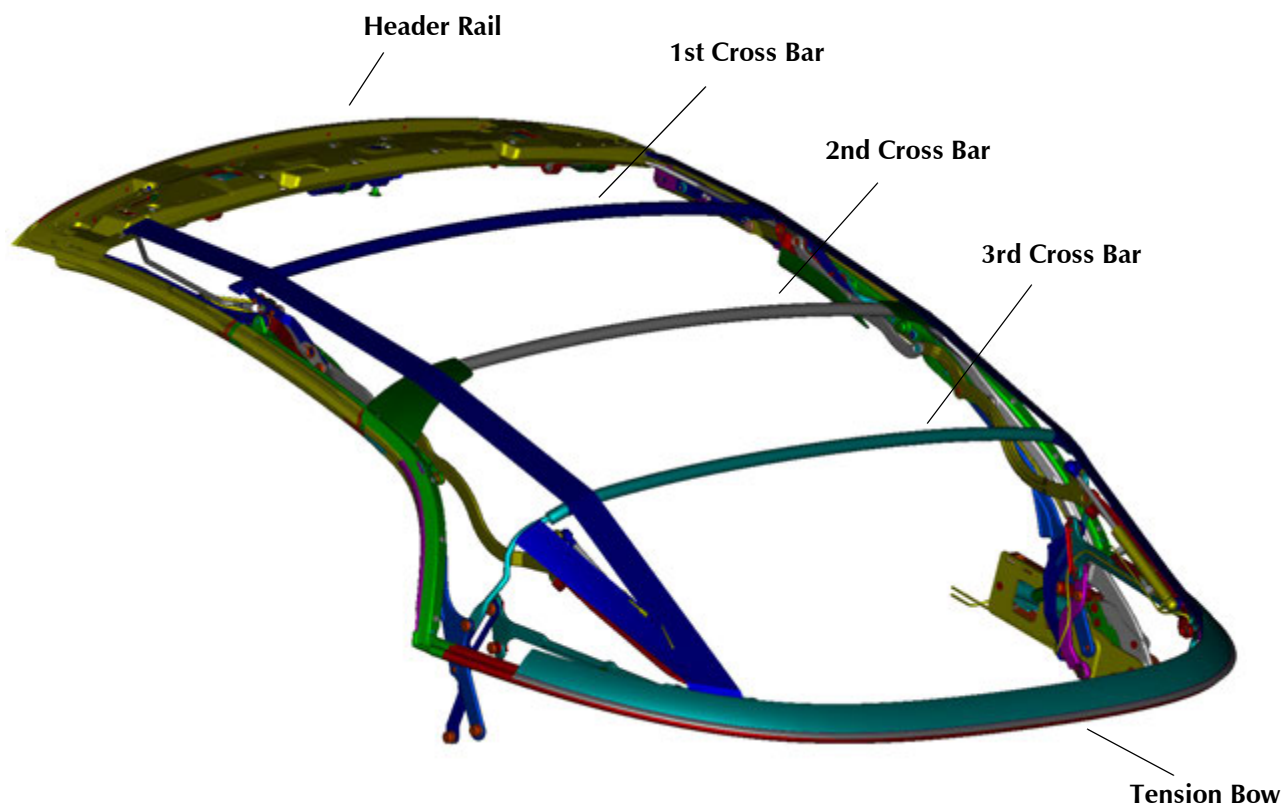
Body System (01.00)

Convertible Roof (01.17)

Description

The convertible roof system comprises an electrically driven hydraulic pump and six hydraulic rams, four for raising and lowering the roof and two for raising and lowering the tonneau cover. The pump is powered via either the 'Roof Up' or Roof Down' relay. Two further pairs of change-over relays power the rear quarter windows (one pair for each window). The roof hydraulic pump is protected by a 30A fuse.

The Roof control module is actuated by the roof switch on the centre console and controls the operation of both the roof and rear quarter window circuits. They can only be operated in a pre-programmed manner.



Specifications

Torque Figures		
Description	Nm.	lb. / ft.
Pump plate	7-10	5.5-7.5
Module plate	7-10	5.5-7.5
Roof Mountings		



Maintenance

Roof

Removal

Warning
Do not place any objects on the top of the deployable rollbar covers behind the rear seat backs.

Warning
Do not allow any person to sit on the deployable rollbar covers at any time.

Warning
If the roof is not stowed and the deployable rollbars deploy they will break through the rear glass.

1. Raise the roof. Do not lock in position.
2. Remove the ignition key and wait for a minimum of five seconds. The roof can now be moved in any direction.

Warning
Keep fingers clear of the roof linkage when moving the roof manually.

During this time the roof hydraulics will relax allowing manual movement of the roof. Some hydraulic fluid resistance will still be present in the operating rams. It may take considerable effort to fully raise the roof manually.

3. Disconnect the vehicle battery at the negative terminal and ensure the ignition key is removed.

Warning
Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

Warning
Do not lean over the rollbars. If the rollbars deploy while someone is leaning over them, they will cause severe injury.

4. Remove the rear seats and trim panels (Refer to 'Rear Trim', page 1-4-5).
5. Raise the tonneau cover and secure in the fully open position.

6. Manually raise the tension bow to 90°.

For access to the hydraulic pipes and wiring harness plugs.

With the roof in the raised position and the tension bow in the 90° position the hydraulic rams have the minimum amount of hydraulic oil in them.



7. Disconnect the hydraulic pipes (x2) for each hydraulic ram.

Hydraulic pipes are self sealing.

tonneau cover pipes image to Follow

8. Disconnect the wiring harness plug from the LH hydraulic ram unit.

Image to Follow

- Disconnect the two wiring harness plugs from inside the boot RH area. Route the cables into the roof storage area.

Image to Follow

- Remove bolts (x6 (3 each side)). Withdraw the roof mechanism.

Installation

- Place the roof mechanism into position. Locate on the dowels provided and secure using bolts x6 (3 each side). Torque the bolts to **TBA Nm**.

The locating dowels are adjustable. In normal circumstances the dowels will not require to be adjusted.

- Connect the hydraulic pipes.
- Connect the LH hydraulic ram unit wiring harness plug.
- Route the RH cable into the boot area. Connect the wiring harness plugs (x3) in the boot RH area.
- Install the rear trim panels (Refer to 'Rear Trim', page 1-4-5).
- Install the rear seat belt top mount. Torque to **35 Nm**.
- Install the rear seat bases and backs.
- Connect the vehicle battery.
- Reset both door windows (Refer to 'Door Glass Setup', page 1-8-5).
- Operate the roof and check for correct installation.

Roof Material

⚠ Warning ⚠

Do not place any objects on the top of the deployable rollbar covers behind the rear seat backs.

⚠ Warning ⚠

Do not allow any person to sit on the deployable rollbar covers at any time.

⚠ Warning ⚠

If the roof is not stowed and the deployable rollbars deploy they will break through the rear glass.

Removal

- Disconnect the vehicle battery at the negative terminal and ensure the ignition key is removed.

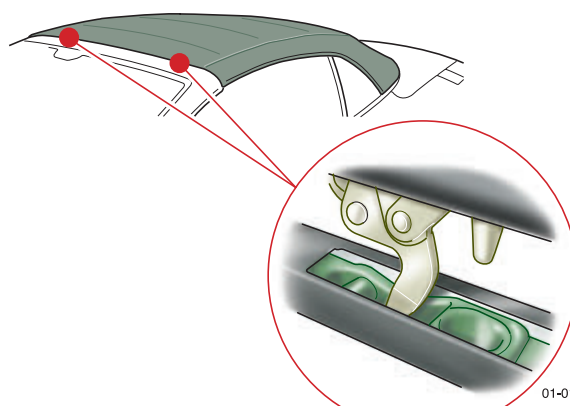
⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

⚠ Warning ⚠

Do not lean over the rollbars. If the rollbars deploy while someone is leaning over them, they will cause severe injury.

- If the roof is raised and locked, unlock and open, slightly.



01-01-128

- Remove the ignition key and wait for a minimum of five seconds. The roof can now be moved in any direction.

⚠ Warning ⚠

Keep fingers clear of the roof linkage when moving the roof manually.

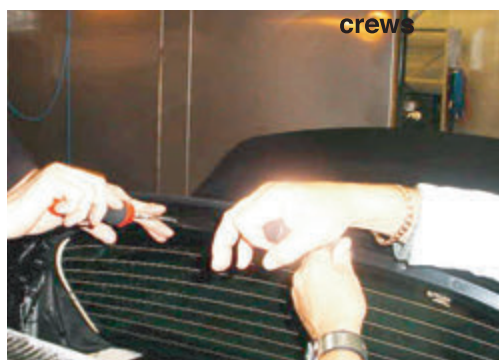
During this time the roof hydraulics will relax allowing manual movement of the roof. Some hydraulic fluid resistance will still be present in the operating rams. It may take considerable effort to fully raise the roof manually.

- Disconnect the vehicle battery.
- Raise the roof lid and secure in the fully raised position.
- Raise the tension bow to 90° to the vehicle.

7. Remove the rear roof seal.



8. Remove the screws retaining the trim strip.
9. Remove the roof material from the roof frame (rear).

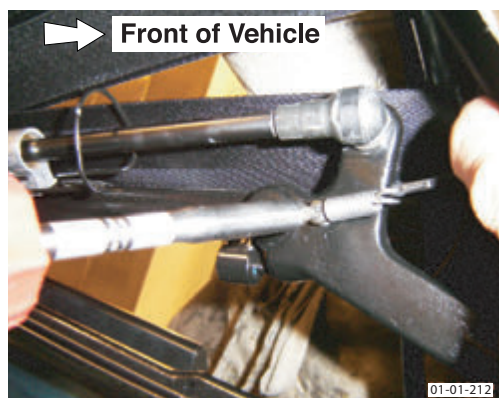


10. Lift the roof material from the rear of the tension bow.



11. Disconnect the window tension cord.

- 11.1 Remove the window tension cord springs.



- 11.2 Remove the three tension cord mounts.



