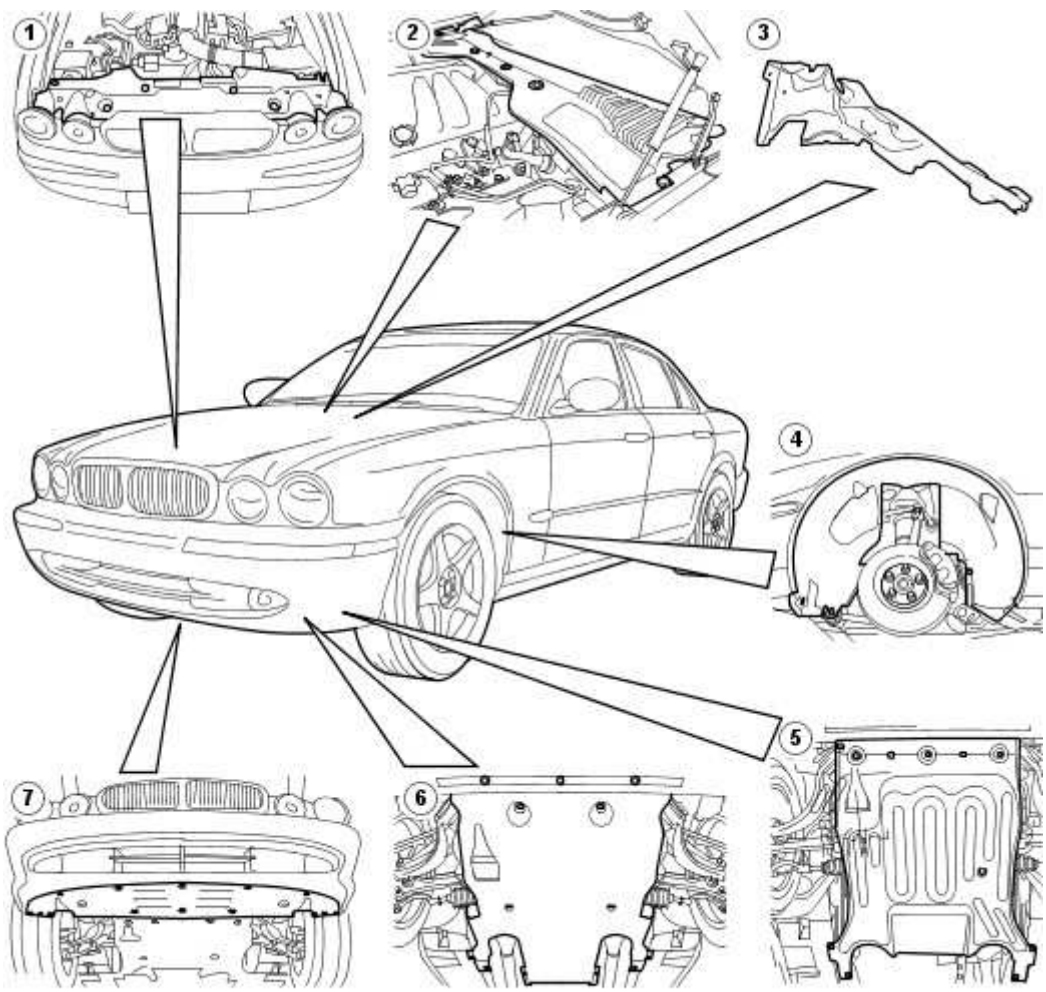
5. BODY AND PAINT

501 : Body and Paint

501-02 : Front End Body Panels

Description and operation

Front End Body Panels



E67437

Item	Part Number	Description

1	-	Radiator closing panel
2	-	Cowl vent screen
3	-	Secondary bulkhead center panel
4	-	Fender splash shield
5	-	Air deflector (petrol variant)
6		Air deflector (diesel variant)
7		Radiator splash shield

Radiator Closing Panel

The radiator closing panel is fitted to the body by retaining clips and is easily removed to give access to the rear of the headlamps.

Cowl Vent Screen - Vehicles built up to G45170

An injection molded plastic cowl vent screen is retained to the bodywork by retaining clips. The cowl vent screen has two access panels and allows easy access to the brake fluid reservoir and the cabin air filter.

Cowl Vent Screen - Vehicles built from G45171

An injection molded plastic cowl vent screen is retained to the bodywork by retaining clips. The cowl vent screen has two access panels and allows easy access to the brake fluid reservoir, the windshield washer reservoir filler neck and the cabin air filter.

Secondary bulkhead center panel

The secondary bulkhead center panel is fitted to prevent engine noise from being transmitted through the bulkhead into the passenger compartment. It also retains the heat in the engine bay compartment to maintain engine bay temperatures and to prevent heat bleeding through into the passenger compartment.

Fender Splash Shield

Protective injection moulded plastic liners are fitted to the inside of the fenders, these help prevent dirt and water ingress into the vehicle body.

Air Deflector

An air deflector is retained to the front subframe. On the diesel variant the air deflector incorporates a transmission undertray. The air deflector assists the flow of air under the vehicle, it also gives protection to the engine bay from dirt and water ingress. On top of the air deflector an acoustic pad is fitted which is covered by a heat shield, this is designed to reduce engine, transmission and road noise.

Radiator Splash Shield

The radiator splash shield is fitted to assist air flow through the cooling pack. It is retained to the bottom of the front bumper cover, both front fender splash shields, and to the front subframe.

Air Deflector (76.11.41)

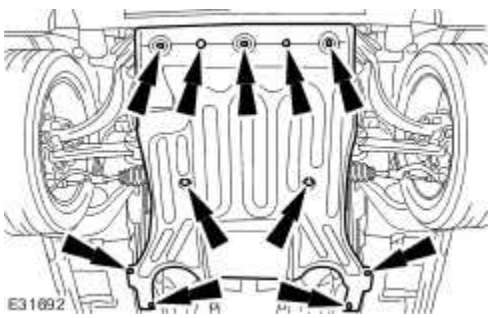
Removal

All vehicles

1 . Raise and support the vehicle.
For additional information, refer to Lifting

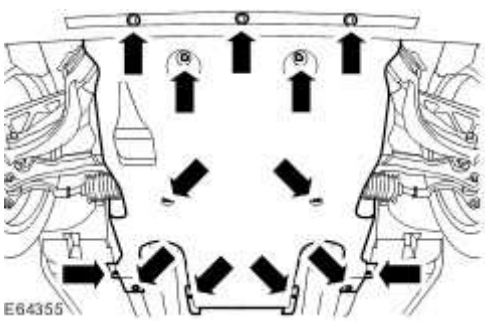
All except vehicles with diesel engine

2 . Remove the air deflector.



Vehicles with diesel engine

3 . Remove the air deflector.

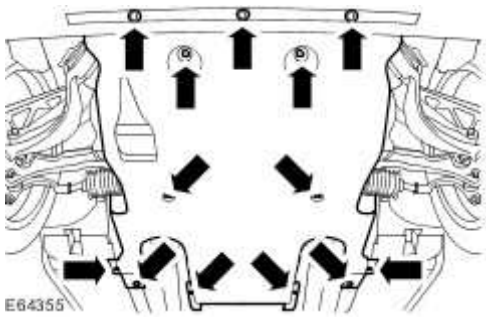


Installation

Vehicles with diesel engine

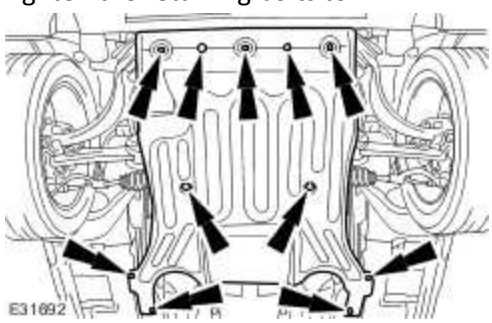
1 . To install, reverse the removal procedure.

- Tighten the retaining bolts to 7 Nm.



All except vehicles with diesel engine

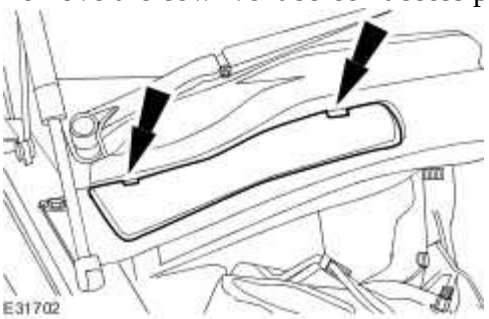
2 . Tighten the retaining bolts to 7 Nm.



Cowl Vent Screen (76.10.01)

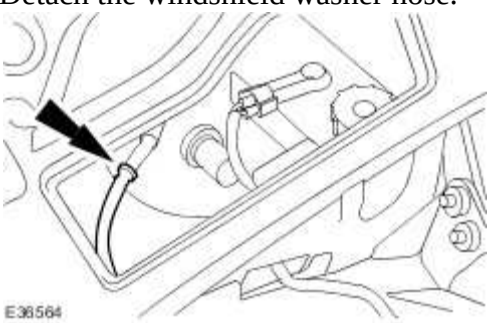
Removal

1 . Remove the cowl vent screen access panel.



2 . Remove both wiper pivot arms. <<501-16>>

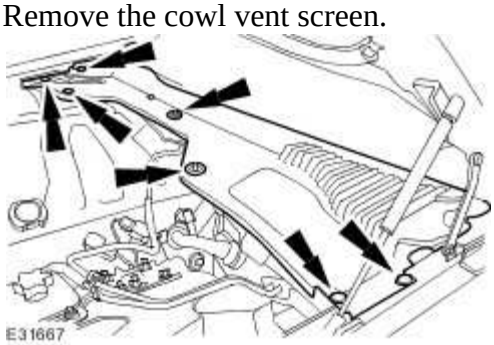
3 . Detach the windshield washer hose.



4 **NOTE:**

· Remove the cowl vent screen starting at one side and working to the opposite side.

Remove the cowl vent screen.



Installation

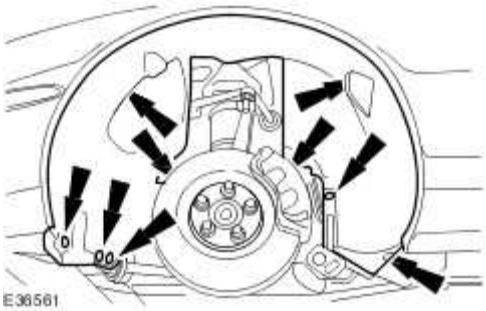
1 . To install, reverse the remove procedure.

Fender Splash Shield (76.10.90)

Removal

1 . Remove the front wheel and tire assembly. <<204-04>>

2 . Remove the fender splash shield.



Installation

1 . To install, reverse the removal procedure.

Radiator Grille Opening Panel (76.10.06)

Removal

1 . Remove the radiator grille opening panel.

Installation

1 . To install, reverse the removal procedure.

Radiator Splash Shield (76.22.90)

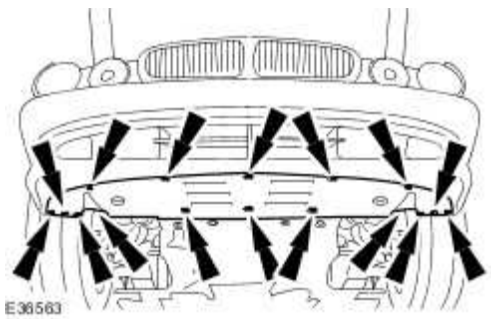
Removal

All vehicles

1 . Raise and support the vehicle.
For additional information, refer to Lifting

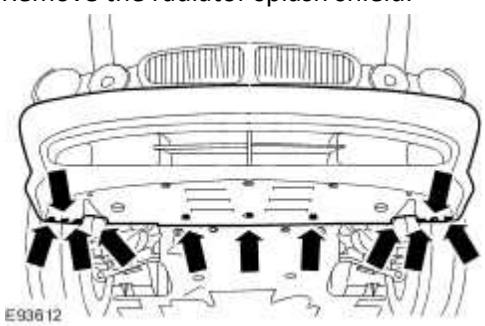
Vehicles built up to VIN:H18679

2 . Remove the radiator splash shield.



Vehicles built from VIN:H18680

3 . Remove the radiator splash shield.



Installation

1 . To install, reverse the removal procedure.

Secondary Bulkhead Center Panel

Removal

All vehicles

1 . Remove the cowl vent screen.
For additional information, refer to Cowl Vent Screen (76.10.01)

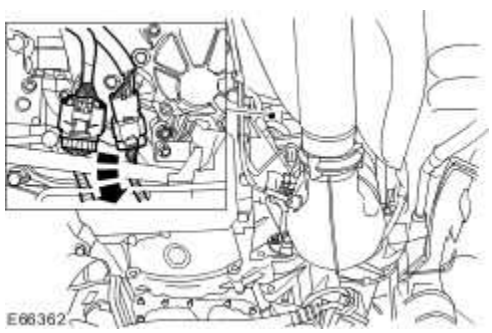
2 Carry out the air conditioning (A/C) system recovery procedure.
. For additional information, refer to Air Conditioning (A/C) System Recovery, Evacuation and Charging (82.30.30)

Right-hand drive vehicles

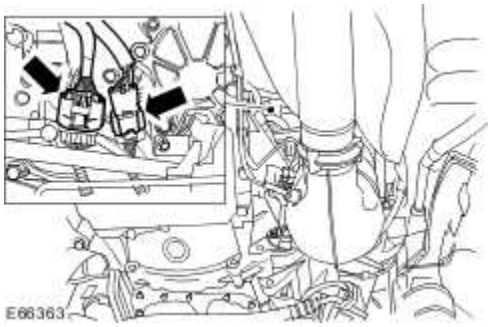
3 . Drain the cooling system.
For additional information, refer to Cooling System Draining, Filling and Bleeding

4 . Remove the air deflector.
For additional information, refer to Air Deflector (76.11.41)

5 . Detach the transmission harness electrical connectors from the retaining bracket.



6 . Disconnect the transmission harness electrical connectors.

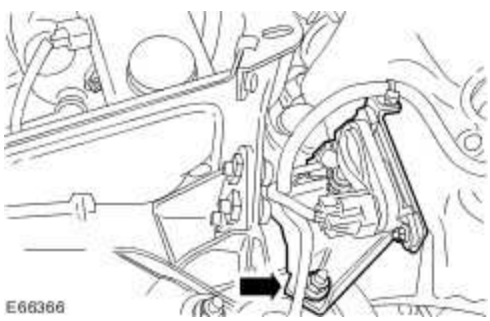


7 . Lower the vehicle.

8 . Detach the brake booster vacuum pipe from the vacuum pump.

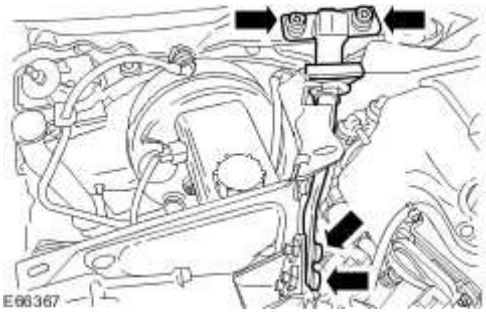
9 . Detach the differential pressure sensor retaining bracket.

- Remove the retaining nut.



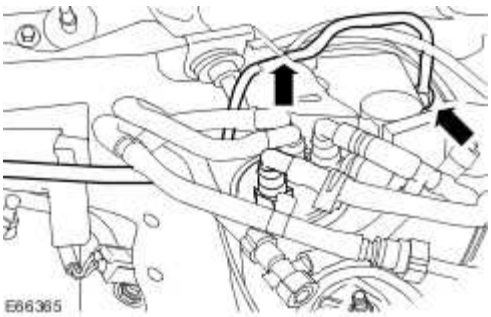
10 . Remove the engine compartment support brace.

- Remove the retaining bolts.



Left-hand drive vehicles

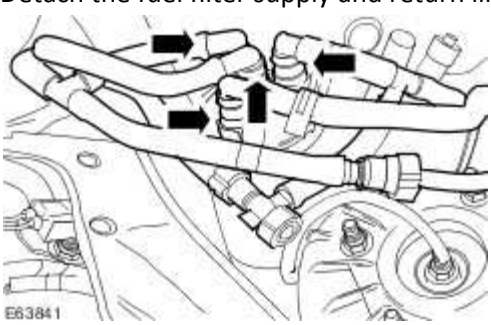
11 . Detach and reposition the brake booster vacuum pipe.



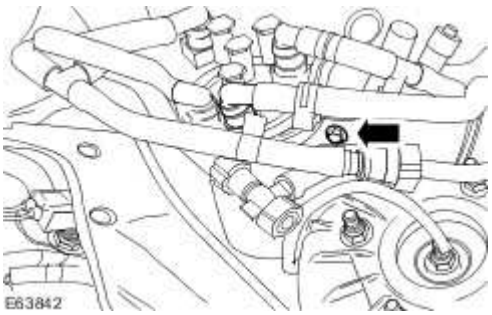
12 . **NOTE:**

Fit suitable blanking caps to the fuel filter unions, fuel supply lines and fuel return lines.

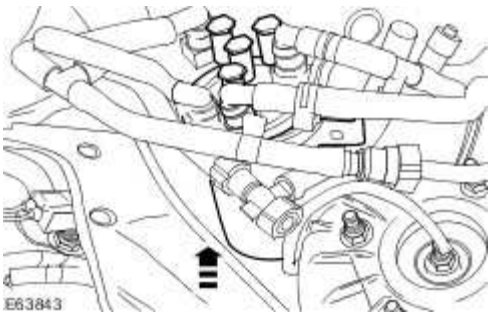
Detach the fuel filter supply and return lines.



13 . Loosen the fuel filter retaining bolt.

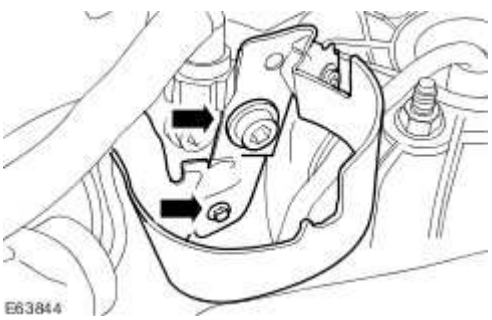


14 . Remove the fuel filter from the retaining bracket.



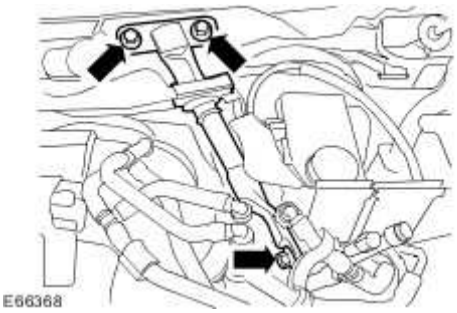
15 . Remove the fuel filter retaining bracket.

- Remove the retaining bolts.

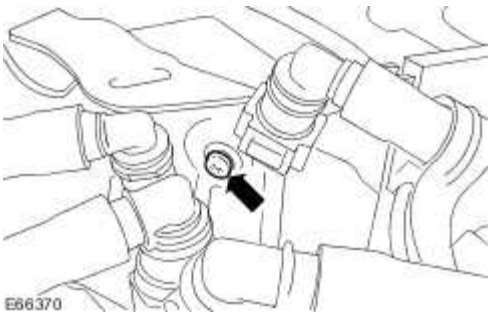


16 . Remove the engine compartment support brace.

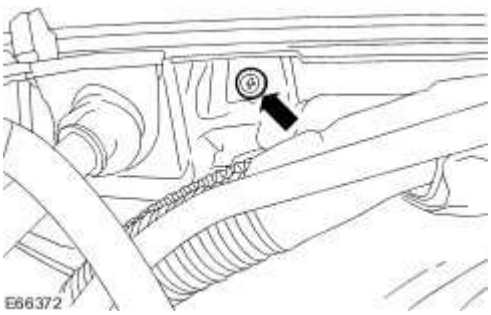
- Remove the retaining bolts.



17 . Remove the secondary bulkhead center panel left-hand retaining scrivet.

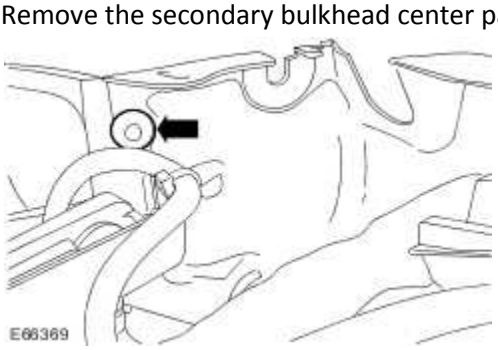


18 . Remove the secondary bulkhead center panel right-hand retaining scrivet.

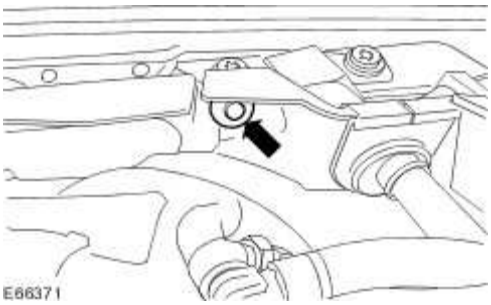


Right-hand drive vehicles

19 . Remove the secondary bulkhead center panel right-hand retaining scrivet.

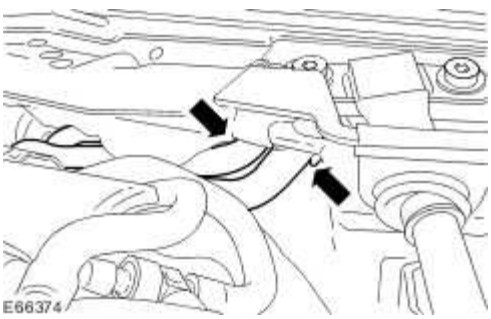


20 . Remove the secondary bulkhead center panel left-hand retaining scrivet.



21 . Detach the heater hoses.

- Reposition the heater hose retaining clips.



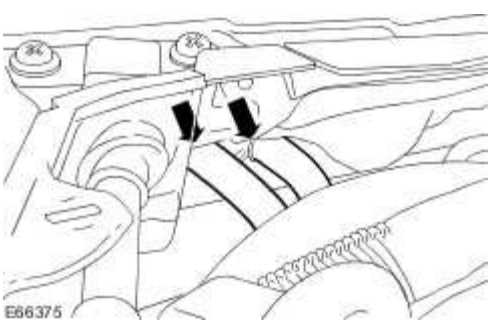
Left-hand drive vehicles

22 . **NOTE:**

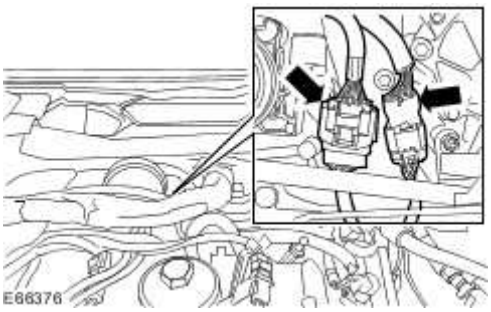
Cap the heater hoses to prevent coolant loss.

Detach the heater hoses.

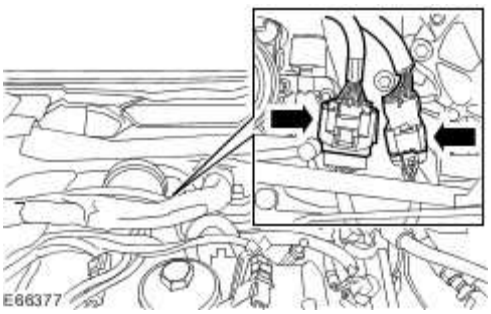
- Reposition the heater hose retaining clips.



23 . Detach the transmission harness electrical connectors from the retaining bracket.



24 . Disconnect the transmission harness electrical connectors.



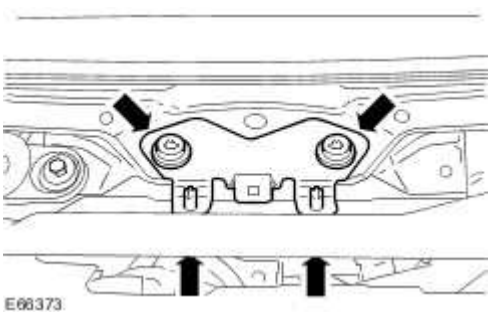
All vehicles

25 . **NOTE:**

Right-hand drive vehicle shown, left-hand drive vehicle similar.

Remove the secondary bulkhead center panel retaining bracket.

- Remove the retaining bolts.
- Remove the retaining scrivets.



26 . **NOTE:**

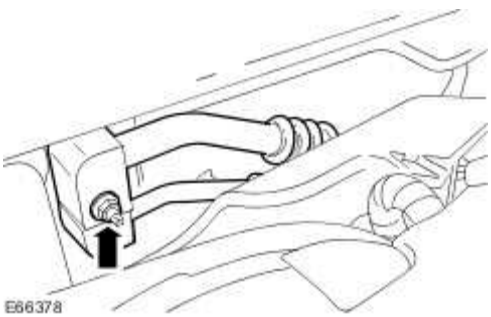
Remove and discard the O-ring seals.

NOTE:

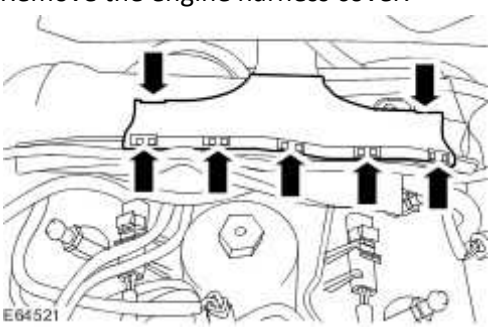
Cap the air conditioning ports.

Detach the evaporator core supply and return pipes.

- Remove the retaining nut.

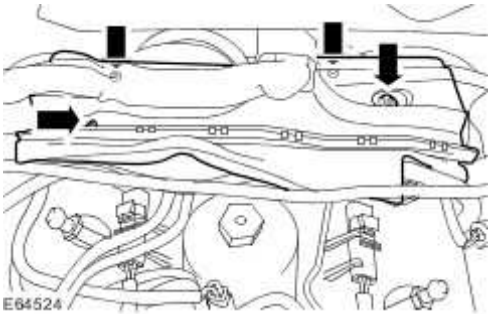


27 . Remove the engine harness cover.



28 . Remove the engine harness casing.

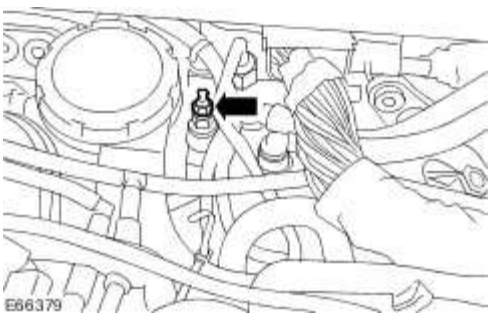
- Remove the retaining bolts.



29 . **NOTE:**

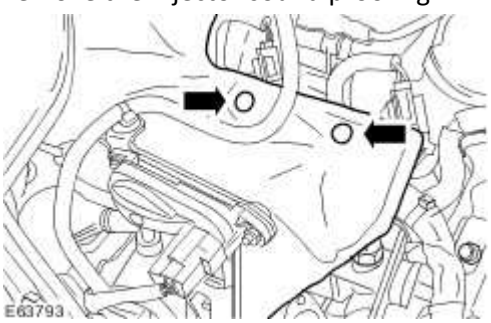
Right-hand drive vehicle shown, left-hand drive vehicle similar.

Loosen the engine harness retaining nut.

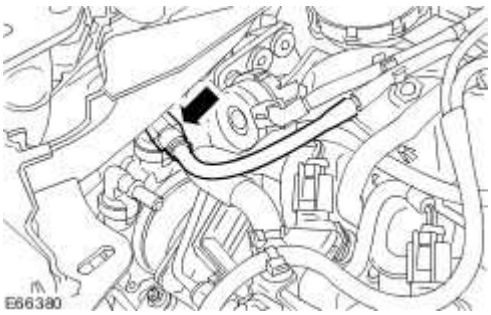


Right-hand drive vehicles

30 . Remove the injector sound proofing.



31 . Disconnect the port de-activation vacuum hose.

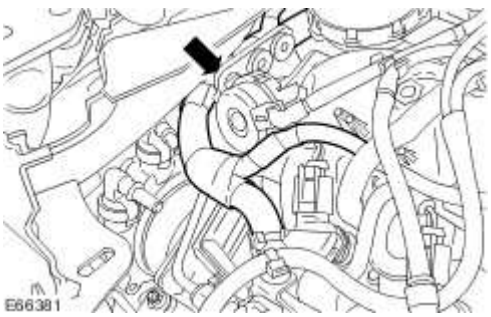


All vehicles

32 . **NOTE:**

Right-hand drive vehicle shown, left-hand drive vehicle similar.

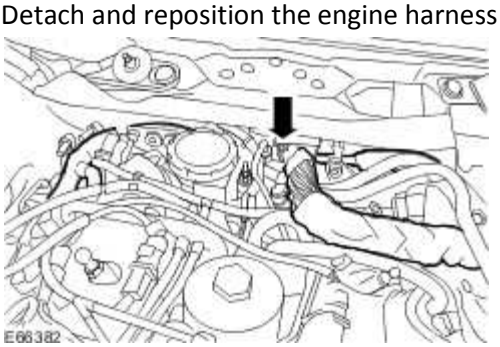
Detach the engine harness.



33 . **NOTE:**

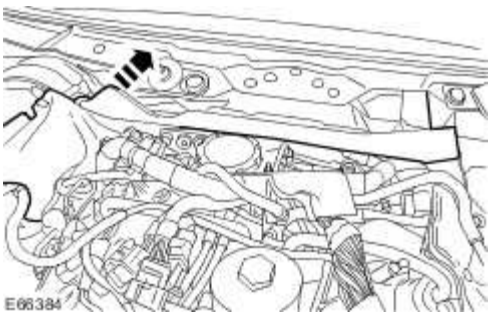
Right-hand drive vehicle shown, left-hand drive vehicle similar.

Detach and reposition the engine harness towards the front of the vehicle.

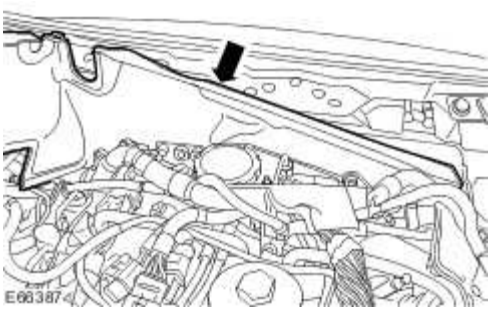


Right-hand drive vehicles

34 . Detach and reposition the secondary bulkhead center panel.



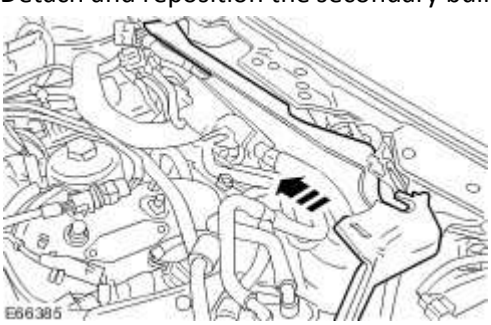
35 . Remove the secondary bulkhead center panel.



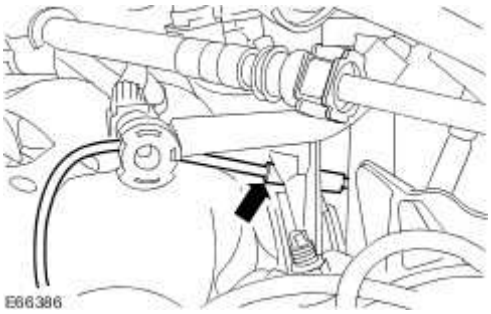
Left-hand drive vehicles

36 . Detach the brake line grommet.

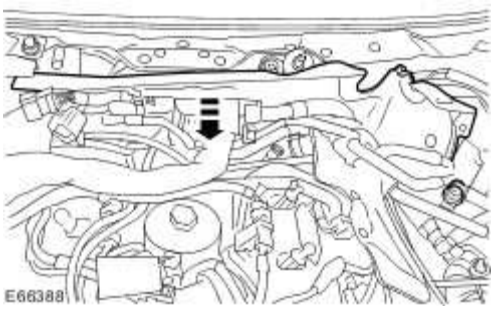
37 . Detach and reposition the secondary bulkhead center panel.



38 . Detach the bonnet release cable from the secondary bulkhead center panel.



39 . Remove the secondary bulkhead center panel.

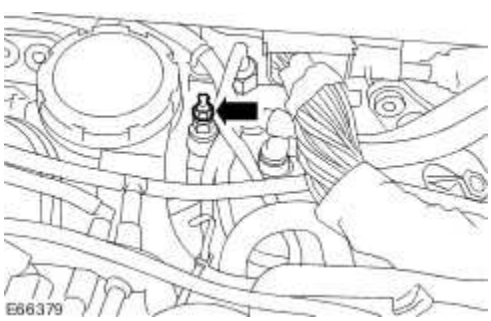


Installation

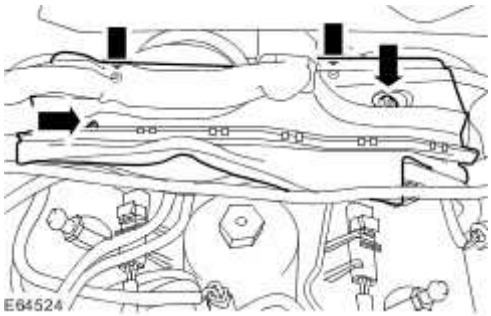
All vehicles

1 . To install, reverse the removal procedure.

Tighten to 7 Nm.

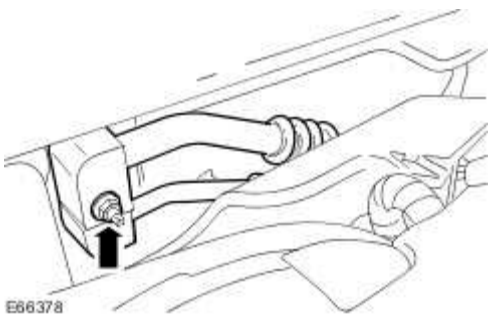


2 . Tighten to 4 Nm.