12. Roll the roof material back to the 3rd cross bar.
Remove the screws that secure the roof lining to the cross bar.
Pull the roof material from the cross bar.
13. Roll the roof material back to the 2nd cross bar.
Remove the screws that secure the roof lining to the cross bar.
Pull the roof material from the cross bar.
14. Remove the front of the roof material from the header rail.



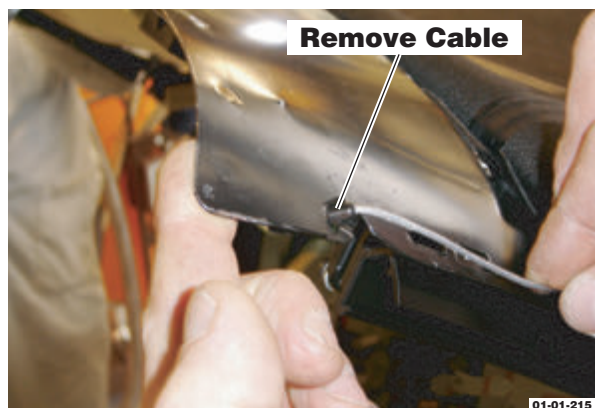
15. Remove the corners of the front of the roof material from the header plate.

The outer screws on both sides of the header plate are not currently used.



16. Pull the roof material from the roof header rail.

17. Remove the two side cable securing clips (two each side) and withdraw the side tension cables through the roof lining.



Ensure that the two cable securing clips (each side) are retained for installation.

18. Roll the roof material back to the 1st cross bar.
Remove the screws that secure the roof lining to the cross bar.
Pull the roof material from the cross bar.
19. Remove the strip in the roof material from the front of the header rail.



Installation

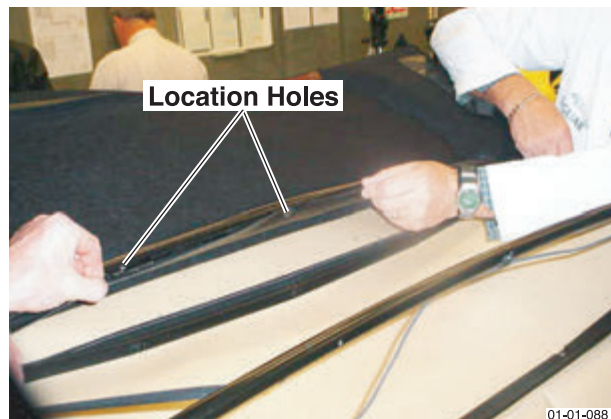
1. Manually raise the roof to the raised position.

2. Lay the roof material on the roof frame.
2.1 Locate the strip in the roof material to the header rail. Secure with screws x4.

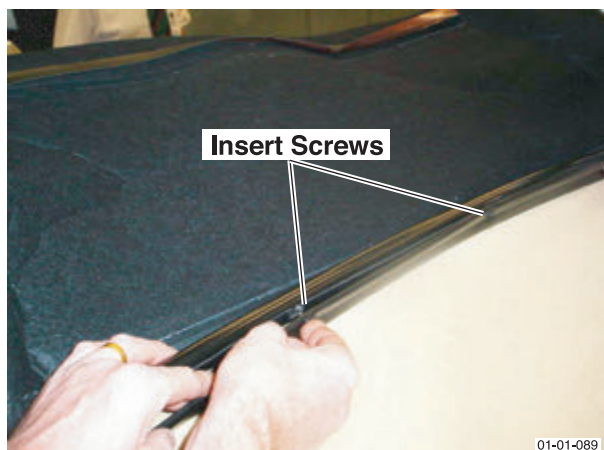


3. Roll the roof material to the 1st cross bar.
4. Remove the sticky strip protection and locate to the first cross bar.
Ensuring that the material is central, stick to the frame cross bar. Affix from centre out, ensuring the holes in the material locate over the holes in the cross bar.

The material with the sticky surface goes under and up around the cross bar.



5. Locate the roof lining strip to the cross bar and secure with screws x5.



9. Install the front of the roof material to the header rail. Secure with screws.

The outer screws on both sides of the header plate are not currently used.



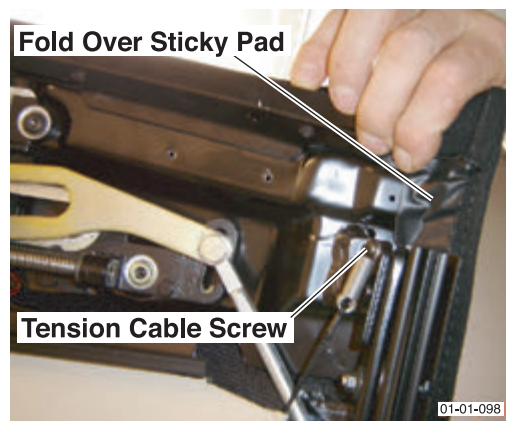
6. Roll the roof material to the 2nd frame cross bar.
7. Repeat step 6 and 7.

The material with the sticky surface goes over and down around the cross bar

8. Feed the side tension cables through the roof lining and install the end of the cables to the header rail. Ensure that the two cable securing clips are installed.



10. Place the material with the sticky pads into position. Remove the sticky pads protection and affix to the header rail.

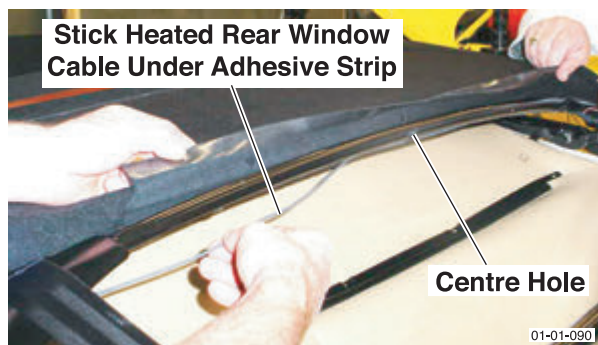


11. Roll the roof material to the 3rd cross bar.

Repeat steps 6 and 7.

The material with the sticky surface goes over and down around the cross bar

Ensure that the heated window cable goes under the adhesive strip.

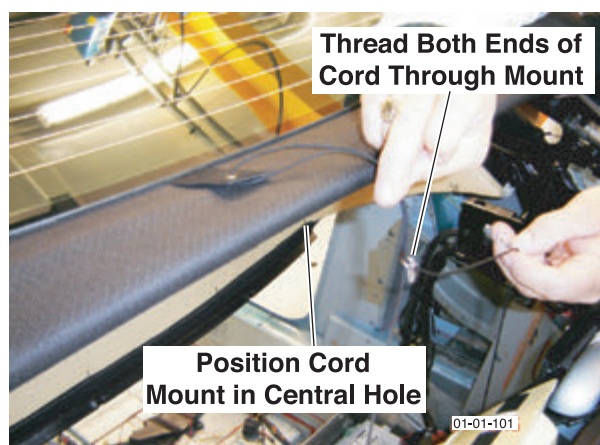


12. Install the window tension cord (if not install).

12.1 Thread the tension cord through the center hole.

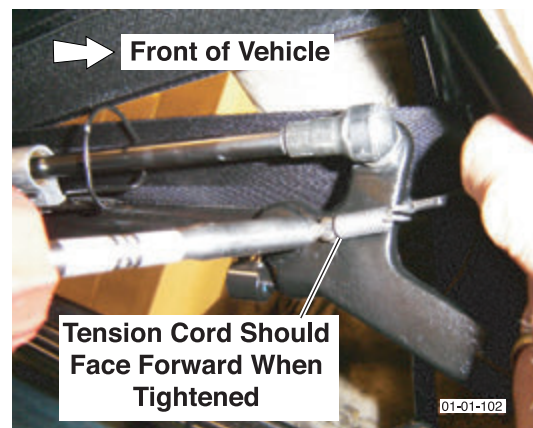


12.2 Install the three tension cord mounts.



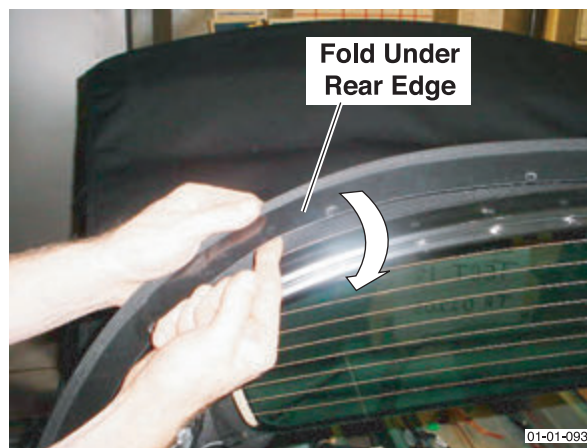
13. Install the ends of the tension cord.

Install the spring, on the end of the tension cord, facing forward.



14. Raise the tension bow to 90°.

15. Slide the roof material over the rear of the tension bow.

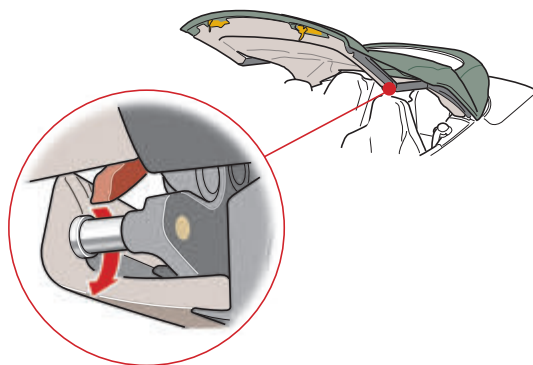


16. Install the trim strip. Do not tighten the screws.



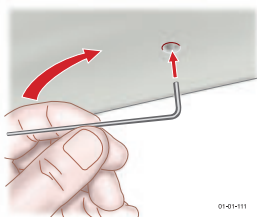
17. Raise the roof to the open position and lock into place. 20. Unlock the roof and lower to enable access to the trim strip. Tighten the remaining screws.

Ensure the two lock arms are located in their catches.



Using the allen key provided in the vehicle tool kit, lock the roof in position.