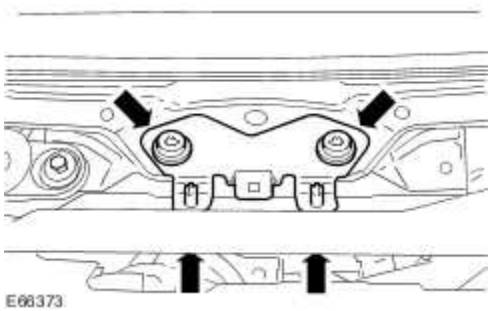


3 . Tighten to 8 Nm.

Fit new O-ring seals.

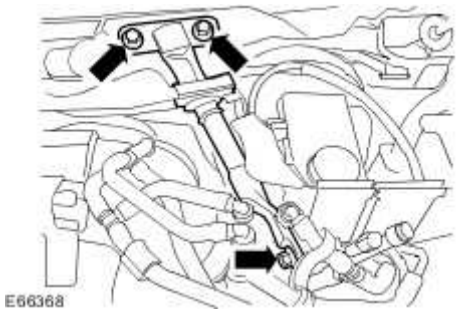


4 . Tighten to 25 Nm.



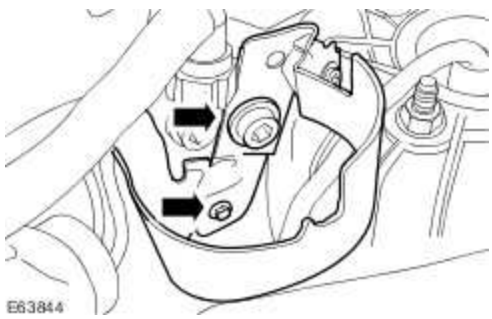
Left-hand drive vehicles

5 . Tighten to 25 Nm.

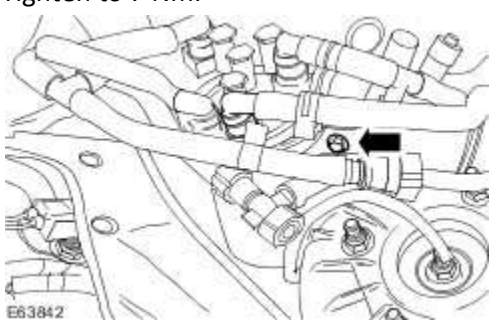


6 . Tighten 10 mm (0.394 inch's) bolt to 25 Nm.

Tighten 6 mm (0.236 inch's) bolt to 8 Nm.

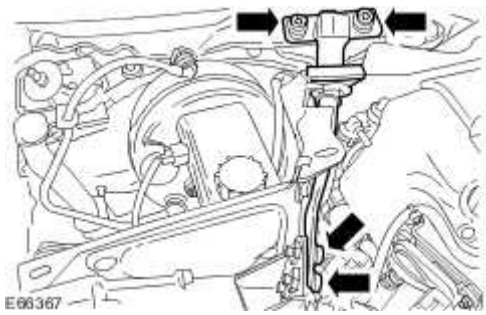


7 . Tighten to 7 Nm.

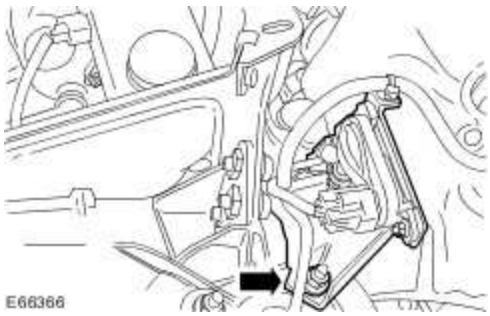


Right-hand drive vehicles

8 . Tighten to 25 Nm.



9 . Tighten to 25 Nm.



All vehicles

10 . Carry out coolant system filling and bleeding procedure.
For additional information, refer to Cooling System Draining, Filling and Bleeding

11 Carry out the air conditioning system evacuation and charging procedure.
. For additional information, refer to Air Conditioning (A/C) System Recovery, Evacuation and Charging (82.30.30)

501-03 : Body Closures

Specifications

Specifications

Torque Specifications

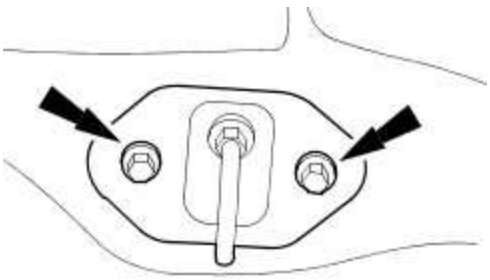
Description	Nm	lb-ft	lb-in

Door check arm to body retaining screws	10	7	89
Door striker retaining screws	28	21	-
Front safety belt retractor retaining bolt	35	26	-
Rear door hinge to body retaining nuts	30	22	-
Luggage compartment lid to hinge retaining bolts	18	13	-
Luggage compartment lid to body retaining bolts	18	13	-
Luggage compartment lid striker retaining bolts	9	-	80
Hood striker retaining bolts	11	8	-
Hood safety latch retaining bolts	11	8	-
Hood to hinge retaining bolts	25	18	-

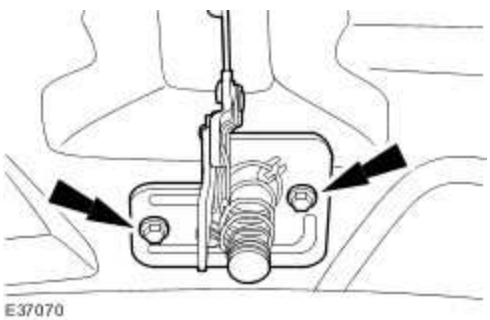
Hood Alignment (76.16.02)

1. **NOTE:**
   Left-hand shown, right-hand similar.

Remove the hood striker plate.



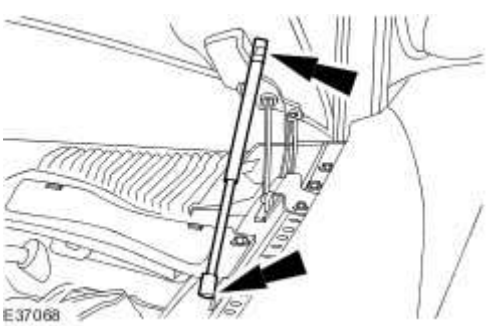
2. Remove the hood safety latch.



3. **NOTE:**
   Support the hood while the hood struts are remove.

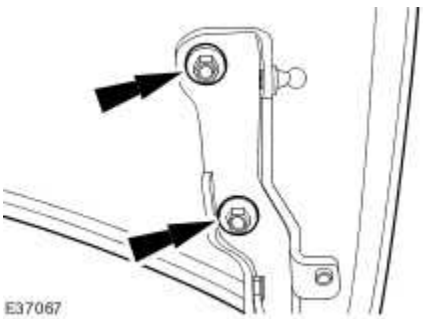
NOTE:
Left-hand shown, right-hand similar.

Remove the hood strut.



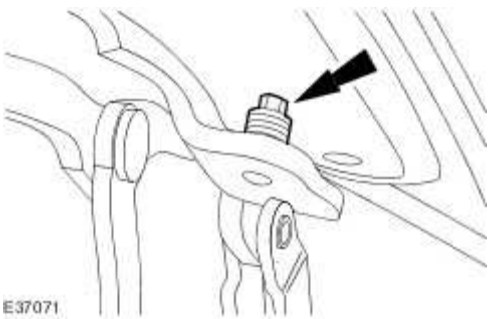
4. **NOTE:**
   Left-hand shown, right-hand similar.

Loosen the hood hinge retaining bolts.



5. **NOTE:**
   Left-hand shown, right-hand similar.

Adjust the hood height.



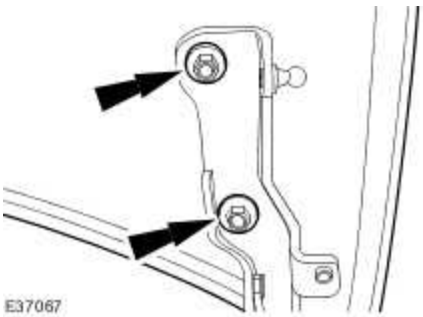
6. **NOTE:**
   Make sure the spacing between the grille to hood, headlamps to hood and fenders to hood are equal.

Set the hood alignment to 1 mm (0.04 in) lower than nominal at the middle edges of the hood.

7. **NOTE:**
   Left-hand shown, right-hand similar.

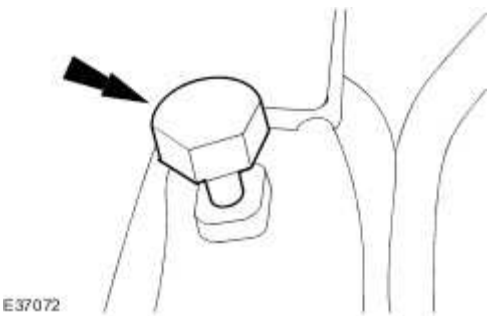
Tighten the hood hinge retaining bolts.

- Tighten to 25 Nm.



8. **NOTE:**
   Left-hand shown, right-hand similar.

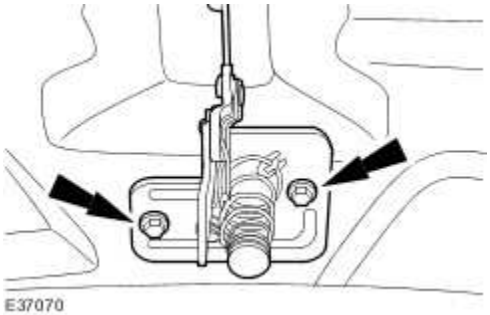
Adjust the hood bump stops to obtain the correct profile between the hood and the headlamps.



9. **NOTE:**
   Left-hand shown, right-hand similar.

Install the hood strut.

10. Install the hood safety latch.
    - Tighten to 11 Nm.

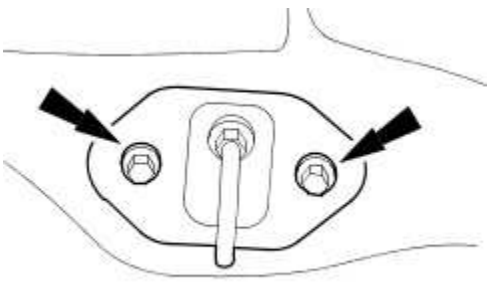


E37070

11. **NOTE:**
    Left-hand shown, right-hand similar.

Install the hood striker.

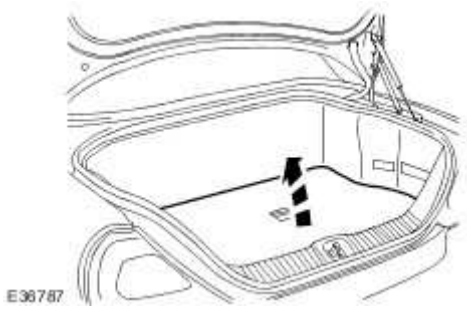
- Tighten to 11 Nm.



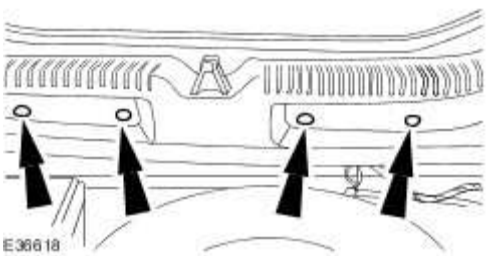
E37069

Luggage Compartment Lid Alignment (76.19.03)

1. Reposition the luggage compartment floor covering.

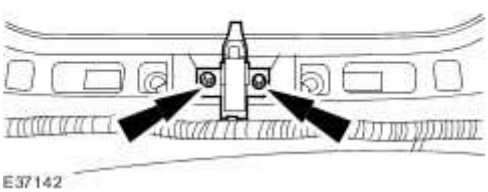


2. Remove the luggage compartment trim panel lower retaining clips.



3. Remove the luggage compartment trim panel.

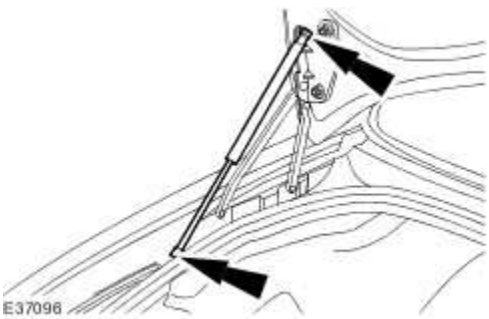
4. Remove the luggage compartment lid striker.



5. Remove the luggage compartment aperture seal.

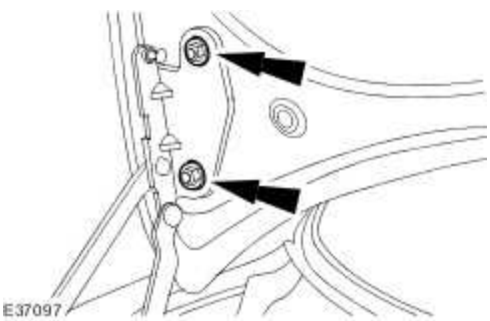
6. **NOTE:**
   Left-hand shown, right-hand similar.

Remove both the luggage compartment lid gas struts



7. **NOTE:**
   Left-hand shown, right-hand similar.

Loosen the luggage compartment lid retaining bolts.



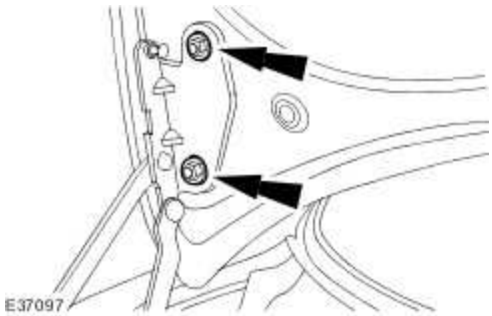
8. **NOTE:**
   Make sure the spacing between the bumper to luggage compartment lid, rear windshield to luggage compartment lid and rear fenders to luggage compartment lid are equal.

Set the luggage compartment lid to the middle of the luggage compartment aperture.

9. **NOTE:**
   Left-hand shown, right-hand similar.

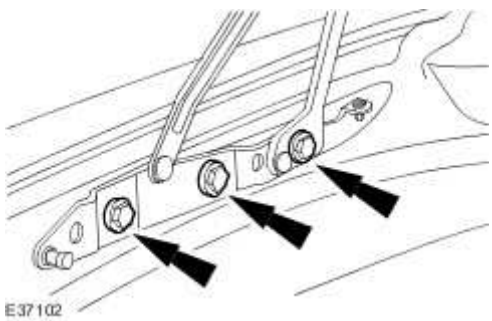
Tighten the luggage compartment lid retaining bolts.

- Tighten to 18 Nm.



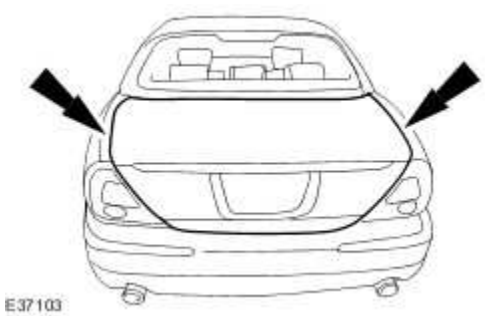
10. **NOTE:**
    Left-hand shown, right-hand similar.

Loosen the luggage compartment lid hinge retaining bolts.



11. **NOTE:**
    Set the alignment to 1 mm (0.04 in) lower than nominal at the middle edges of the luggage compartment lid.

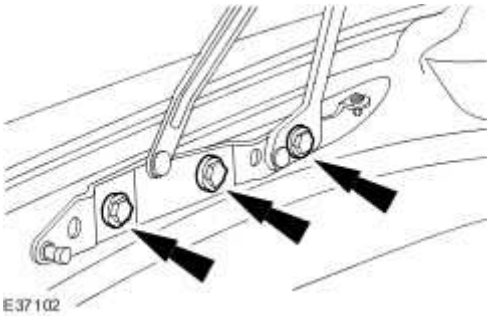
Set the luggage compartment lid alignment.



12. **NOTE:**
    Left-hand shown, right-hand similar.

Tighten the luggage compartment lid hinge retaining bolts.

- Tighten to 18 Nm.

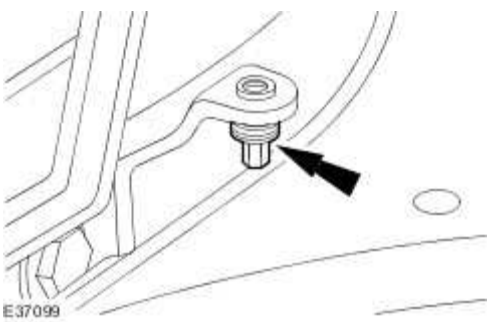


13. **NOTE:**
    Left-hand shown, right-hand similar.

Install both the luggage compartment lid gas struts.

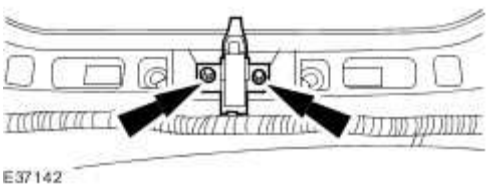
14. **NOTE:**
    Left-hand shown, right-hand similar.

Adjust the luggage compartment lid hinge stops.



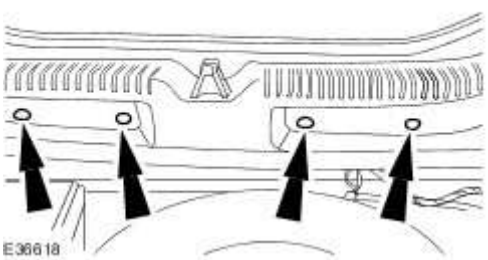
15. Install the luggage compartment aperture seal.

16. Install the luggage compartment lid striker.
    - Tighten to 9 Nm.

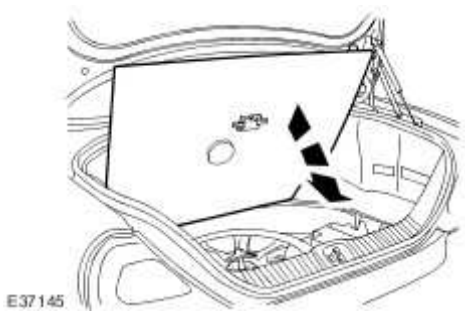


17. Install the luggage compartment trim panel.

18. Install the luggage compartment trim panel lower retaining clips.



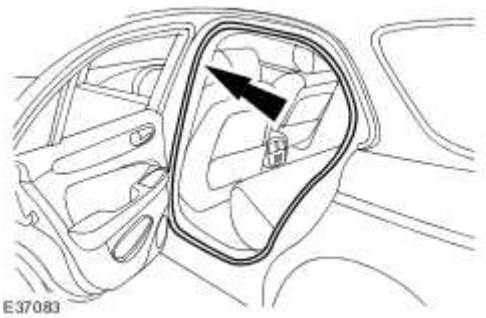
19. Reposition the luggage compartment floor covering.



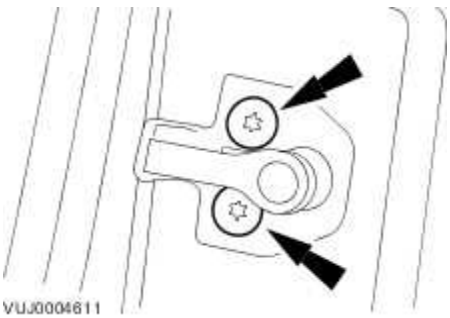
Rear Door Alignment (76.28.08)

1. Remove the B-pillar trim panel. <<501-05>>

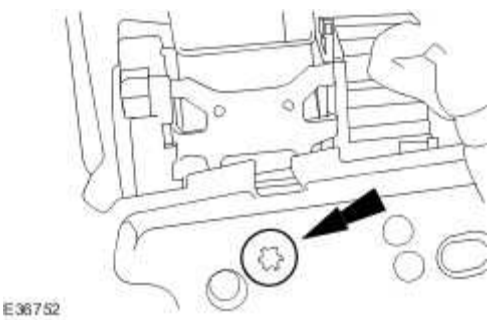
2. Remove the rear door aperture seal.



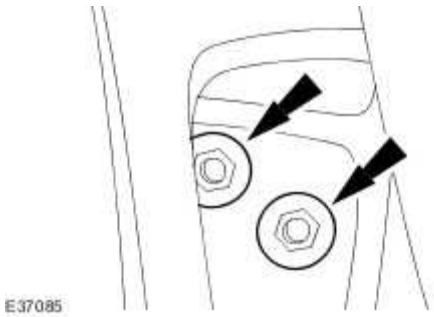
3. Remove the rear door striker.



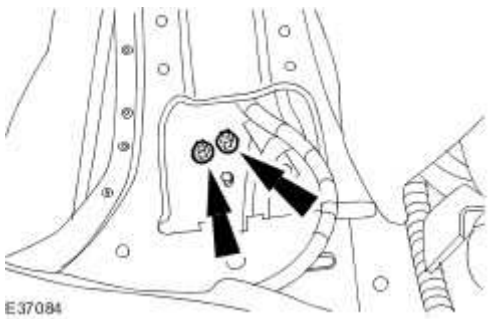
4. Detach the front safety belt retractor.



5. Loosen the rear door upper hinge retaining nuts.

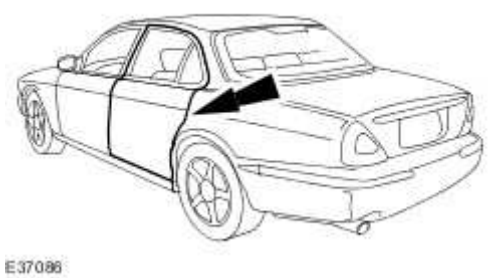


6. Loosen the rear door lower hinge retaining nuts.

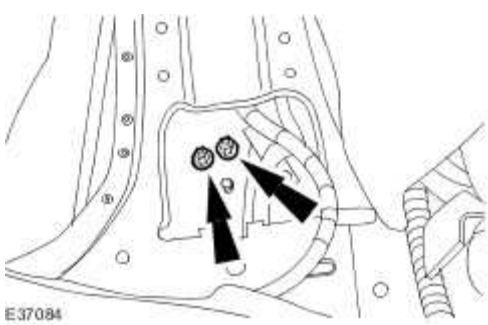


7. **NOTE:**
   Make sure the spacing between the rear door to front door, rear door to rear fender, rear door to roof panel and rear door to sill are equal.

Set the rear door to the correct alignment.

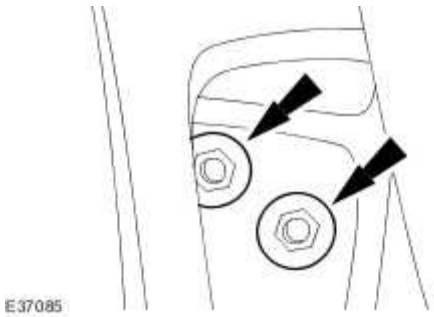


8. Tighten the rear door lower hinge retaining nuts.
   - Tighten to 30 Nm.

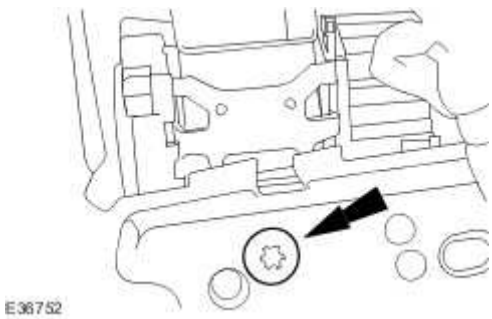


9. Tighten the rear door upper hinge retaining nuts.

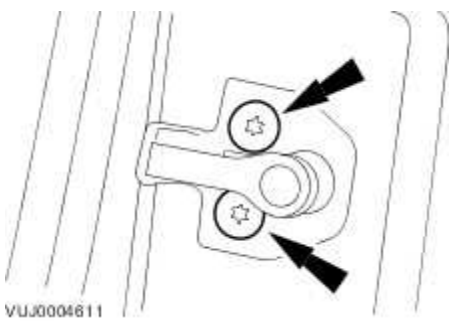
- Tighten to 30 Nm.



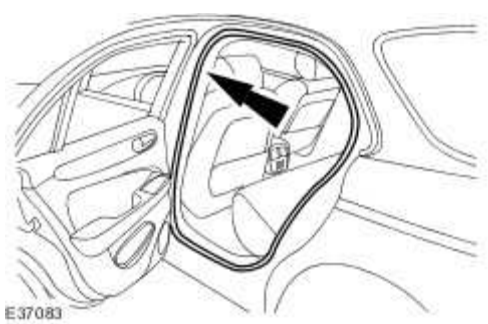
10. Attach the front safety belt retractor.
    - Tighten to 35 Nm.



11. Install the rear door striker.
    - Tighten to 28 Nm.



12. Install the rear door aperture seal.



13. Install the B-pillar trim panel. <<501-05>>

Body Closures

Doors

All doors comprise of an inner and outer panel, spot clinched and bonded together to form a door assembly. Both panels incorporate extensions bonded together to form a cheater assembly and a sealant is applied in cosmetic bead form to all spot clinch joints.

The doors are conventional latch to striker plate design with the strikers located on the body pillars.

A joint-less single profile bulb seal is installed on each door together with a water shedder and separate vacuum formed speaker cup. Upper and lower door hinges and multi-stage check arms require no lubrication throughout the vehicle life.

Luggage Compartment Lid

The luggage compartment lid comprises of an inner and outer panel spot clinched and bonded together to form a complete assembly.

The luggage compartment lid is a conventional lock to striker plate design with the striker located centrally on the edge of the load space floor.

Hood

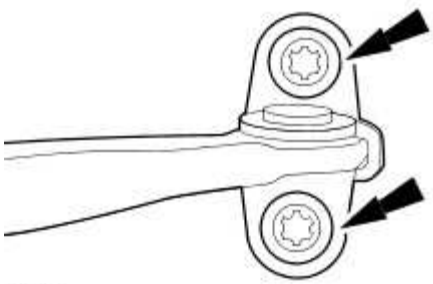
The hood assembly consists of a one piece inner and outer panel, spot clinched and bonded together with a bead of sealant applied to each clinch joint. The hood opens from the front and is secured by two hood latches and a secondary safety catch.

Front Door Opening Weatherstrip (76.40.01)

Removal

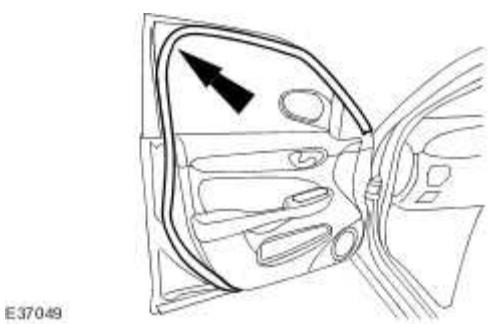
1 . **CAUTION: Make sure the door check arm cannot contact the A-piilar whilst it is detach. Failure to follow this instruction may result in damage to the vehicle.**

Detach the door check arm.



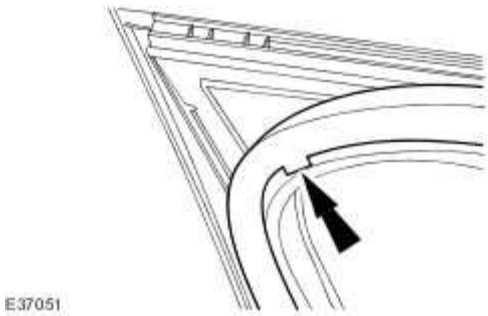
2 Remove the front door opening weatherstrip.

. Remove the front door opening weatherstrip retaining clips from the door using suitable side cutters.



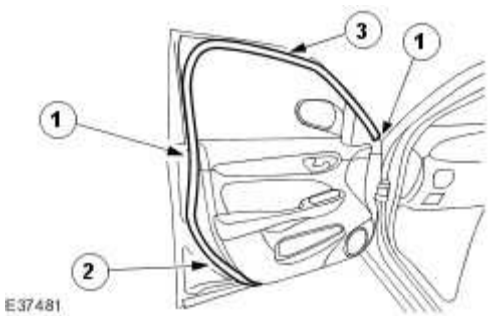
Installation

1 . Align the front door opening weatherstrip to the front door.



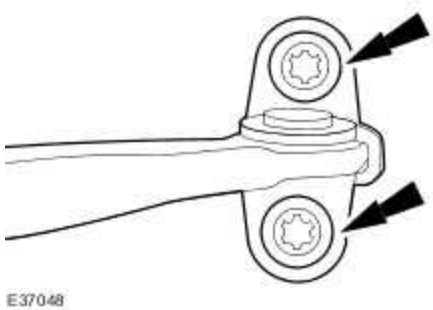
2 . Attach the top of the front door weatherstrip.

1) Attach the the front door opening weatherstrip two top retaining clips.
2) Attach the remaining front door opening weatherstrip retaining clips.
3) Attach the top of the front door weatherstrip.



3 . Attach the door check arm.

Tighten to 10 Nm.



Hood (76.16.01)

Removal

1 . **NOTE:**

Support the hood while the hood struts are removed.

NOTE:

Left-hand shown, right-hand similar.

Remove the hood strut.

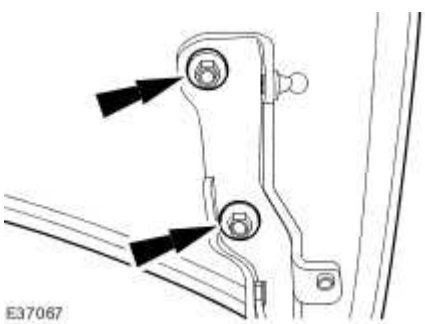
2 . **CAUTION: Make sure the hood does not contact the vehicle body while removing. Failure to carry out these instructions may cause damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Remove the hood.

- Remove the hood retaining bolts.



Installation

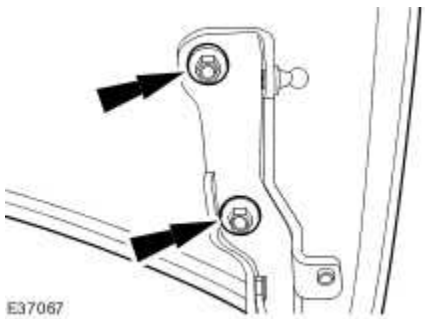
1. **CAUTION: Make sure the hood does not contact the vehicle body while installing. Failure to carry out these instructions may cause damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

To install, reverse the removal procedure.

Tighten to 25 Nm.



2 . Align the hood.

For additional information, refer to

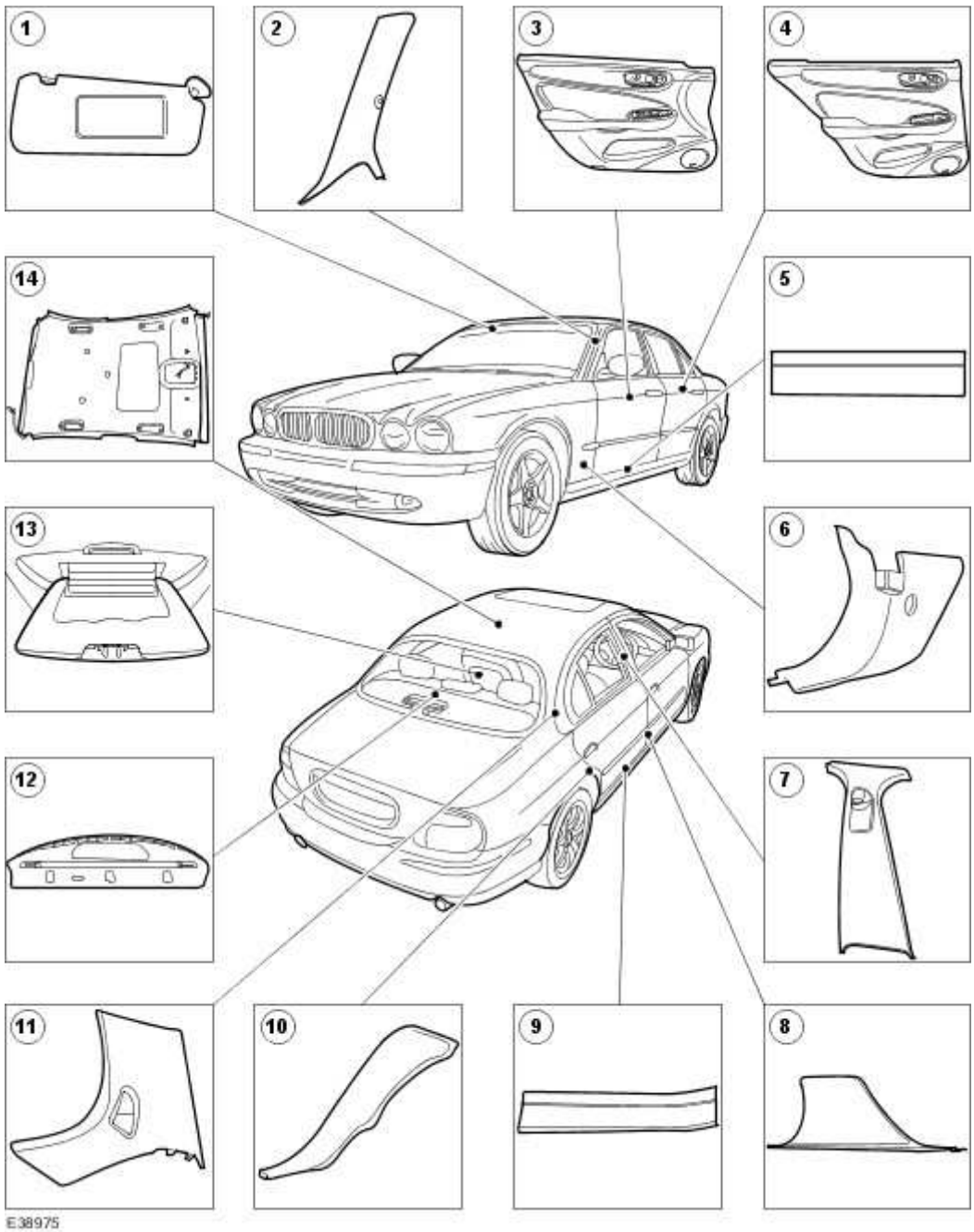
Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front safety belt anchor retaining bolt	35	26	-
Rear safety belt upper mounting bracket retaining bolt	35	26	-
Rear safety belt anchor retaining bolt	40	30	-
Rear center safety belt anchor retaining nut	35	26	-
Folding tray to seat frame retaining bolts	5	-	44
Folding tray to finish panel retaining bolts	2	-	18
Folding tray work surface to finish panel retaining bolts	2	-	18
Folding tray striker to work surface retaining bolts	1	-	9

Interior Trim



Item	Part Number	Description
1	—	Sun visor
2	—	A-pillar trim
3	—	Front door trim panel
4	—	Rear door trim panel

5	—	Front scuff plate trim panel
6	—	Cowl side trim panel
7	—	B-pillar upper trim panel
8	—	B-pillar lower trim panel
9	—	Rear scuff plate trim panel
10	—	Lower C-pillar trim panel
11	—	Upper C-pillar trim panel
12	—	Parcel shelf
13	—	Folding Tray
14		Headliner

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. The pillar trims and the headliner are safety critical assemblies as they mount the occupant sensors and interface with the side airbag curtains (to make sure correct deployment is achieved), and as such, correct alignment and installation are necessary for safety reasons.