Continue to turn the allen key until no more movement is possible.



01-01-111

Locking the roof manually may require the assistance of a second person to push down so the catches engage while the allen key is turned.

18. Check that the roof material is correctly installed.

Make Sure There Are No Creases



01-01-105

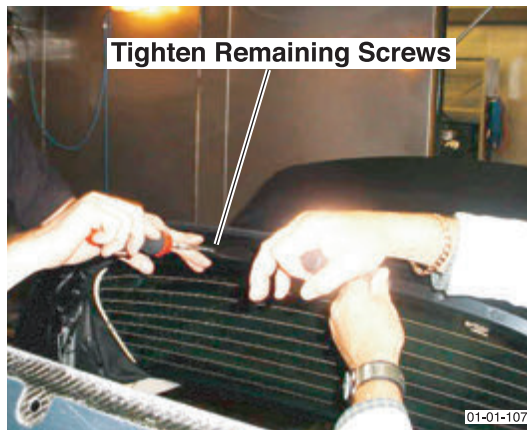
19. Tighten 4 or 5, evenly, trim strip screws while the roof is in the open position.

Tighten Screws



01-01-106

Tighten Remaining Screws



01-01-107

21. Install the roof material over the roof side frame.



Secure Edge Trim

01-01-108

The screw holes in the roof material are used when the sealing strip is installed.

Finished Hood



01-01-109

Weather Seals

Removal

1.

Installation

1.

Roof Pump

⚠ Warning ⚠

Do not place any objects on the top of the deployable rollbar covers behind the rear seat backs.

⚠ Warning ⚠

Do not allow any person to sit on the deployable rollbar covers at any time.

⚠ Warning ⚠

If the roof is not stowed and the deployable rollbars deploy they will break through the rear glass.

Removal

1. Disconnect the vehicle battery at the negative terminal and ensure the ignition key is removed.

⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

⚠ Warning ⚠

Do not lean over the rollbars. If the rollbars deploy while someone is leaning over them, they will cause severe injury.

2. Remove the ignition key and wait for a minimum of five seconds. The roof can now be moved in any direction.

⚠ Warning ⚠

Keep fingers clear of the roof linkage when moving the roof manually.

During this time the roof hydraulics will relax allowing manual movement of the roof. Some hydraulic fluid resistance will still be present in the operating rams. It may take considerable effort to fully raise the roof manually.

3. Disconnect the vehicle battery.
4. Remove the LH road wheel and arch liner.

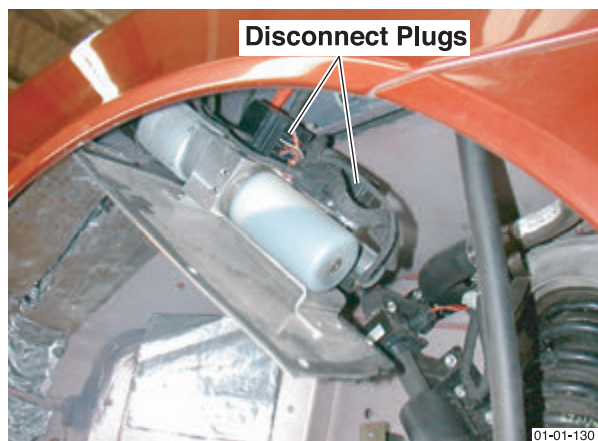
The fuel filler drain off pipe is attached to the arch liner. Ensure that the fuel filler drain off pipe does not disconnect from it's stub pipe.

5. Remove bolts (x6). Support the pump plate as the screws are removed.

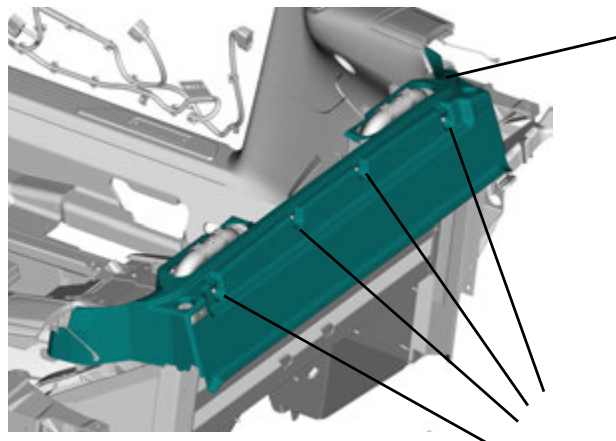
The pump is attached to the pump plate.



6. Disconnect two wiring harness plugs.

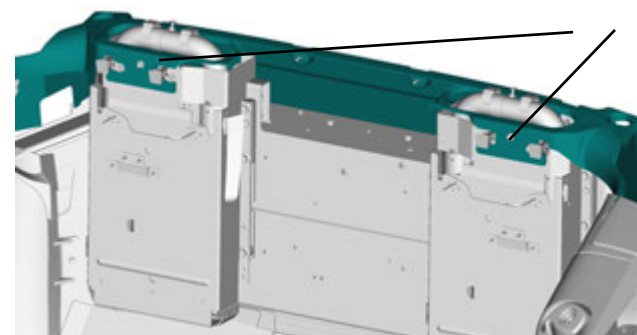


9. Remove the rear closing panel.



7. Manually raise the tension bow to 90°.

For access to the hydraulic pipes and wiring harness plugs.



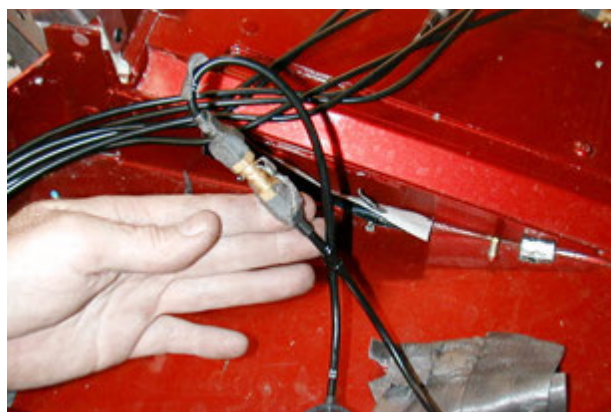
10. Disconnect the hydraulic pipes.

Connect feed and return hydraulic pipes to create an hydraulic loop.

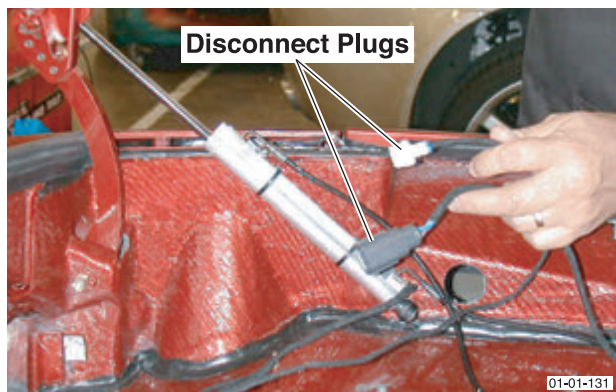
Creating hydraulic loops will enable the hydraulic rams to continue to operate.

Connect the hydraulic pipes, feed to return.

8. Remove the rollbar trim cover.



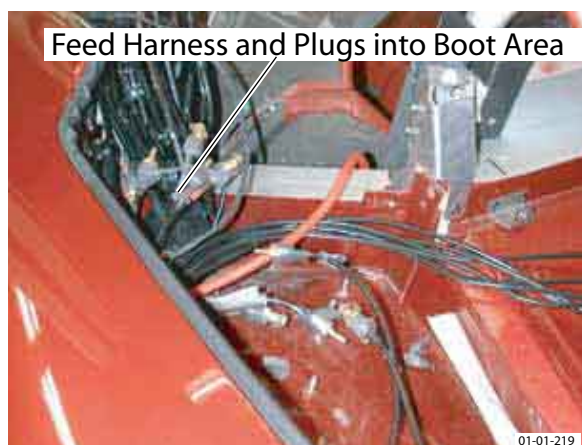
11. Disconnect the two wiring harness plugs from inside the boot area.
3. Connect the two pump wiring harness plugs.



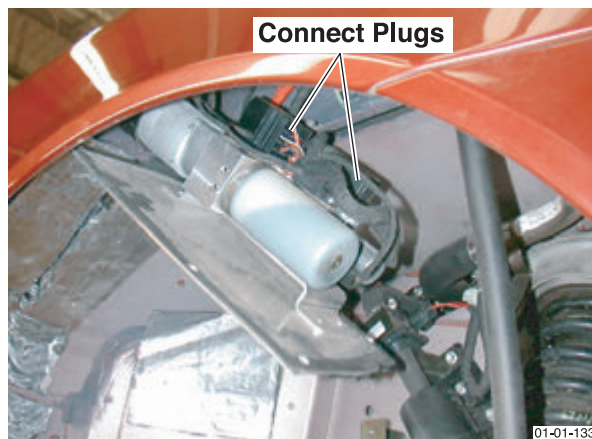
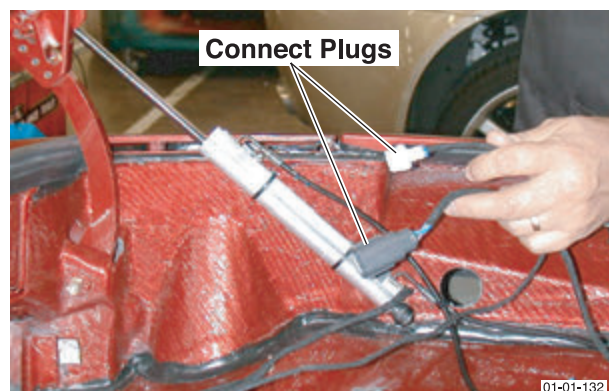
12. Withdraw the hydraulic pipes and the wiring harness cables through the vehicle body, while lowering the pump.