The headliner is a one-piece design covering the entire interior of the roof and is made of a moulded composite with cloth covering. Finger depressions give pull-down access for the sun visors and passenger assist handles are provided.

There is an interior lamp fitted into the front of the overhead console.

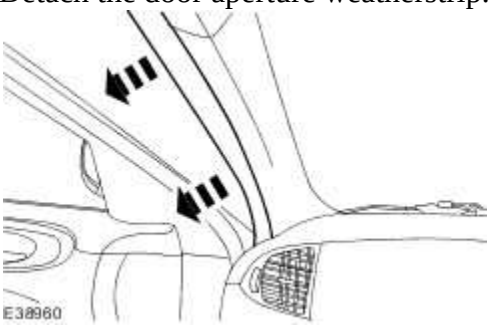
A-Pillar Trim Panel (76.13.31)

Removal

1 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the door aperture weatherstrip.



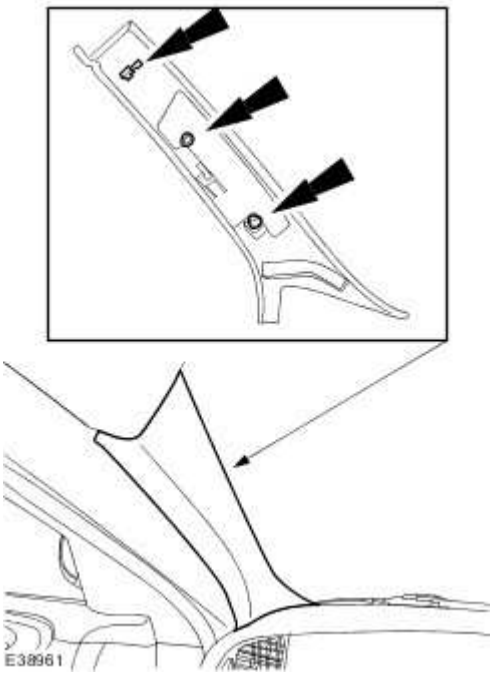
2 . **NOTE:**

Cut the C-pillar trim panel retaining strap.

NOTE:

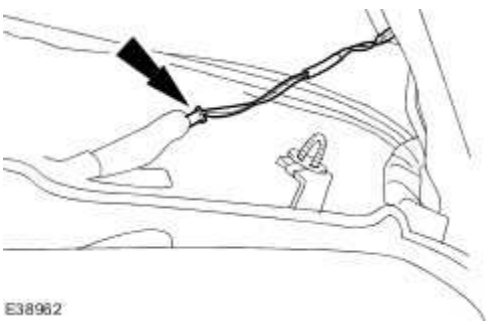
Left-hand shown, right-hand similar.

Detach the A-pillar trim panel.



3 . Remove the A-pillar trim panel.

- Disconnect the occupancy position sensor electrical connector.



Installation

1 . **WARNING: The retaining strap is a safety critical item and must be replaced to prevent the trim detaching in the event of the side curtain airbag deployment.**

NOTE:

When installing the new retaining strap and rivet make sure the old clip has been removed from the body before pressing the trim into place.

To install, reverse the removal procedure.

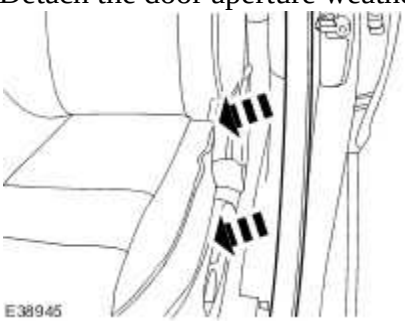
B-Pillar Lower Trim Panel (76.13.29)

Removal

1 . Remove both front and rear scuff plate trim panels.
For additional information, refer to

2 . **NOTE:**
Left-hand shown, right-hand similar.

Detach the door aperture weatherstrip.

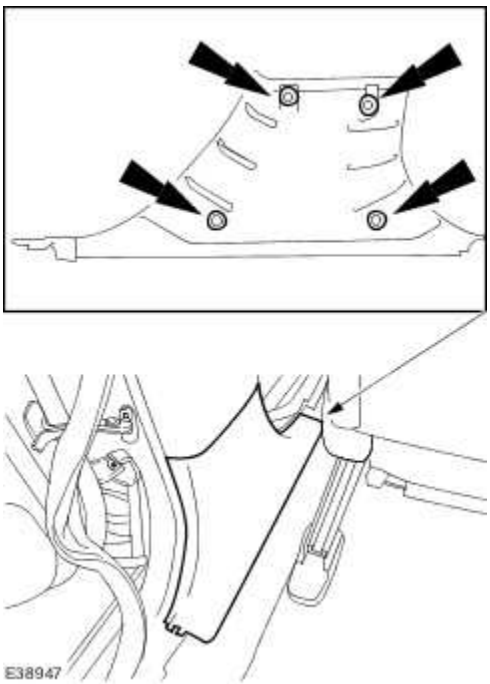


3 . **NOTE:**
Left-hand shown, right-hand similar.

Detach the door aperture weatherstrip.

4 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the B-pillar lower trim panel.



Installation

1 . To install, reverse the removal procedure.

B-Pillar Upper Trim Panel (76.13.28)

Removal

1 . Remove the B-pillar lower trim panel.
For additional information, refer to

2 . **NOTE:**
Left-hand shown, right-hand similar.

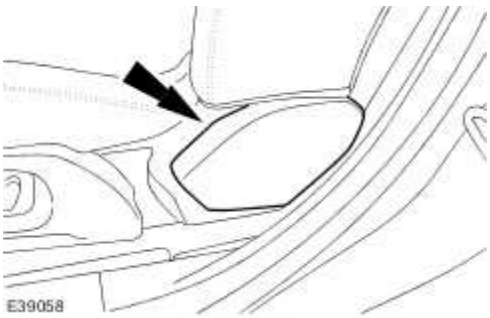
Locally detach the front door aperture weatherstrip.

3 . **NOTE:**
Left-hand shown, right-hand similar.

Locally detach the rear door aperture weatherstrip.

4 . **NOTE:**
Left-hand shown, right-hand similar.

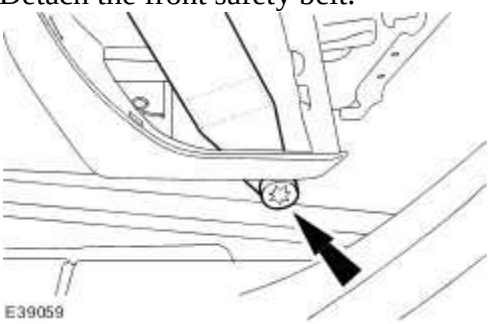
Remove the front safety belt access cover.



5 . **NOTE:**

Left-hand shown, right-hand similar.

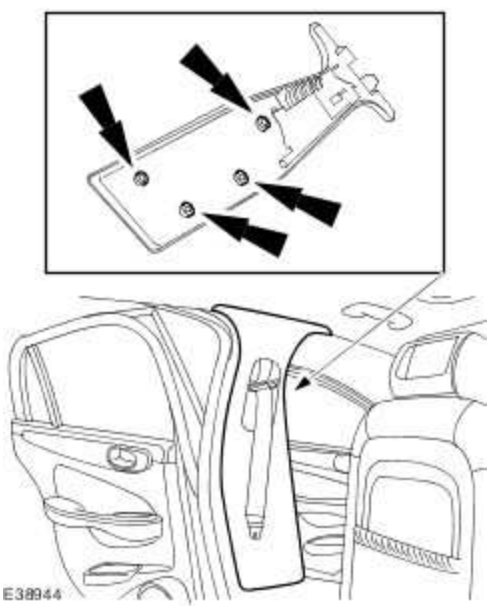
Detach the front safety belt.



6 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the B-pillar upper trim panel.



Installation

1. **WARNING: Make sure the B-pillar upper tangs are located into the slots in the body below the curtain airbag as this retains the trim in the event of side airbag deployment.**

NOTE:

To guarantee line up of the B-pillar trim and seat belt anchor bolt make sure that the seat belt slider plate and the B-pillar trim slider plate are at there lowest positions.

NOTE:

Left-hand shown, right-hand similar.

To install, reverse the removal procedure.

Tighten to 35 Nm.

Cowl Side Trim Panel (76.13.30)

Removal

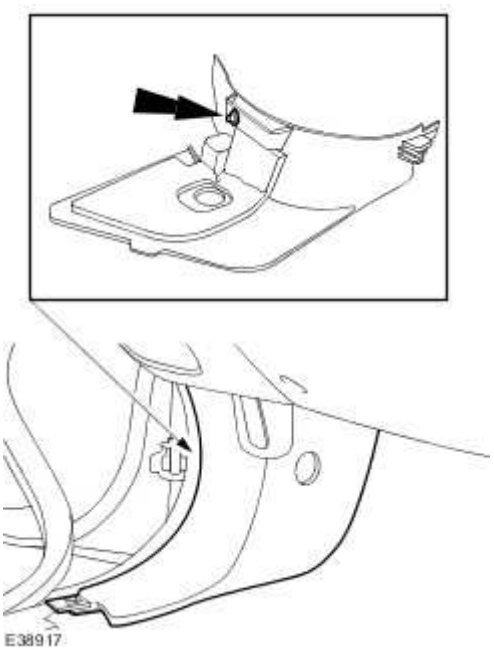
1 . Remove the scuff plate trim panel.
For additional information, refer to Scuff Plate Trim Panel (76.13.81)

2 . **NOTE:**
Left-hand shown, right-hand similar.

Detach the door aperture weatherstrip.

3 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the cowl side trim panel.



Installation

1 . To install reverse the removal procedure.

C-Pillar Lower Trim Panel

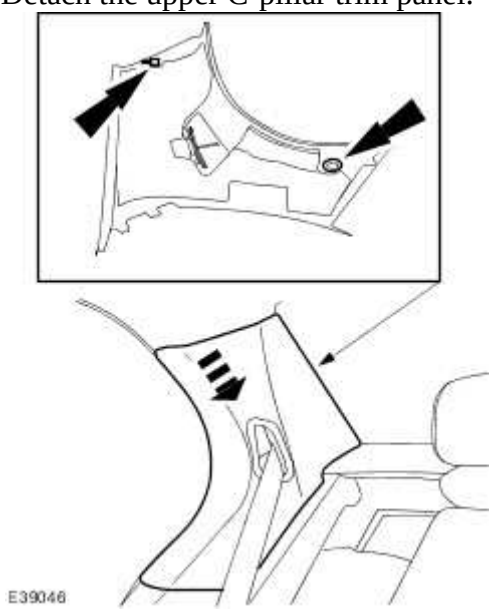
Removal

1 . Remove the rear seat back rest. <<501-10>>

2 . Locally detach the door aperture weatherstrip.

3 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the upper C-pillar trim panel.



4 . **NOTE:**
Left-hand shown, right-hand similar.

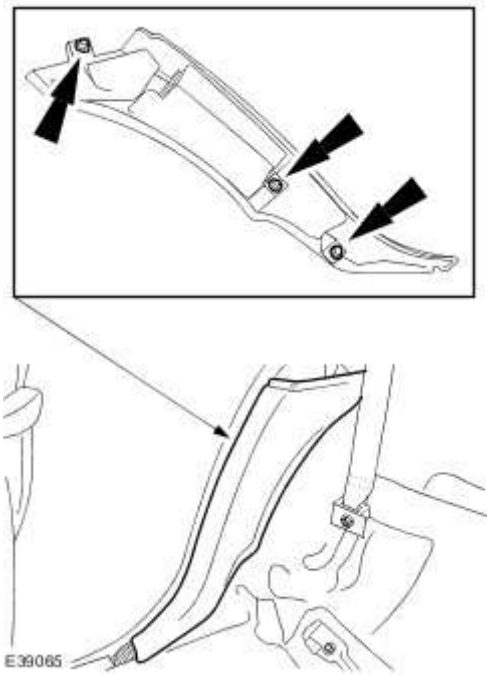
Reposition the upper C-pillar trim panel.

- Cut the upper C-pillar trim panel retaining strap.

5 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the lower C-pillar trim panel.



Installation

1 . **WARNING: The retaining strap is a safety critical item and must be replaced to prevent the trim detaching in the event of the side curtain airbag deployment.**

NOTE:

When installing the new retaining strap and rivet make sure the old clip has been removed from the body before pressing the trim into place.

To install, reverse the removal procedure.

C-Pillar Upper Trim Panel

Removal

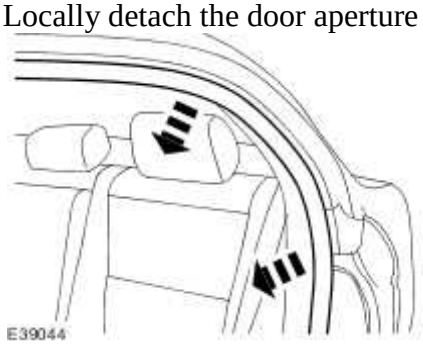
1 . Remove the rear seat back rest. <<501-10>>

2 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the rear safety belt.

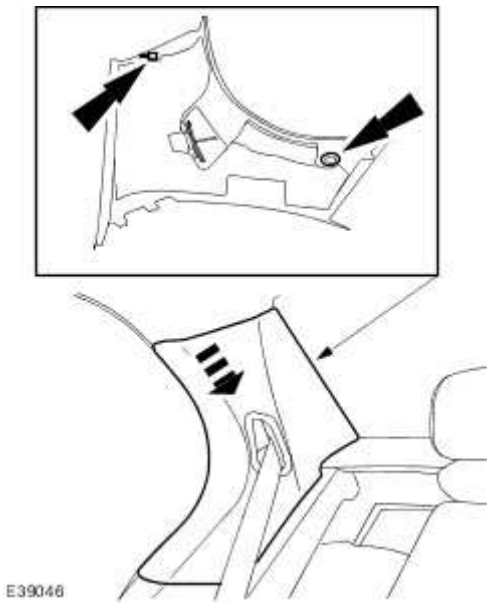
3 . **NOTE:**
Left-hand shown, right-hand similar.

Locally detach the door aperture weatherstrip.



4 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the C-pillar trim panel.



5 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the C-pillar trim panel.

- Cut the C-pillar trim panel retaining strap.

Installation

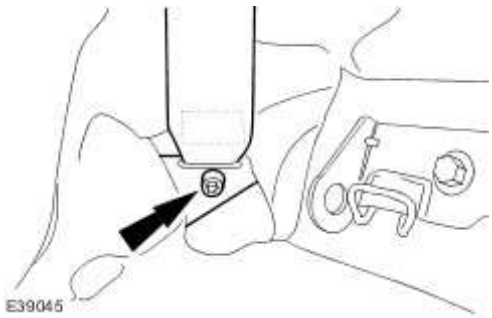
1 . **WARNING: The retaining strap is a safety critical item and must be replaced to prevent the trim detaching in the event of the side curtain airbag deployment.**

NOTE:

When installing the new retaining strap and rivet make sure the old clip has been removed from the body before pressing the trim into place.

To install, reverse the removal procedure.

- Tighten to 40 Nm.

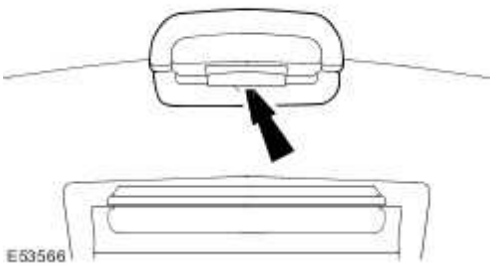


Folding Tray (76.47.31)

Removal

1 . Open the folding tray.

2 . Remove the folding tray latch assembly.

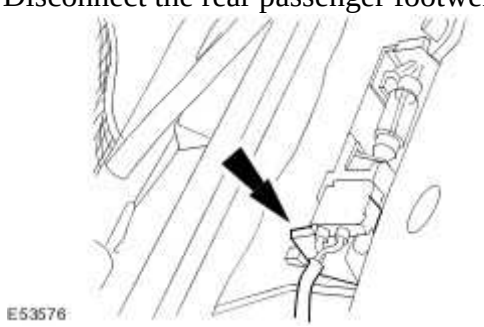


3 . Detach the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

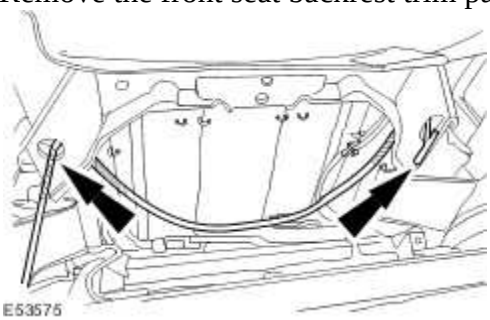
2) Detach the front seat backrest trim panel.

4 . Disconnect the rear passenger footwell courtesy lamp electrical connector.

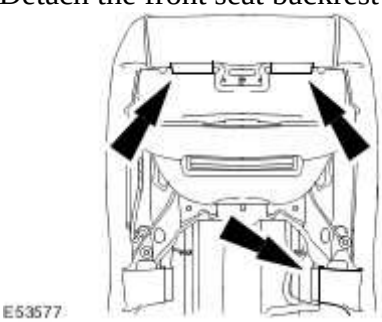


5 . Detach the front seat backrest trim panel retaining strap.

6 . Remove the front seat backrest trim panel.

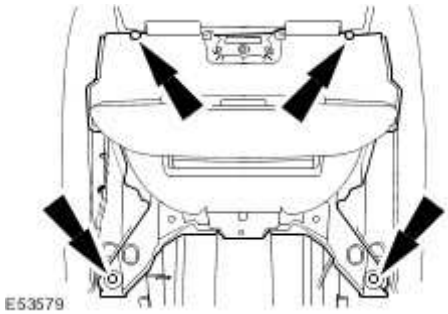


7 . Detach the front seat backrest cover.

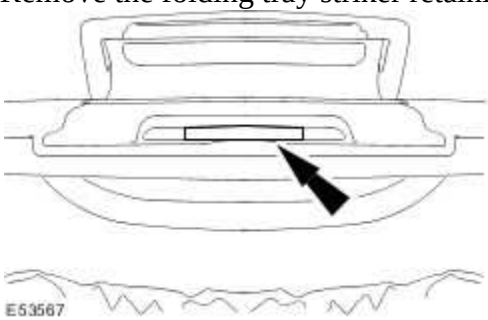


8 . Detach the lumbar motor.

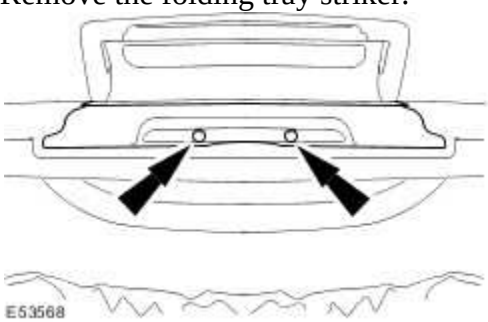
9 . Remove the folding tray.



10 . Remove the folding tray striker retaining screw cover.



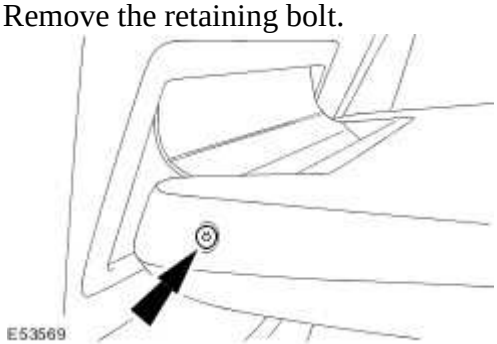
11 . Remove the folding tray striker.



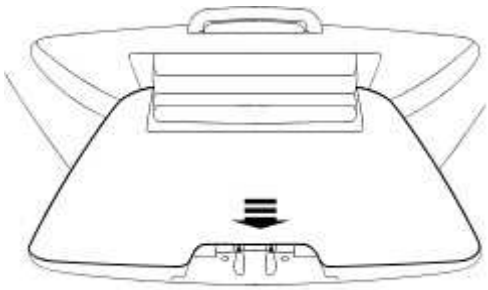
12 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the retaining bolt.

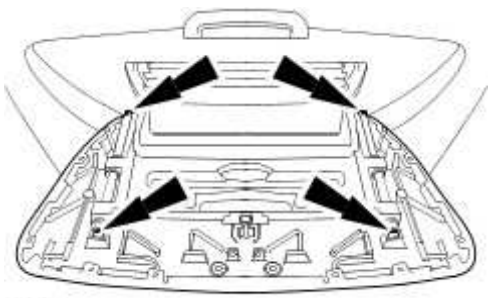


13 . Remove the folding tray work surface.


E53570

14 . Remove the folding tray finish panel.

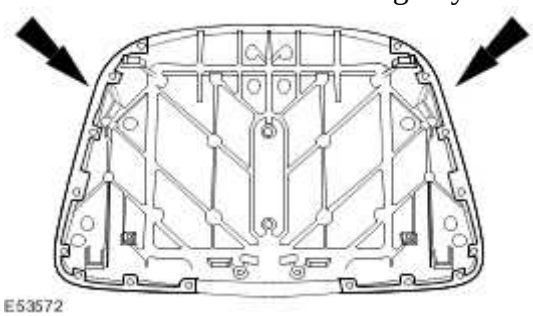
- Remove the securing screws.


E53571

15 . **NOTE:**

The folding tray finish panel gaskets are handed.

Remove and discard the folding tray finish panel gasket.


E53572

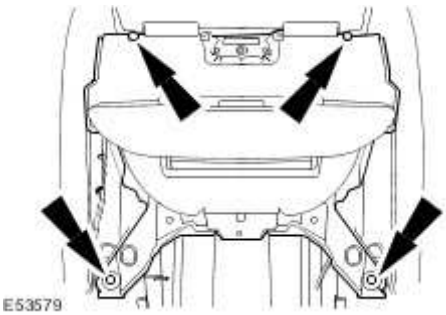
Installation

1 . **NOTE:**

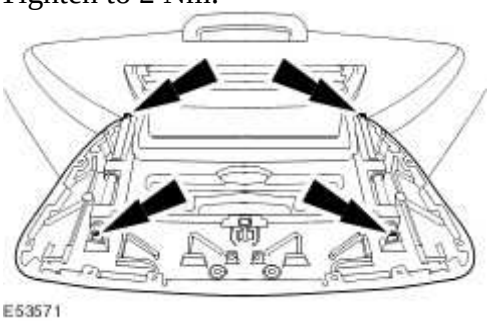
Install new folding tray finish panel gaskets.

To install, reverse the removal procedure.

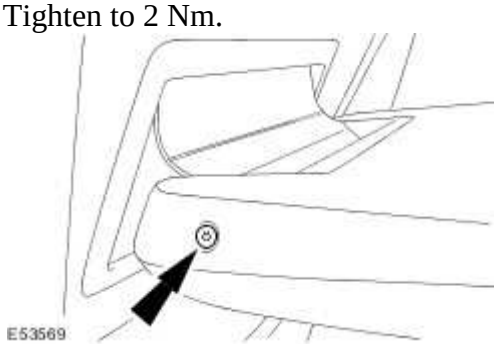
- Tighten to 5 Nm.



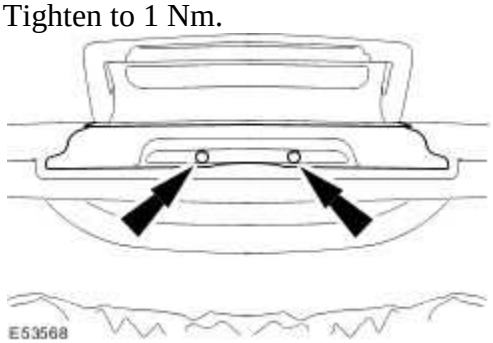
2 . Tighten to 2 Nm.



3 . Tighten to 2 Nm.



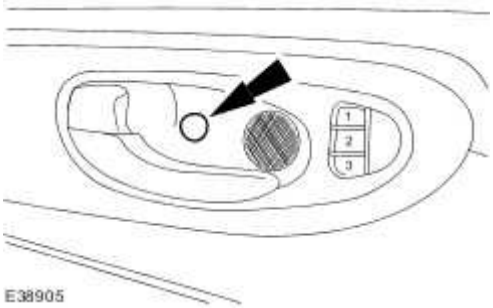
4 . Tighten to 1 Nm.



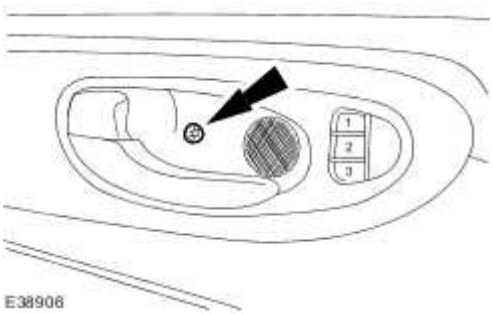
Front Door Trim Panel (76.34.01)

Removal

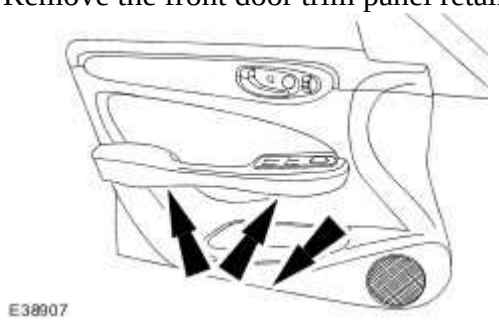
1 . Remove the front door interior handle retaining screw cover.



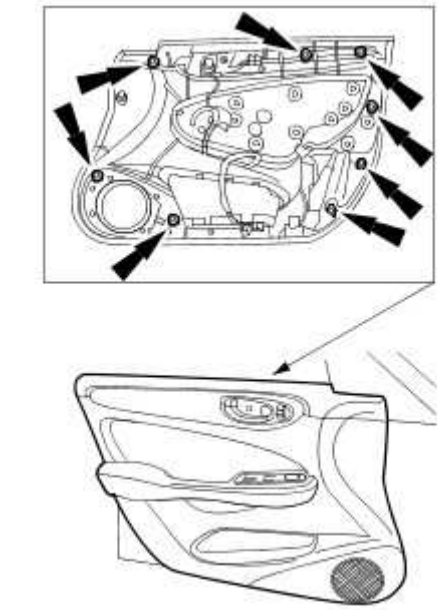
2 . Remove the front door interior handle retaining screw.



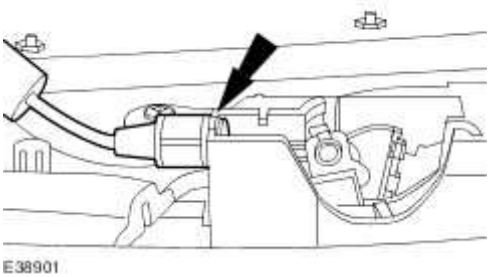
3 . Remove the front door trim panel retaining screws.



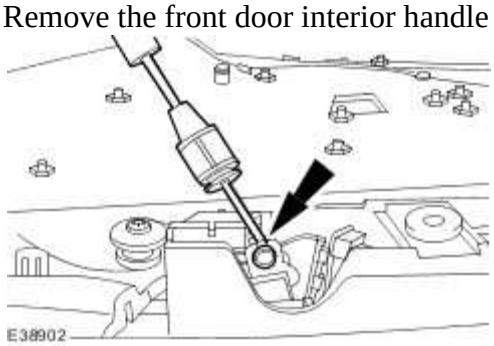
4 . Detach the front door door trim panel.



5 . Detach the front door interior handle cable.

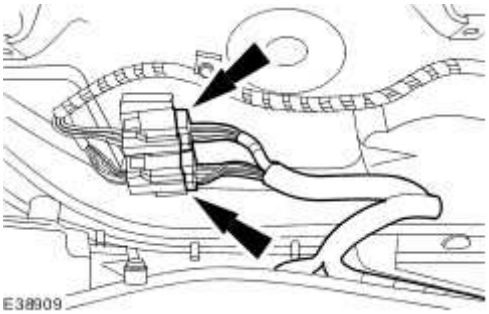


6 . Remove the front door interior handle cable.



7 . Remove the front door trim panel.

- Disconnect the electrical connectors.



Installation

1 . To install, reverse the removal procedure.

Headliner (76.64.01)

Removal

All vehicles

1 . Remove the A-pillar upper trim panels.
For additional information, refer to

2 . Remove both upper B-pillar trim panels.
For additional information, refer to B-Pillar Upper Trim Panel (76.13.28)

3 . Remove both C-pillar upper trim panels.
For additional information, refer to C-Pillar Upper Trim Panel

4 . Remove the overhead console.
For additional information, refer to Overhead Console (76.13.69)

5 . Remove both sun visors.
For additional information, refer to Sun Visor (76.10.48)

6 . Remove the high mounted stoplamp.
For additional information, refer to High Mounted Stoplamp (86.41.01)

7 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the sun visor retaining clip.

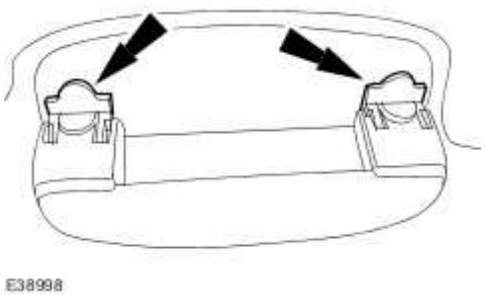
8 . **NOTE:**

Right-hand shown, left-hand similar.

NOTE:

Front shown, rear similar.

Rotate the front occupant assist handle screw covers.



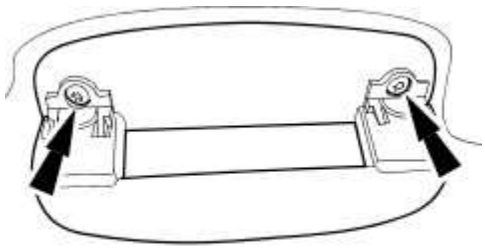
9 . **NOTE:**

Right-hand shown, left-hand similar.

NOTE:

Front shown, rear similar.

Remove the front occupant assist handle.

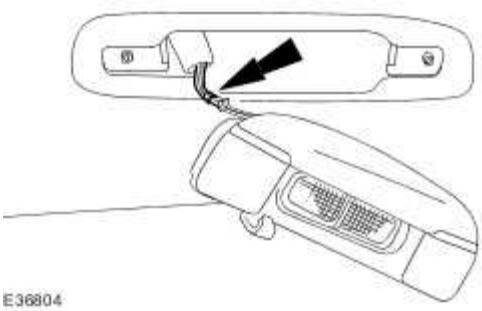


10 . **NOTE:**

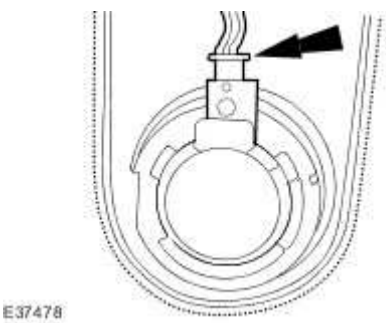
Right-hand shown, left-hand similar.

Remove the rear occupant assist handle.

- Disconnect the electrical connector.



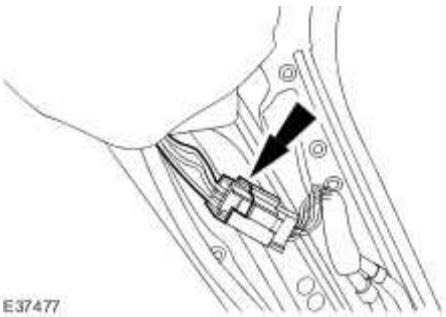
11 . Disconnect the rain sensor electrical connector.



12 . **NOTE:**

Left-hand shown, right-hand similar.

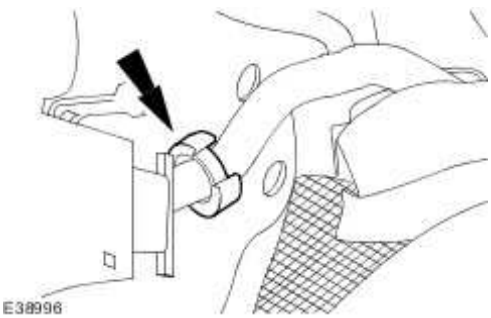
Disconnect the headlining wiring harness front electrical connector.



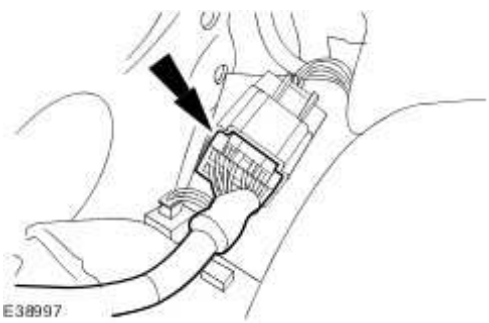
13 . **NOTE:**

Left-hand shown, right-hand similar.

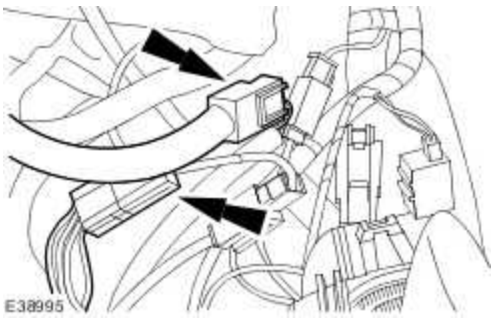
Detach the cabin harness.



14 . Disconnect the cabin harness electrical connector.