Installation

1. Feed the hydraulic pipes through the vehicle body. Feed the wiring harness plugs into the boot area.



2. Connect the two boot wiring harness plugs.



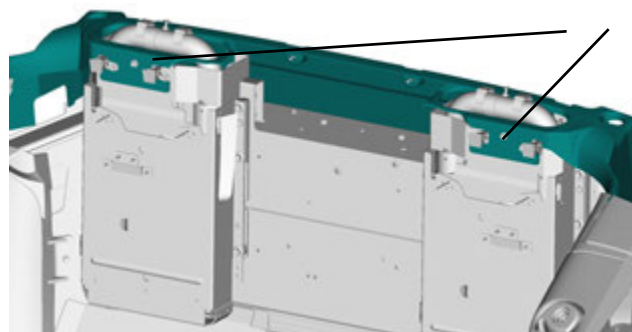
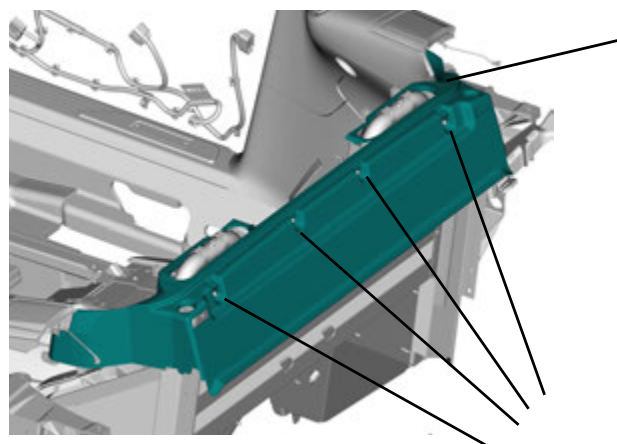
4. Raise the pump and pump plate assembly into position and secure. Torque bolts to **7-10 Nm**.

Take care not to trap hydraulic pipes and wiring harness cables.

5. Connect the hydraulic pipes.

The hydraulic pipes are numbered, i.e. connect pipes numbered 32 together, etc.

6. Install the rear closing panel.



7. Install the rollbar trim cover.
8. Install the road wheel arch liner and road wheel. (Refer to 'Road Wheel Nut Torque Tightening', page 4-5-7).

Roof Module

Removal

1. Remove the ignition key and wait for a minimum of five seconds. The roof can now be moved in any direction.

⚠ Warning ⚠

Keep fingers clear of the roof linkage when moving the roof manually.

During this time the roof hydraulics will relax allowing manual movement of the roof. Some hydraulic fluid resistance will still be present in the operating rams. It may take considerable effort to fully raise the roof manually.

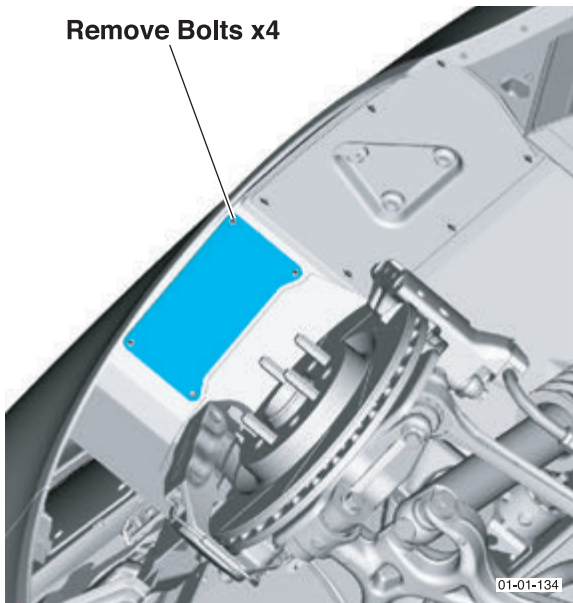
2. Disconnect the vehicle battery.
3. Remove the LH road wheel and arch liner.

The fuel filler drain off pipe is attached to the arch liner. Ensure that the fuel filler drain off pipe does not disconnect from it's stub pipe.

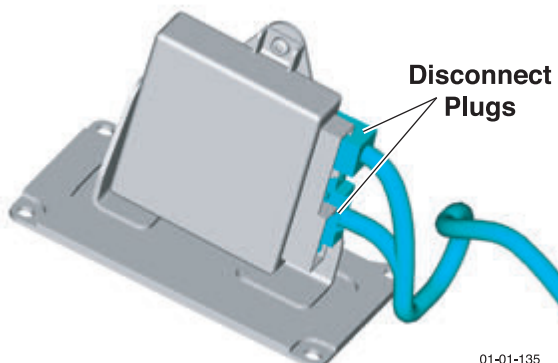
4. Remove bolts (x4). Support the module plate as the screws are removed.

The roof module is attached to the plate.

Remove Bolts x4



5. Lower the module plate to access the two wiring harness plugs. Disconnect the two wiring harness plugs and withdraw the roof module.



Installation

1. Raise the roof module into position and connect the two wiring harness plugs.
2. Install the roof module and plate assembly. Torque bolts to 7-10 Nm.

Roof Lid Hydraulic Rams

Removal

1. Remove the ignition key and wait for a minimum of five seconds. The roof can now be moved in any direction.

⚠ Warning ⚠

Keep fingers clear of the roof linkage when moving the roof manually.

During this time the roof hydraulics will relax allowing manual movement of the roof. Some hydraulic fluid resistance will still be present in the operating rams. It may take considerable effort to fully raise the roof manually.

2. Disconnect the vehicle battery.
3. Raise the tension bow to 90° to the vehicle.
4. Raise the roof lid and support.
5. **LH ram only.**
 - 5.1 Withdraw the pump and pump plate unit.
 - 5.2 Connect the vehicle battery. Open the boot lid.
 - 5.3 Disconnect the wiring harness plug. Feed the wiring harness cable through into the pump area.

⚠ Warning ⚠

Take care to avoid sharp edges.

Disconnect plug from the
Boot image

- 5.4 Close the boot lid. Disconnect the vehicle battery.
- 5.5 Disconnect the wiring harness plugs.

Disconnect plug from
the front
of the mech image

6. Disconnect the hydraulic pipes.

Connect feed and return hydraulic pipes to create an hydraulic loop.

Creating hydraulic loops will enable the hydraulic rams to continue to operate.

The hydraulic pipes are numbered, i.e. connect pipes, feed to return, numbered 32 together, etc.

3. **LH ram only.**

- 3.1 Connect the wiring harness plug (x1).

Disconnect plug from the front of the mech

Disconnect hydraulic Pipes

7. Disconnect both ends of the hydraulic ram and withdraw the ram.

Installation

1. Connect the ram to it's mounts.
2. Connect the hydraulic pipes.

The hydraulic pipes are numbered, i.e. connect pipes, feed to return, numbered 32 together, etc.

- 3.2 Feed the wiring harness cable (x1) through into the boot area.

⚠ Warning ⚠

Take care to avoid sharp edges.

- 3.3 Install the pump and pump plate unit.
4. Remove the roof lid support.
5. Connect the vehicle battery. Open the boot lid.
6. Connect the boot area wiring harness plug.

Connect hydraulic Pipes

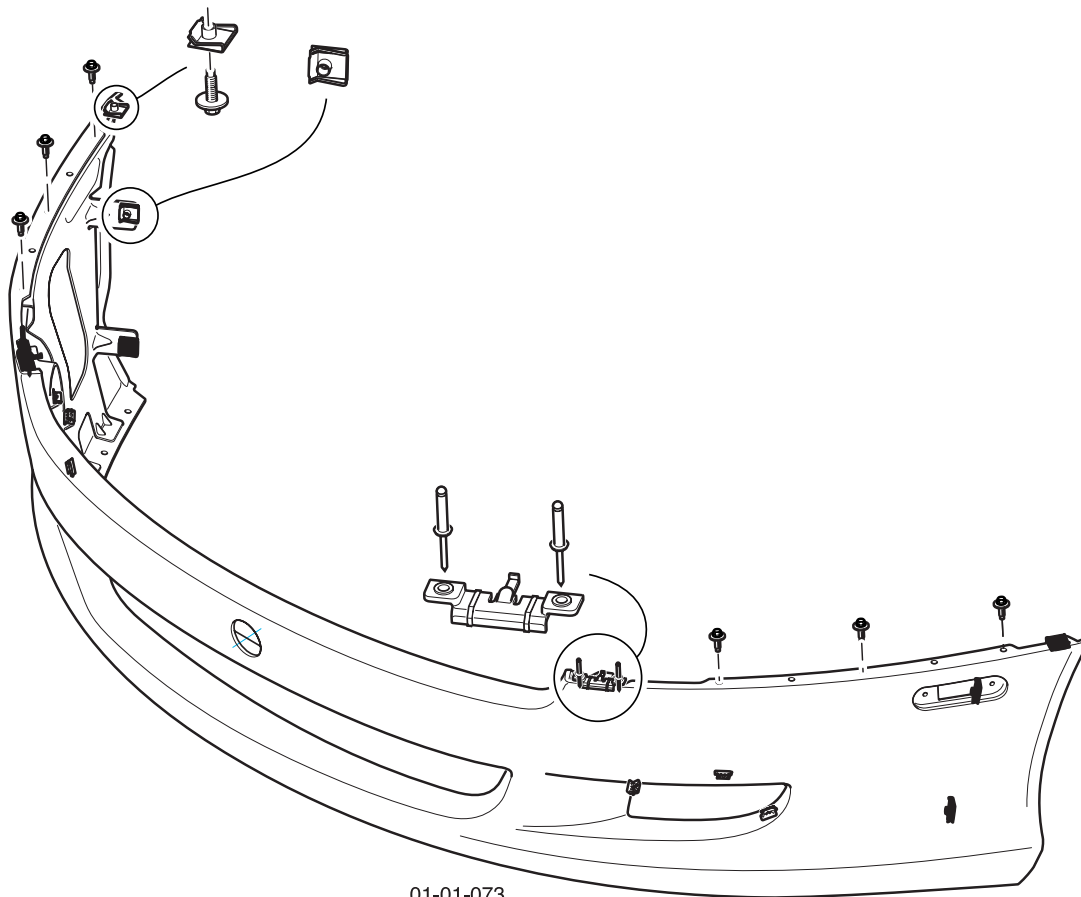


ASTON MARTIN

Body System (01.00)

Bumpers (01.19)

Front Bumper



01-01-073

Specifications

Torque Figures

Description	Nm	lb. / ft.
Bumper to bumper bracket	4-5	3-4

Maintenance

Repair Operation Time (ROT)

Item	Code
Bumper Remove / Install	01.19.AB

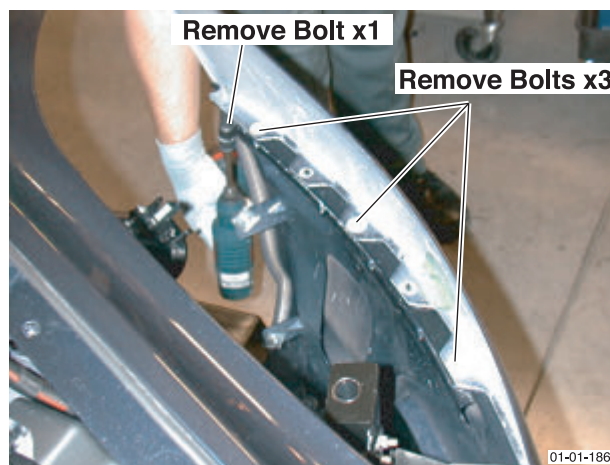
Removal

1. Remove the road wheel and arch liner.
2. Remove the bolts (x6) that secure the under tray to the bumper.

The air intake for the alternator is located in the front under tray.

3. Remove the LH and RH air boxes (Refer to 'Air Filter Box', page 3-13-3).

4. Remove bolts (x8 (x4 each side)) that secure the bumper.



01-01-186



5. Disconnect the retaining clips (x2).

Use a tool, i.e. a long screwdriver, to unclip the bumper from the vehicle body.

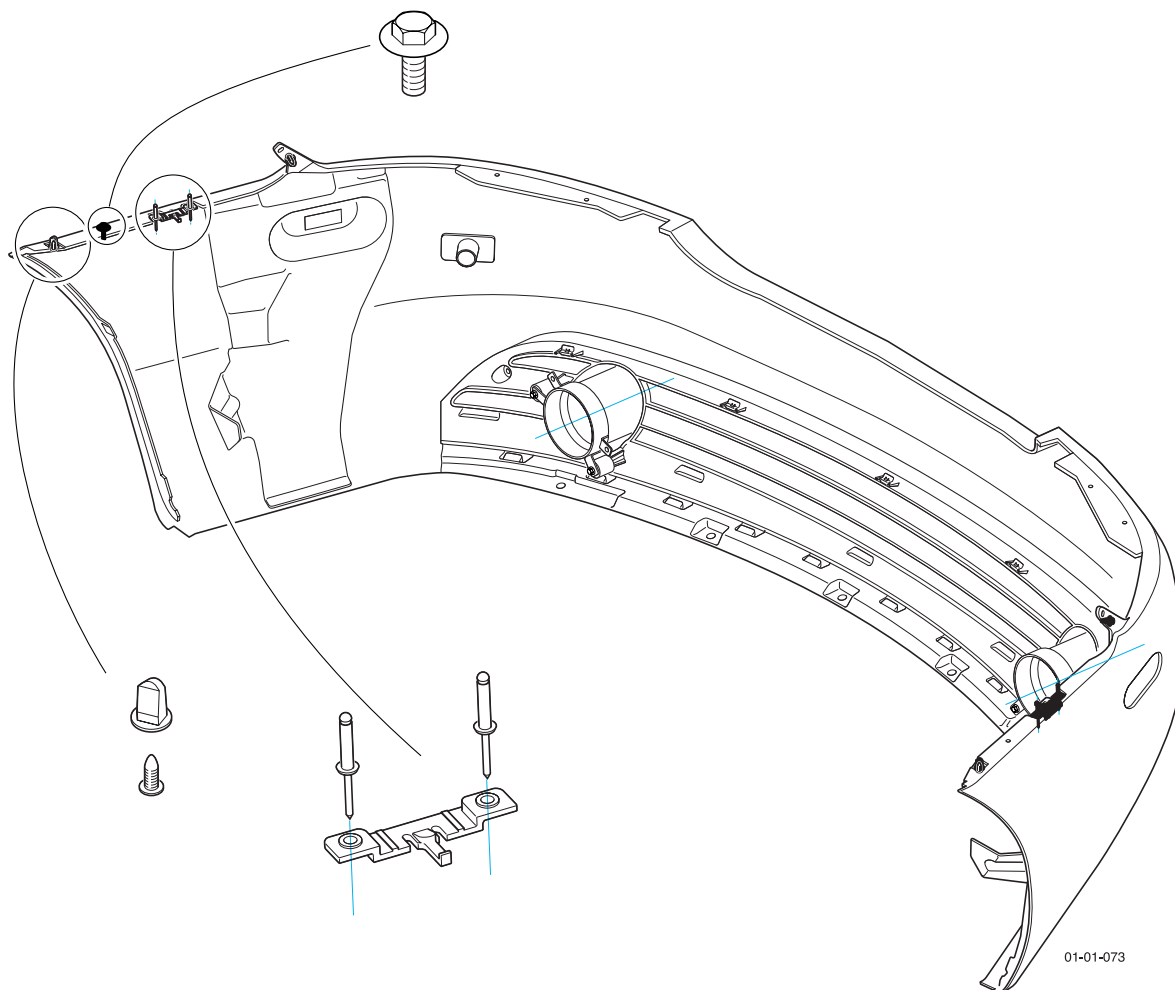
Image to follow

6. Pull the bumper from the clips located in the front grill.
Withdraw the bumper from the vehicle.

Installation

1. Place the bumper in position. Push install onto the clips located in the front grill.
2. Locate on the retaining clips (x2).
3. Install bolts (x8 (x4 each side)) to the bumper. Torque to **4-5 Nm**.
4. Install the LH and RH air boxes (Refer to 'Air Filter Box', page 3-13-3).
5. Install the undertray.
6. Install the road wheel arch liner and wheel.

Rear Bumper



Specifications

Torque Figures

Description	Nm	lb. / ft.
Bumper to bumper bracket	2-3	1.5-2.5

Maintenance

Repair Operation Time (ROT)

Item	Code
Bumper Remove / Install	01.19.BB

Removal

1. Remove the light clusters.
 - 1.1 Open the boot and remove the trim from around the light cluster mounts.
 - 1.2 Release and remove nuts (x3).
 - 1.3 Withdraw the rear light cluster unit. Disconnect the wiring harness plug.

2. Remove the bumper tag screw.



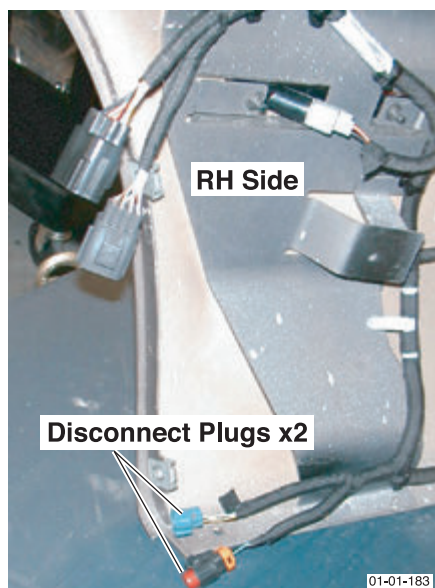
3. Remove screws x4 (2 each side).



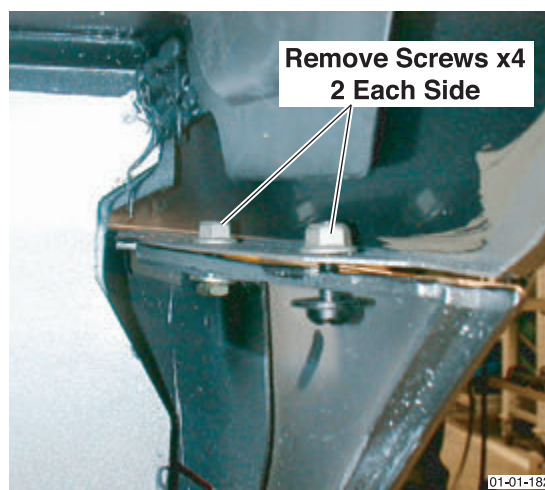
4. Remove bolt from inside the boot (1 each side).



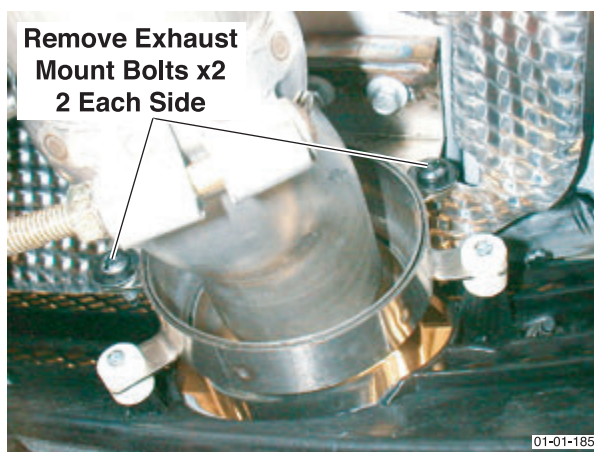
5. Remove the roadwheel and disconnect the rear section of the roadwheel arch liner.
6. Disconnect the wiring harness plugs (x2 (RH side)) and (x2 (LH side)).