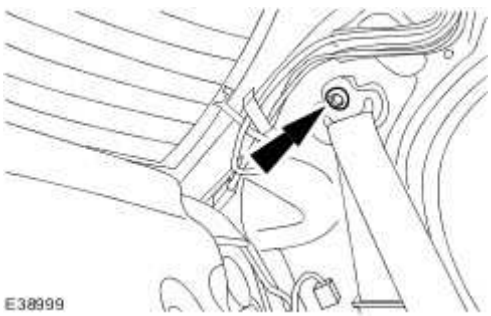
15 . Disconnect the electrical connectors.



16 . **NOTE:**

Left-hand shown, right-hand similar.

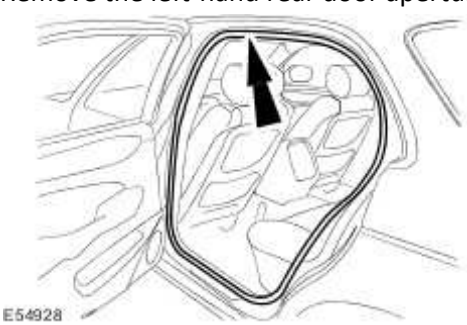
Detach the rear seat belt.



Long wheelbase

17 . Remove the rear scuff plate trim panel.
For additional information, refer to Scuff Plate Trim Panel (76.13.81)

18 . Remove the left-hand rear door aperture seal.



19 . Remove the front seat.

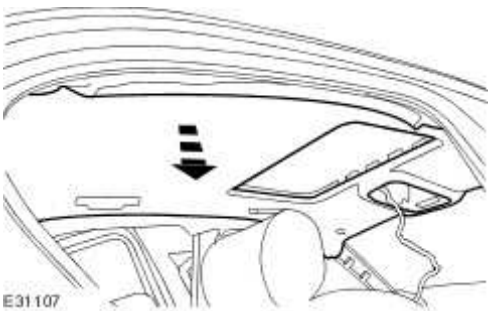
For additional information, refer to Front Seat (76.70.01)

All vehicles

20 . **NOTE:**

Remove and discard the five black securing clips in the roof opening panel cassette.

Detach the headliner.

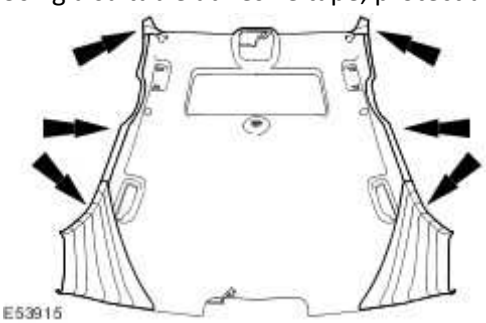


Long wheelbase

21 . **NOTE:**

Headliner shown removed for clarity.

Using a suitable adhesive tape, protect all of the corners and both sides of the headliner.



22 . Remove the headliner through the left-hand rear door aperture.

Short wheelbase

23 . Remove the rear window glass.
For additional information, refer to Rear Window Glass (76.81.11)

24 . Remove the headliner through the rear window glass aperture.

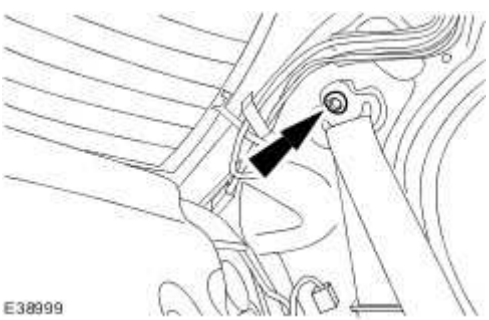
Installation

1 . **NOTE:**

Replace the five black securing clips in the roof opening panel cassette.

To install, reverse the removal procedure.

Tighten to 35 Nm.



Parcel Shelf (76.67.06)

Removal

1 . Remove the rear seat back rest. <<501-10>>

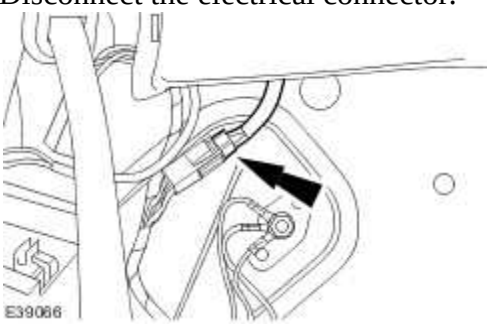
2 . Remove both upper C-pillar trim panels.
For additional information, refer to

3 . **CAUTION: Lower the rear window blind to the rest position. Failure to carry out this procedure may result in damage to the vehicle.**

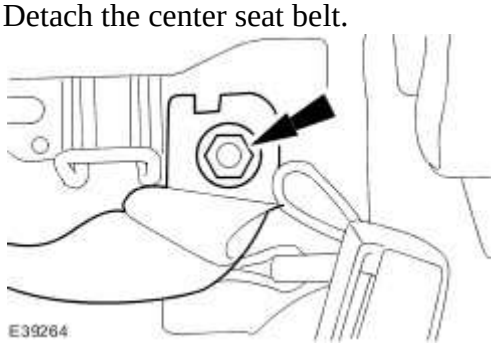
Lower the rear window blind to the rest position.

4 . **NOTE:**
Left-hand shown, right-hand similar.

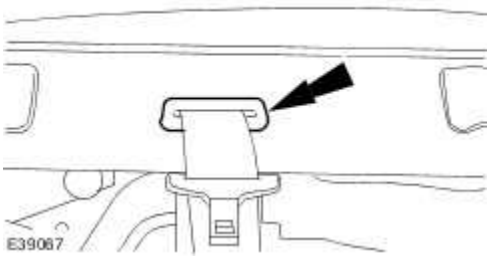
Disconnect the electrical connector.



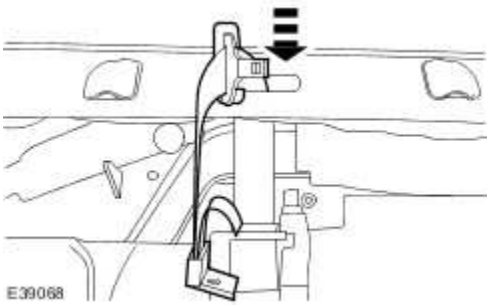
5 . Detach the center seat belt.



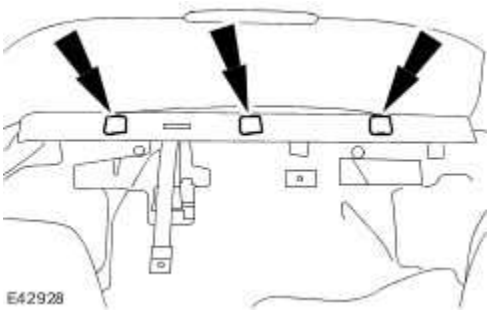
6 . Detach the center seat belt finisher trim.



7 . Feed the center seat belt through the parcel shelf aperture.



8 . Remove the child seat mounting finisher trims.



9 . Remove the parcel shelf.

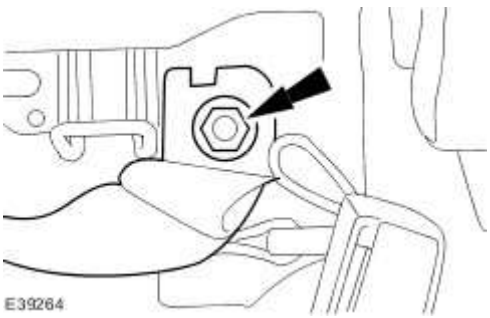
Installation

1 . **NOTE:**

Make sure on installation the parcel shelf is located correctly into the body.

To install, reverse the removal procedure.

- Tighten to 35 Nm.

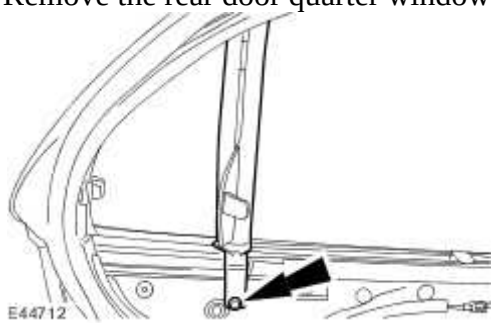


Rear Door Quarter Window Blind

Removal

1 . Remove the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

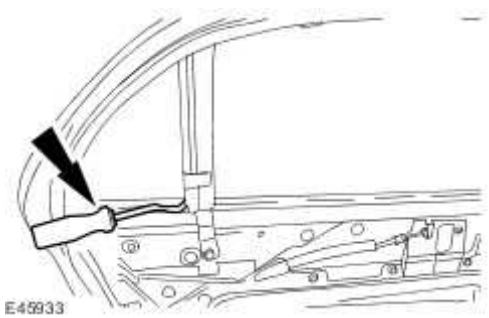
2 . Remove the rear door quarter window blind retaining bolt.



3 . **CAUTION: The rear door quarter window blind must be detached from the rear door as shown. Failure to follow this instruction may result in damage to the component.**

Detach the rear door quarter window blind.

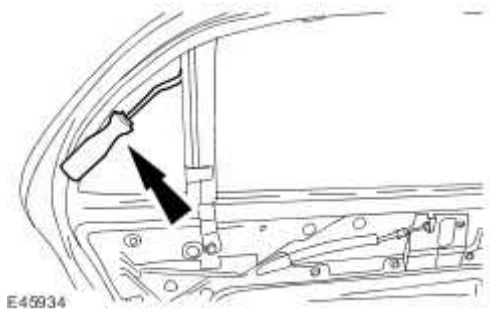
- Using a suitable tool, release the lower securing clip.



4 . **CAUTION: The rear door quarter window blind must be removed from the rear door as shown. Failure to follow this instruction may result in damage to the component.**

Remove the rear door quarter window blind.

- Using a suitable tool, release the upper securing clip.
- Remove the rear door quarter window blind.



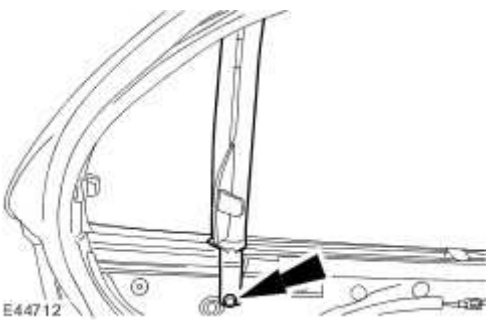
Installation

1 **NOTE:**

· Make sure the rear door quarter window blind is correctly attached to the front edge of the rear door divisional bar before securing the rear clips.

Install the rear door quarter window blind.

- Install the rear door quarter window blind retaining bolt.
- Tighten to 4 Nm.



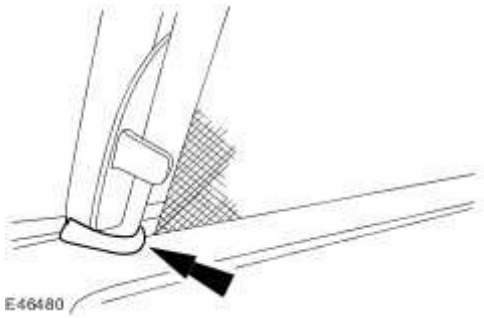
2 . Install the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

Rear Door Trim Panel (76.34.04)

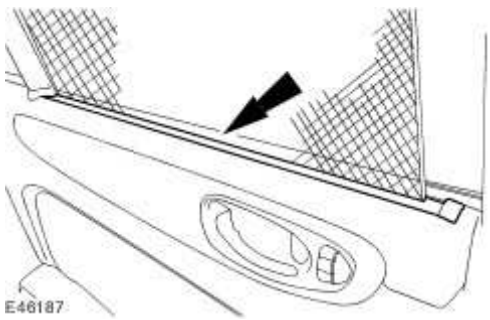
Removal

All vehicles

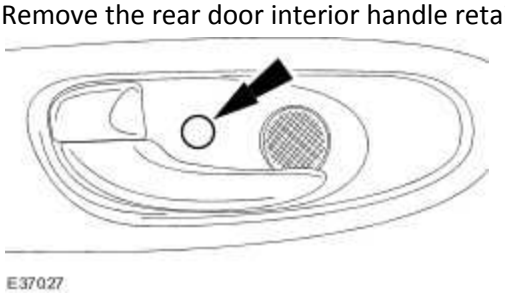
1 . Remove the rear door quarter window blind lower seal.



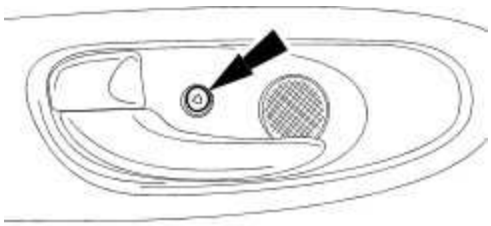
2 . Remove the rear door window blind finisher trim.



3 . Remove the rear door interior handle retaining screw cover.

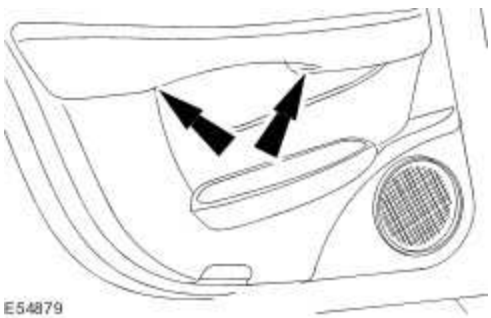


4 . Remove the rear door interior handle retaining screw.



E37028

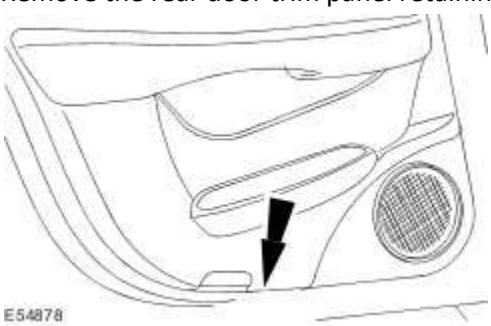
5 . Remove the rear door trim panel retaining screws.



E54879

Short wheelbase

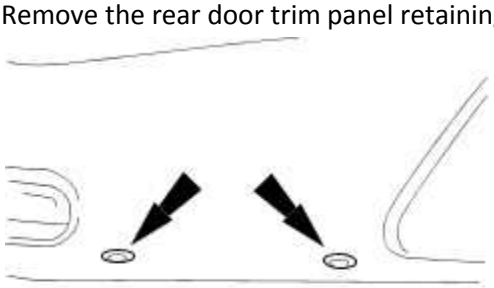
6 . Remove the rear door trim panel retaining screw.



E54878

Long wheelbase

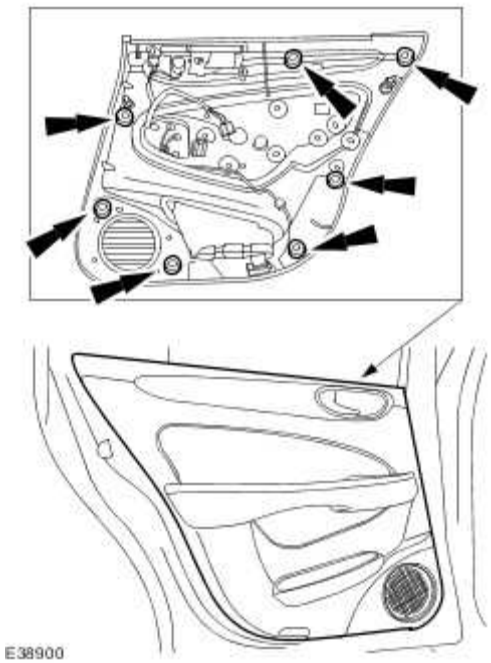
7 . Remove the rear door trim panel retaining screws.



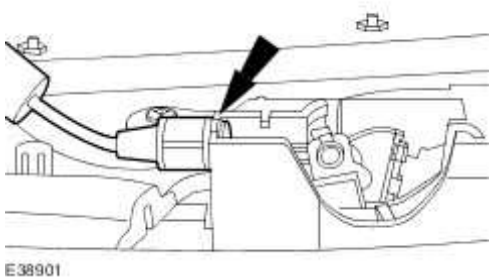
E53474

All vehicles

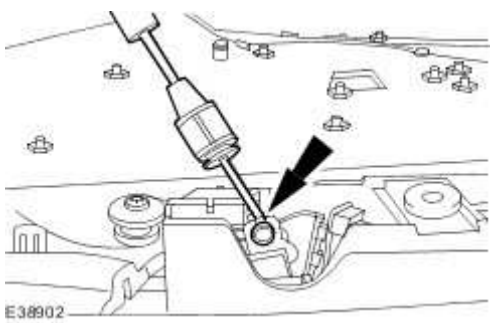
8 . Detach the rear door trim panel.



9 . Detach the rear door interior handle cable.

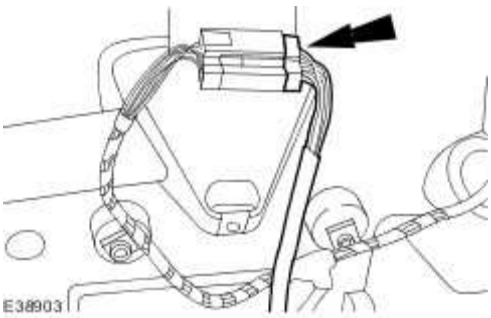


10 . Remove the rear door interior handle cable.