7. Remove screws (x4 (x2 each side)) from the bumper.



8. Remove bolts (x4 (x2 each)) that secure the exhaust mount to the end pipe trim.



9. Disconnect the retaining clips (x2).

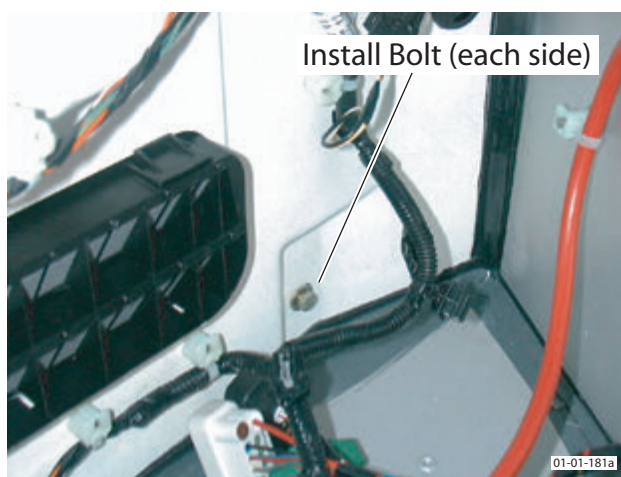
Use a tool, i.e. a long screwdriver, to unclip the bumper from the vehicle body.

Image to follow

10. Disconnect the two clips in the top centre of the bumper. Withdraw the bumper from the vehicle.

Installation

1. Place the bumper to the vehicle. Locate the two clips in the center top of the bumper.
2. Locate the retaining clips (x2).
3. Install the bumper 'Tag' screw.
4. Install screws (x4 (x2 each side)). Torque to **2-3 Nm**.
5. Install the screws (x4) in the light cluster opening.
6. Install the light clusters.
 - 6.1 Place a light cluster unit to vehicle and connect the wiring harness plug.
 - 6.2 Insert the light cluster unit into position.
 - 6.3 Ensure the rubber seal is in position. Tighten nuts (x3).
 - 6.4 Repeat for the second light cluster.
7. Install the bolts (x2) to the bumper boot mount.



8. Install the exhaust mounts.
9. Connect the wiring harness plugs.
10. Install the road wheel arch liner and wheel.

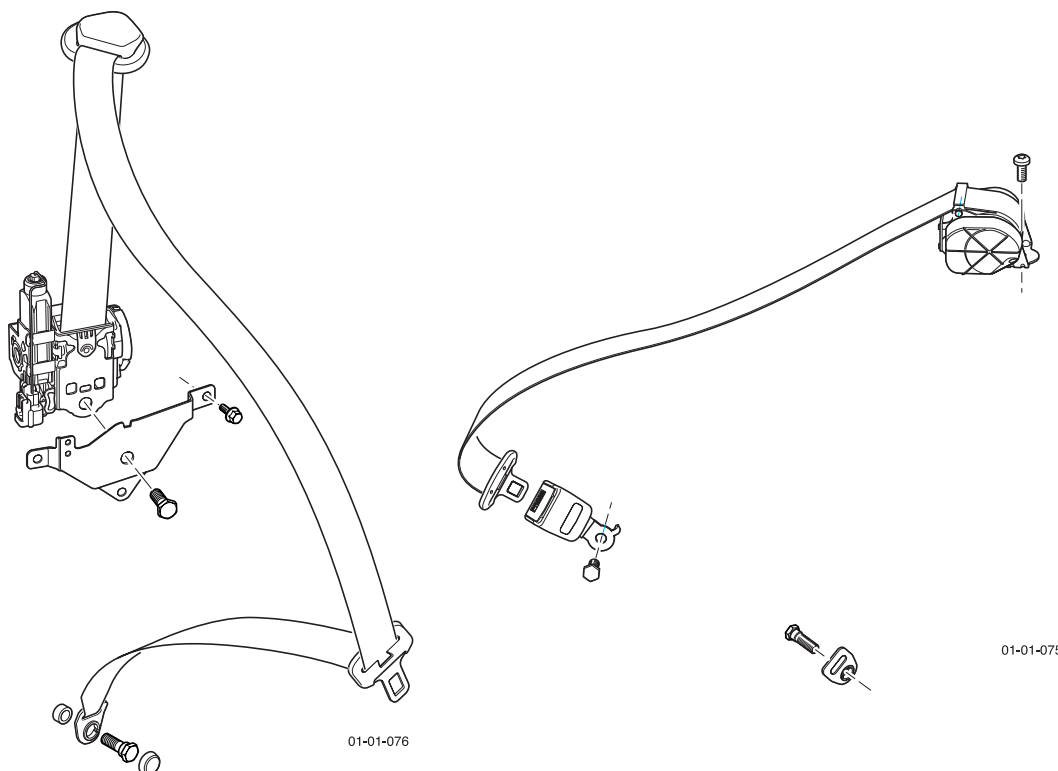


ASTON MARTIN

Body System (01.00)

Restraining Devices (01.20)

Seat Belts



This vehicle is installed with four inertia reel safety belts. The inertia belt reels automatically tension the belts to provide security with comfort. In the event of a collision or during severe braking, the belt reels will lock.

The driver and front passenger safety belt buckles are installed with a switch, which is connected to a warning indicator housed within the DIM. When the ignition is first turned on the warning indicator will illuminate only if the seat belt is not fastened. If the safety belt is fastened before the ignition is turned on the circuit is broken and the indicator will remain off.

Pre-tensioner and Load Limiting Systems

The driver and front passenger seat belts are equipped with pre-tensioner and load limiting systems.

When required, the front airbag and pre-tensioner systems will deploy simultaneously.

In some moderate frontal or near frontal accidents, only the pre-tensioner system will deploy.

The pre-tensioners take up slack in the front seat belts as the airbags are expanding. The load limiting system releases belt webbing in a controlled manner to reduce belt force on the occupant's chest.

The Restraints Control Module (RCM) receives information on the status of the safety belt buckles from a switch contained in the buckle. Only fastened safety belts will activate.

The safety belt retractors, which are mounted within the base of the B pillars, incorporate a torsion bar load limiting device. This device consists of a retractor reel which is mounted onto a spindle (torsion bar) which once the sensor has locked the retractor reel and a predetermined load is applied, twists and allows additional webbing into the system. The deceleration force required to initiate this sequence is approximately the same as that required to initiate airbag deployment. The torsion bar load limiting device will only react if the safety belt is in use at the time of the impact.

Caution

It should be considered that during any event that utilizes the full capability of the safety belts, the webbing may have been elongated and the torsion bar may have twisted. For this reason, if a vehicle is involved in an accident which results in the deployment of the airbag(s), all the safety belts that were in use at the time of the accident MUST be renewed.



Emergency Locking Retractor (ELR)

The retractors in all seat positions feature ELR. During any period of sudden deceleration, or under lateral load when cornering at speed, a sensor weight within the safety belt retractor moves a locking pawl against the teeth on the retractor reel, which then locks the retractor preventing any further release of webbing. As soon as the load applied onto the retractor through the safety belt webbing is removed the locking pawl releases the retractor reel and normal movement is returned to the retractor.

Automatic Locking Retractor (ALR)

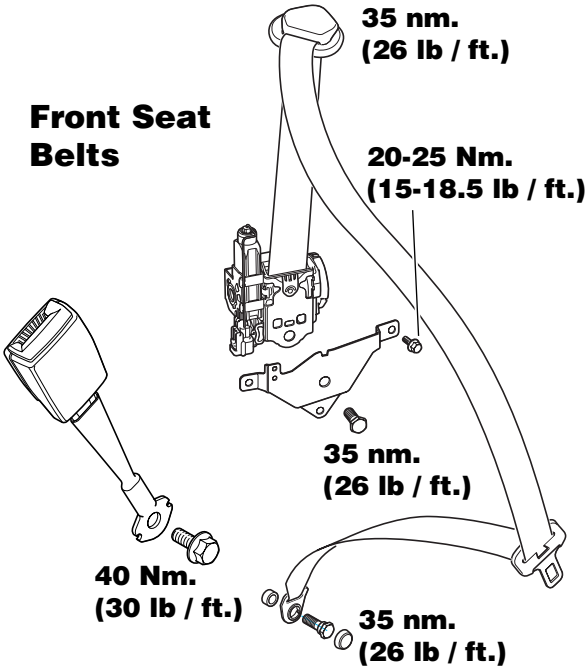
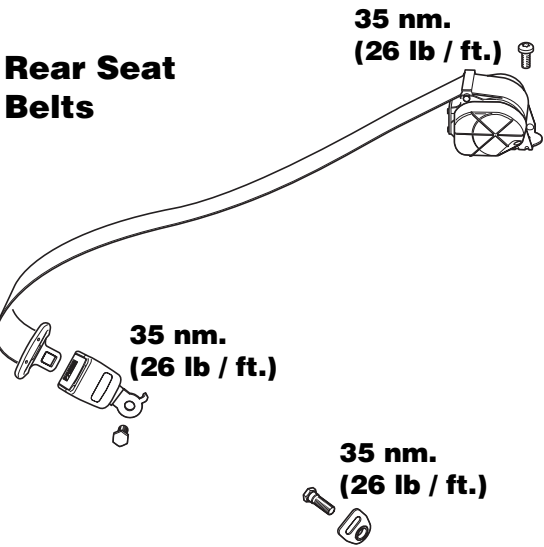
Automatic locking retractors (ALR) are installed to all passenger seat positions.

The safety belt webbing on these are clearly marked to show their operating feature. To initiate the ALR system, fasten the safety belt into it's buckle and pull all of the webbing from the retractor, as the safety belt is released the retractor locks allowing travel in only one direction thus producing a fixed length restraint and preventing the safety belt from introducing slack, making any child seat it may be restraining secure. The ALR system of the retractor is disengaged by unfastening the safety belt and allowing the safety belt to fully retract onto the reel.

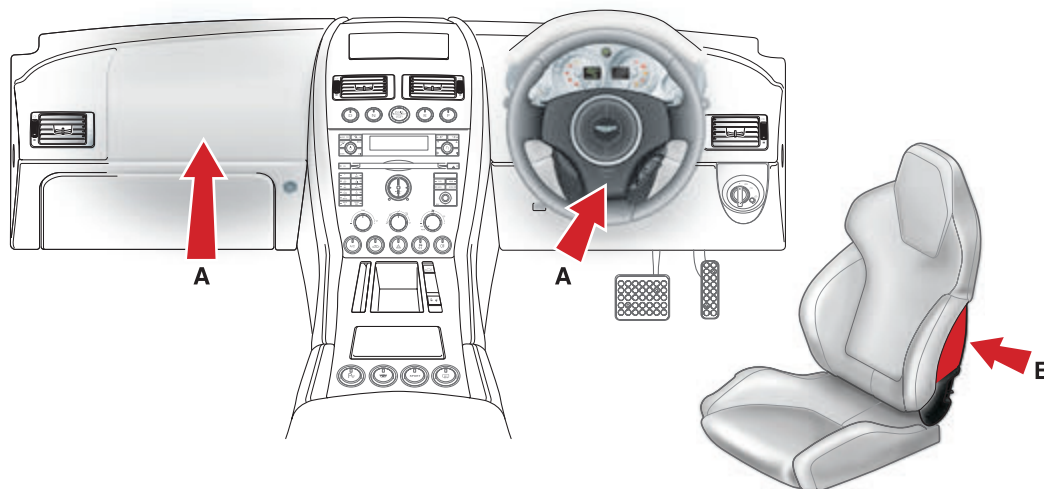
Specifications

Torque Figures
Description

Torque Figures
Description



Airbag System



The airbag system is designed to provide increased collision protection for front seat occupants in addition to that provided by the safety belt system. Safety belt use is necessary to obtain the best occupant protection and to receive the full advantages of the airbag system.

This vehicle is equipped with driver, passenger, side impact airbags and seat belt pretensioners, which are electrically controlled by a Restraints Control Module (RCM).

The purpose of the driver, passenger and side airbags is to provide **additional** protection for the front seat occupants in the event of a serious impact (front or side impacts). The airbags are supplementary to the seat belts.

Airbag Deployment

⚠ Warning ⚠

Airbags inflate rapidly and with considerable force, there is therefore a risk of death or serious injury such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained by seat belts or are not sitting correctly when the airbags deploy. The risk of injury from a deploying airbag is greatest close to the trim covering the airbag.

⚠ Warning ⚠

The whole sequence of airbag deployment, from sensing the impact to full inflation of the airbag takes place in a fraction of a second.

Dual Inflation Technology

When activated, the airbags will deploy at either a normal or reduced level of inflation, depending on crash severity. Various sensors determine the direction and severity of an impact. The system analyses this information then deploys the appropriate airbags.

Driver airbag Module

The driver airbag module is installed in the steering wheel, the cover forming the outer surface of the steering wheel boss. The cover has a split line moulded into its surface allowing the airbag to exit through the cover when the system deploys.

No routine maintenance is required and there are no serviceable parts. The driver airbag module is replaced as an assembly.

Passenger Airbag Module

The passenger airbag module is located above the glove compartment behind a deployment panel.

The passenger airbag deployment panel hinges up out of the way during airbag deployment.

The passenger airbag module is replaced as an assembly. There is no routine maintenance required and there are no serviceable parts.

Side Airbag Module

A side impact airbag module is mounted in the outboard bolster of each front seat. In a side airbag module deployment situation, the airbag module deploys from behind a hard trim panel.

Clockspring

The airbag clockspring continuously transfers electrical signals from the driver airbag module to the airbag sensor.

The airbag clockspring is mounted on the steering column, behind the steering wheel and does not contain any serviceable components. Ensure that the steering wheel is locked in the central position before commencing any work on the steering column, wheel or airbag.

Restrains Control Module (RCM)

The primary purpose of the RCM is to discriminate between an event that warrants an airbag system deployment and an event that does not. The RCM governs the operation of the whole system and performs continual system diagnostics. Information on the severity of an impact is received from the impact sensors.

Variations in the deployment of the front airbag modules are dependent on the status of the front safety belt buckles.

Impact Sensors

Side Impact - Side impact sensors are mounted to the base of each B-pillar. In the event of a side impact, the RCM processes the impact data sent by the side impact sensor against stored data. The RCM will deploy both side impact airbags dependant on seat belt buckle status.

Front Impact

Front impact sensors (x2) are located under the grill opening panel.

The SRS module processes the impact data sent by the front impact sensor against stored data, and deploys the front airbags, and the seat belt pre-tensioners.

Specifications

Torque Figures

Description	Nm	lb. / ft.
Drive Airbag	8-10	6-7.5
Passenger Airbag	11.5	8.5
Side Airbag	10	7.5

Maintenance

Driver Airbag

Repair Operation Time (ROT)	
Item	Code
Drivers Airbag Renew	01.20.AB

Removal

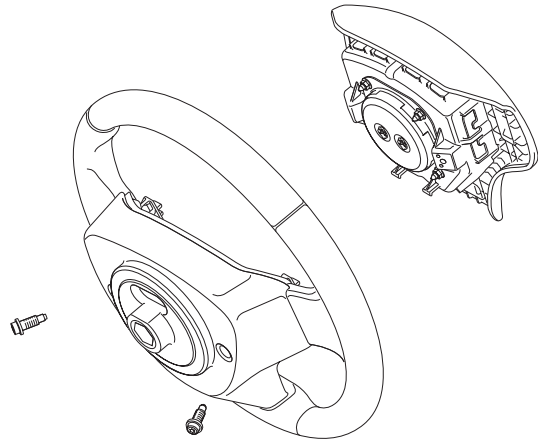
1. Remove the earth ('-ve') terminal from the vehicle battery and ensure the ignition key is removed.

⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the airbag system.

2. Remove bolts (x2) that secure the driver airbag.

Rotate the steering wheel to gain access to the two bolts.



3. Withdraw the driver airbag to gain access to the wiring harness plug. Disconnect the plug.
4. Withdraw the driver airbag.

Installation

1. Place the airbag module to the steering wheel. Connect the wiring harness plug.
2. Install the bolts (x2). Torque to **8-10 Nm**.
3. Connect the vehicle battery with the ignition in the 'Off' position.

Passenger Airbag

Repair Operation Time (ROT)	
Item	Code
Passenger Airbag Renew	01.20.BB

Removal

1. Remove the earth ('-ve') terminal from the vehicle battery and ensure the ignition key is removed.

⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the airbag system.

2. Remove the glove box.
 - 2.1 Pull of the outer trim panel. Disconnect the glovebox release switch wiring harness plug.
 - 2.2 Release the damper cord.
 - 2.3 Remove screws (x3) from the glovebox door hinge. Remove door.
 - 2.4 Remove screws (x4) from the sight shield. Remove the sight shield and glovebox.

3. Remove the airbag trim panel.

Caution
Withdraw the airbag panel carefully. The airbag panel can crease if forced out.

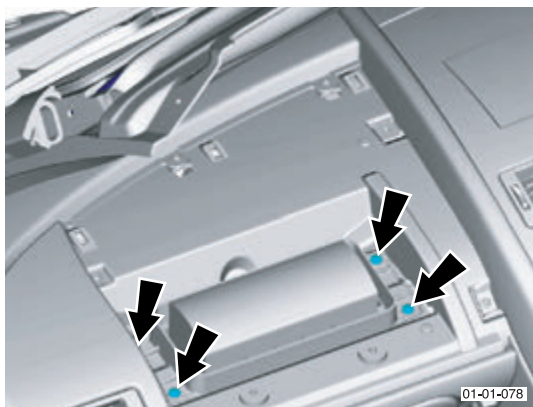
- 3.1 Remove screws (x3).
- 3.2 Lift from the front edge. Withdraw out of clips (x3).



4. Disconnect the wiring harness plugs (x2).



5. Remove bolts (x4) and withdraw the airbag.



Installation

1. Install the airbag. Torque bolts to **11.5 Nm**.
2. Connect the wiring harness plugs.
3. Install the airbag trim panel. Torque bolts to **11.5 Nm**.
4. Install the glovebox.
5. Connect the vehicle battery with the ignition in the 'Off' position.

Side Impact Airbag

Removal

1. Remove the earth ('-ve') terminal from the vehicle battery and ensure the ignition key is removed.

Warning

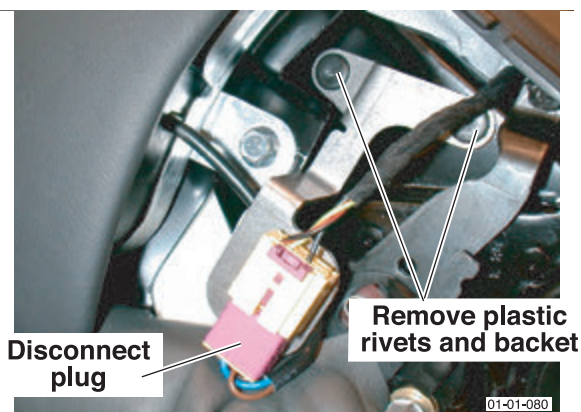
Allow a two minute power down period before proceeding. This will ensure that there is no power to the airbag system.

2. Remove the seat lower side trim.

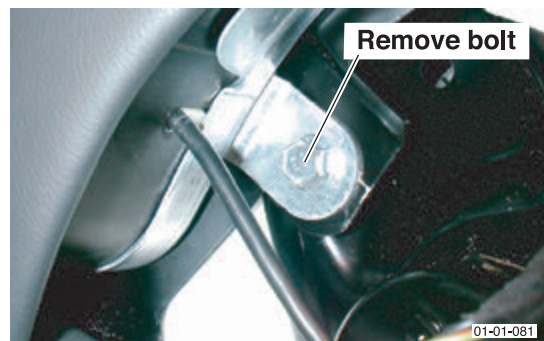


Remove trim

3. Disconnect the wiring harness plug.



4. Remove bolt (x1) that secures the airbag module to the seat.



Remove bolt

Installation

1. Place the airbag to the seat. Torque bolt to **10 Nm**.
2. Connect the wiring harness plug.
3. Install the seat lower trim panel.
4. Connect the vehicle battery with the ignition in the 'Off' position.

Deployable Rollbars

⚠ Warning ⚠
Do not place any objects on the top of the deployable rollbar covers behind the rear seat backs.

⚠ Warning ⚠
Do not allow any person to sit on the deployable rollbar covers at any time.

⚠ Warning ⚠
If the roof is not stowed and the deployable rollbars deploy they will break through the rear glass.

Specifications

Torque Figures		
Description	Nm	lb. / ft.
Deployable Rollbar Unit	20-30	15-22.5
Deployable Rollbar Sensor Unit	TBA	

Maintenance

Rollbar Unit

Remove

1. Disconnect the vehicle battery at the negative terminal and ensure the ignition key is removed.

⚠ Warning ⚠
Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

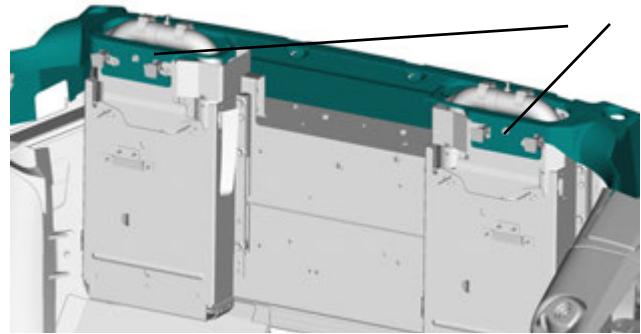
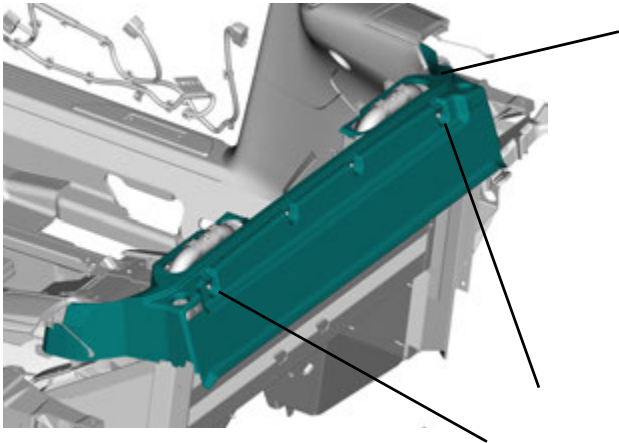
⚠ Warning ⚠
Do not lean over the rollbars. If the rollbars deploy while someone is leaning over them, they will cause severe injury.

2. Remove the rear seat bases and backs (Refer to 'Rear Seats', page 1-7-3).
3. Remove the rollbar trim cover.
4. **LH Rollbar unit only.**
Remove the rear centre console (Refer to 'Rear Trim', page 1-4-5).

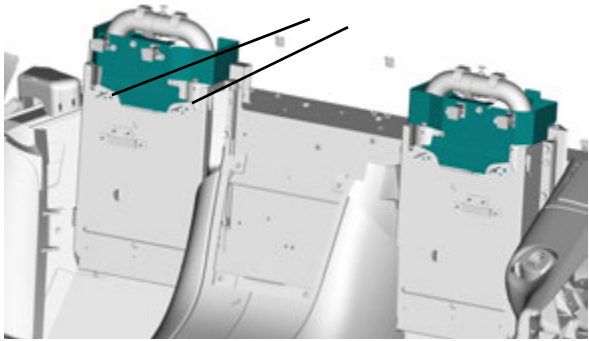
To gain access to the LH ROPS unit wiring harness plug.

5. Disconnect the wiring harness plug.

6. Remove the rear closing panel.



7. Drill out the pop rivets (x2) that secure the seat back bracket to the ROPS unit.



8. Remove bolts (x2 on each) that secure the seat back bracket.

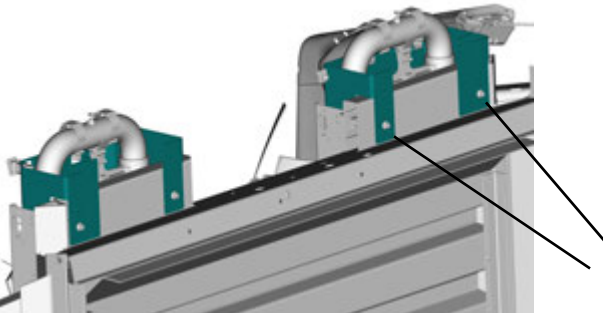
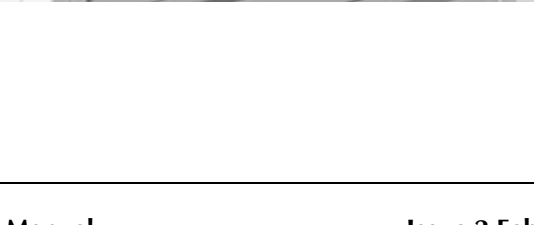
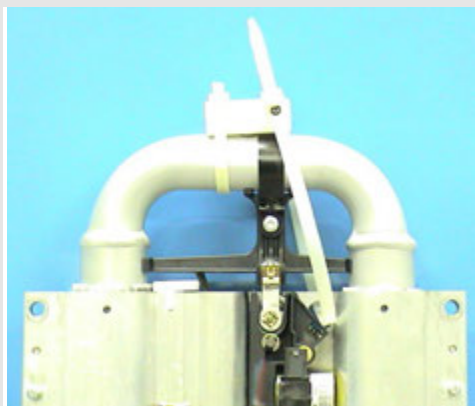


Image to follow



⚠ Warning ⚠

Ensure that the deployable rollbars are secured in the lowered position.



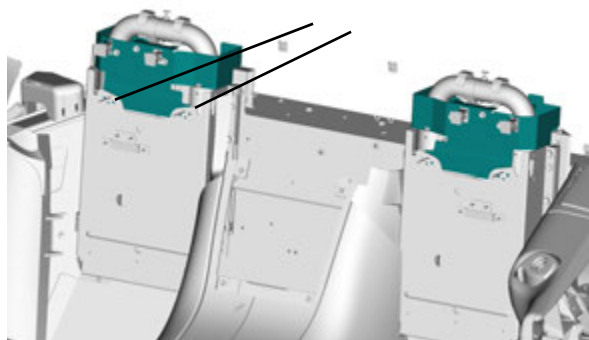
9. Remove bolts x6 that secure the deployable rollbar unit. Withdraw the ROPS unit.

Install

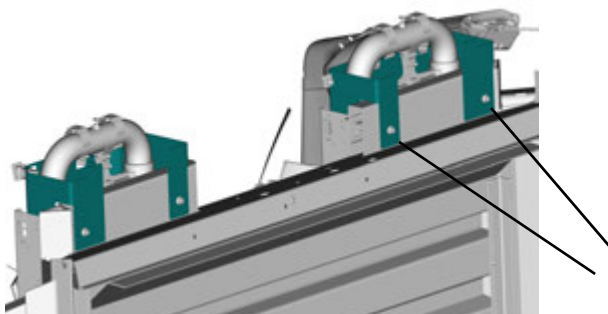
⚠ Warning ⚠

Do not connect the vehicle battery until the ROPS unit is fully installed.

1. Install the deployable rollbar unit. Torque bolts (x6) to **20-30 Nm**.
2. Pop rivet (x2) the seat back bracket to the ROPS unit.

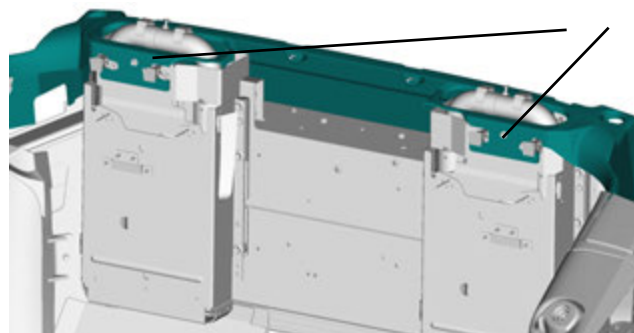
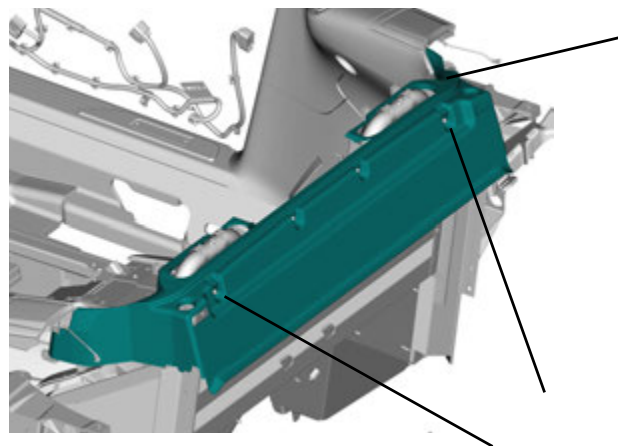


3. Install the bolts (x2) that secure the seat back bracket.



4. Install the rear closing panel.

The two center screws are installed when the 3rd center console trim panel is installed.



5. Connect the wiring harness plug.
6. **LH Rollbar Unit Only.**
Install the rear centre console (Refer to 'Rear Trim', page 1-4-5).
7. Install the rear seat bases and backs (Refer to 'Rear Seats', page 1-7-3).

Rollbar Sensor

Remove

1. Disconnect the vehicle battery at the negative terminal and ensure the ignition key is removed.

⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

2. Remove the boot trim to gain access to the rollbar sensor unit.
3. Remove the bolts (x4) that secure the rollbar sensor and bracket assembly.
4. Withdraw the rollbar sensor and bracket assembly to access the wiring harness plug. Disconnect the wiring harness plug.
5. Remove the rollbar sensor unit from its bracket (screws x3).

Install

⚠ Warning ⚠

Do not connect the vehicle battery until the rollbar sensor is fully installed.

⚠ Warning ⚠

Allow a two minute power down period before proceeding. This will ensure that there is no power to the deployable rollbar system.

1. Install the deployable rollbar sensor unit to its bracket. Torque bolts (x3) to **TBA Nm**.
2. Connect the wiring harness plug.
3. Install the bolts (x4) that secure the rollbar sensor and bracket assembly. Torque to **TBA Nm**.
4. Install the boot trim.
5. Connect the vehicle battery at the negative terminal.