11 . Remove the rear door trim panel.

- Disconnect the electrical connector.



Installation

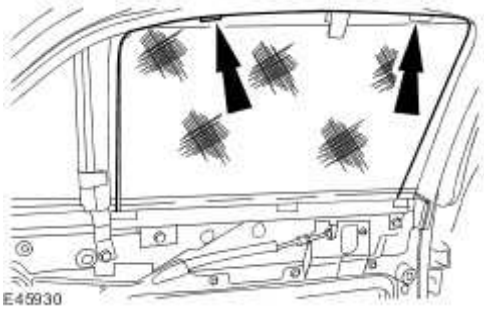
1 . To install, reverse the removal procedure.

Rear Door Window Blind

Removal

1 . Remove the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

2 . Open the Rear door window blind.

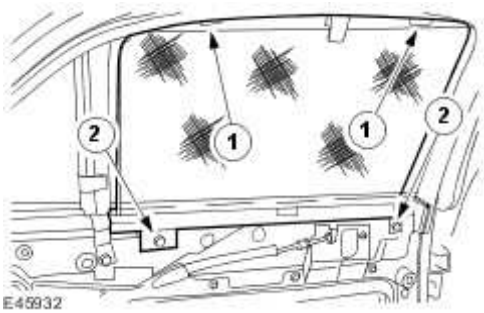


3 . Remove the rear door window blind.

1) Release the blind.

2) Remove the retaining bolts.

- Remove the rear door window blind.



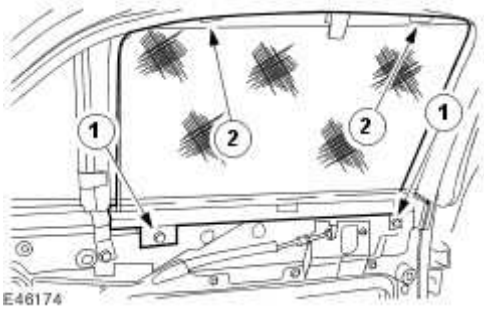
Installation

1 . Install the rear door window blind.

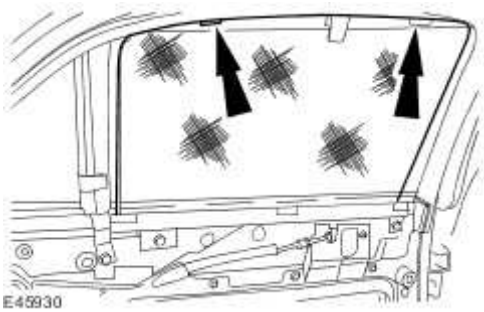
1) Install the rear door window blind retaining bolts.

- Tighten to 4 Nm.

2) Open the rear door window blind.



2 . Close the Rear door window blind.



3 . Install the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

Rear Window Blind (76.14.04)

Removal

1 · **CAUTION: Lower the rear window blind to the rest position. Failure to carry out this procedure may result in damage to the vehicle.**

Lower the rear window blind to the rest position.

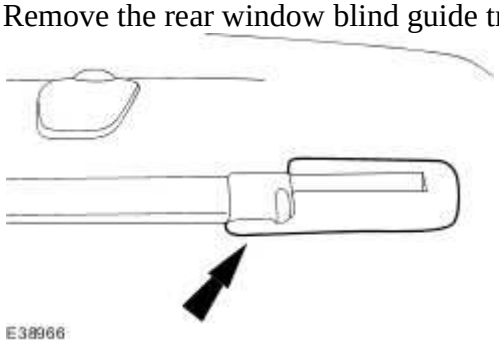
2 . Remove the parcel shelf.
For additional information, refer to

3 · **CAUTION: Do not extend the rear window blind more than 10 mm away from the rear window blind guide trim. Failure to follow this instruction may result in damage to the component.**

CAUTION: Do not extend the center of the rear window blind away from the parcel shelf. Failure to follow this instruction may result in damage to the component.

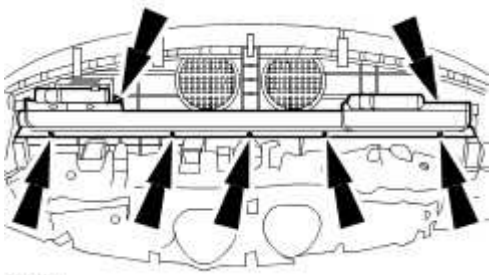
NOTE:
Left-hand shown, right-hand similar.

Remove the rear window blind guide trim.



4 · **NOTE:**
Locally remove the insulation on the back of the parcel shelf to gain access to the rear window blind retaining screws.

Remove the rear window blind.



Installation

1 . To install, reverse the removal procedure.

Rear Window Blind Arm

Removal

1 · **CAUTION: Lower the rear window blind to the rest position. Failure to carry out this procedure may result in damage to the vehicle.**

Lower the rear window blind to the rest position.

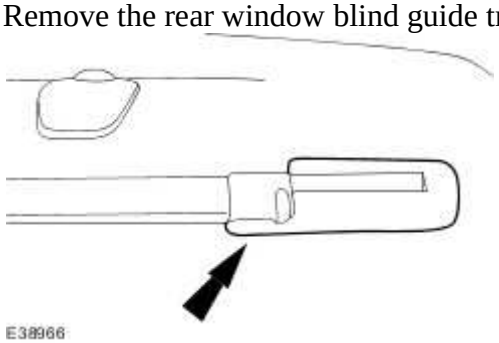
2 . Remove the parcel shelf.
For additional information, refer to Parcel Shelf (76.67.06)

3 · **CAUTION: Do not extend the rear window blind more than 10 mm away from the rear window blind guide trim. Failure to follow this instruction may result in damage to the component.**

CAUTION: Do not extend the center of the rear window blind away from the parcel shelf. Failure to follow this instruction may result in damage to the component.

NOTE:
Left-hand shown, right-hand similar.

Remove the rear window blind guide trim.

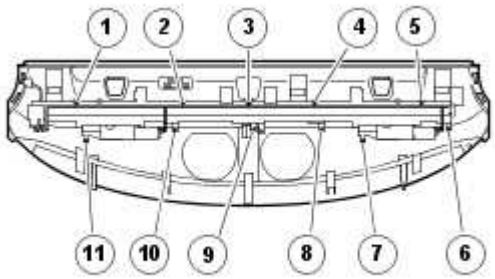


4 · **NOTE:**
Locally remove the insulation on the back of the parcel shelf to gain access to the rear window blind retaining screws.

NOTE:
Note the fitted position of the washers.

Remove the rear window blind.

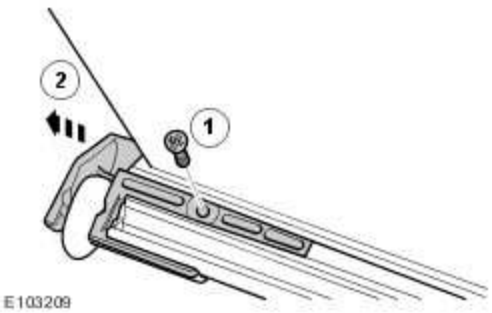
Remove the eleven screws.



5 . **NOTE:**

Left-hand shown, right-hand similar.

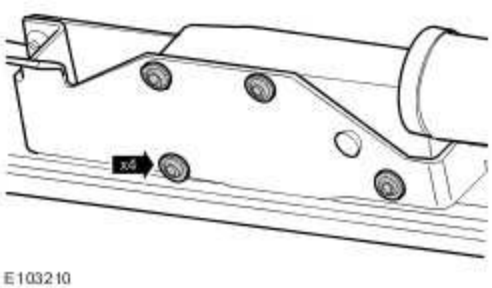
Remove the rear window blind end caps.



6 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rear window blind motor securing screws.



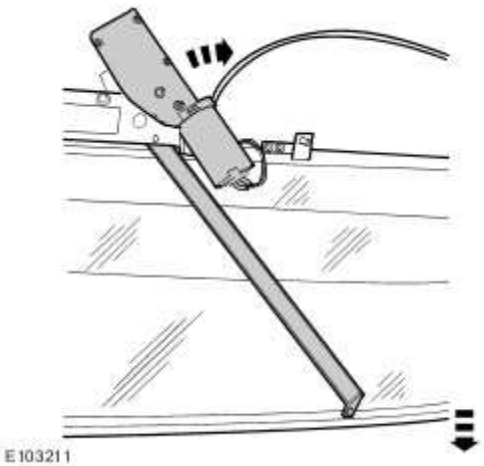
7 . **CAUTION: Make sure that the rear window blind arms are not twisted while removing the motors. Failure to follow this instruction may result in damage to the components.**

NOTE:

Left-hand shown, right-hand similar.

Remove the rear window blind motors.

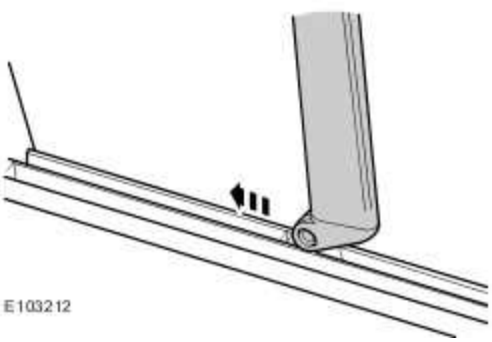
- Extend the rear window blind fully by hand.
- The motors will rotate and release as the blind is extended.



8 . **NOTE:**

Left-hand shown, right-hand similar.

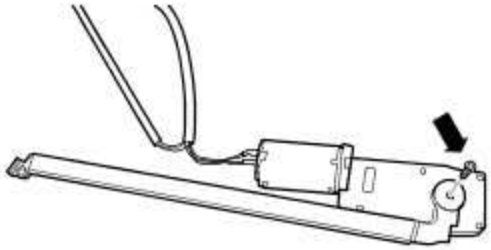
Release the arm sliders from the rear window blind guide and remove the motors.



9 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the arms from the motors

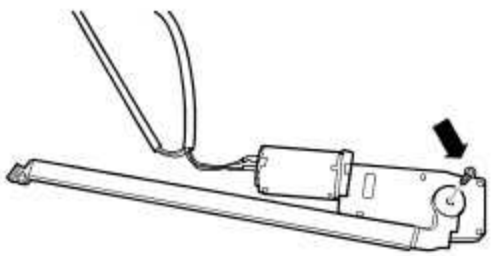


E103378

Installation

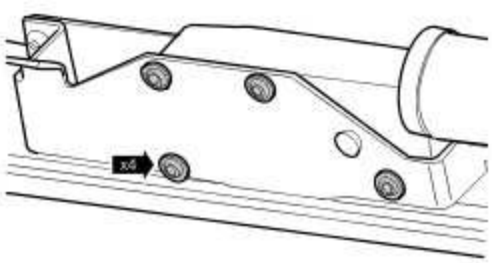
1 . To install, reverse the removal procedure.

2 . Tighten to 5 Nm.



E103378

3 . Tighten to 5 Nm.



E103210

Rear Window Blind Motor

Removal

NOTE:

The rear window blind motors can not be serviced separately and must be renewed in pairs.

1 · **CAUTION: Lower the rear window blind to the rest position. Failure to carry out this procedure may result in damage to the vehicle.**

Lower the rear window blind to the rest position.

2 . Remove the parcel shelf.
For additional information, refer to Parcel Shelf (76.67.06)

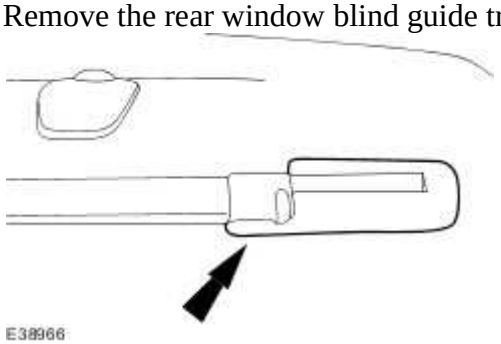
3 · **CAUTION: Do not extend the rear window blind more than 10 mm away from the rear window blind guide trim. Failure to follow this instruction may result in damage to the component.**

CAUTION: Do not extend the center of the rear window blind away from the parcel shelf. Failure to follow this instruction may result in damage to the component.

NOTE:

Left-hand shown, right-hand similar.

Remove the rear window blind guide trim.

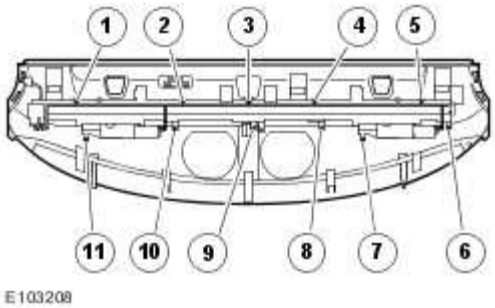


4 **NOTE:**

· Locally remove the insulation on the back of the parcel shelf to gain access to the rear window blind retaining screws.

Remove the rear window blind.

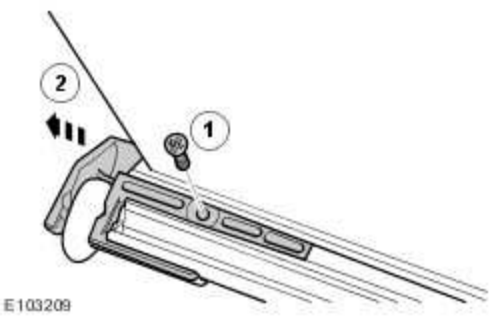
- Remove the eleven screws.



5 . **NOTE:**

Left-hand shown, right-hand similar.

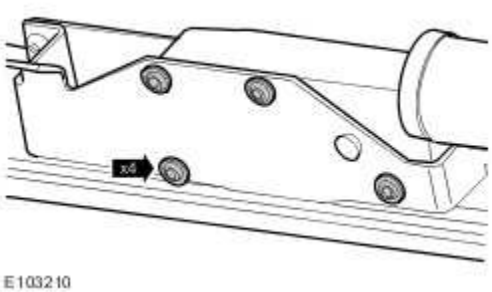
Remove the rear window blind end caps.



6 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rear window blind motor securing screws.



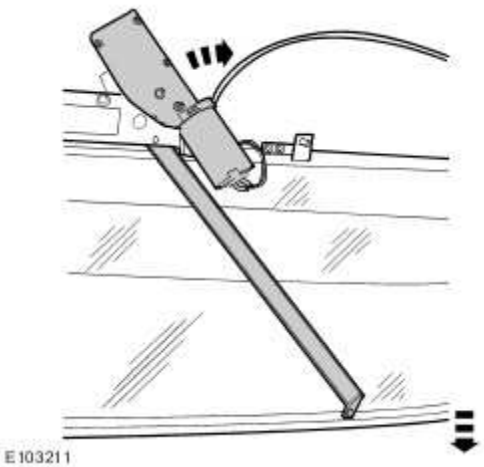
7 . **CAUTION: Make sure that the rear window blind arms are not twisted while removing the motors. Failure to follow this instruction may result in damage to the components.**

NOTE:

Left-hand shown, right-hand similar.

Remove the rear window blind motors.

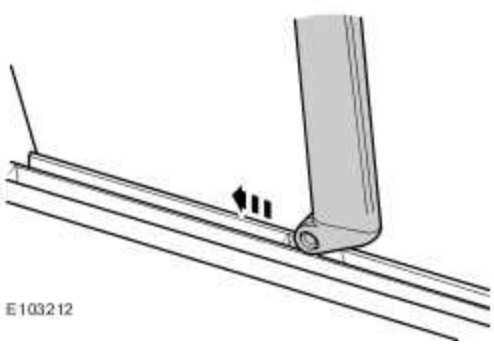
- Extend the rear window blind fully by hand.
- The motors will rotate and release as the blind is extended.



8 . **NOTE:**

Left-hand shown, right-hand similar.

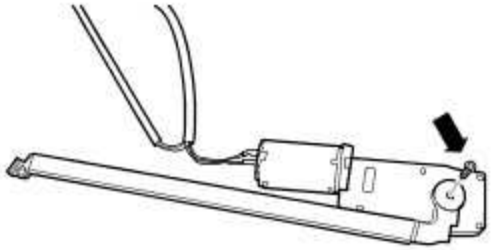
Release the arm sliders from the rear window blind guide and remove the motors.



9 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the arms from the motors

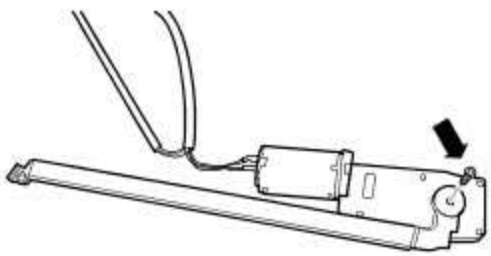


E103378

Installation

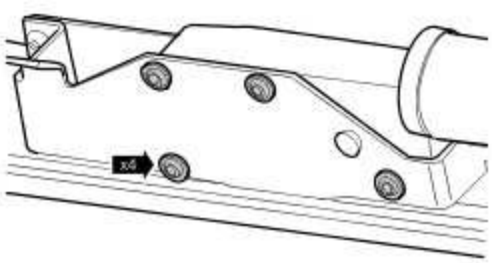
1 . To install, reverse the removal procedure.

2 . Tighten to 5 Nm.



E103378

3 . Tighten to 5 Nm.



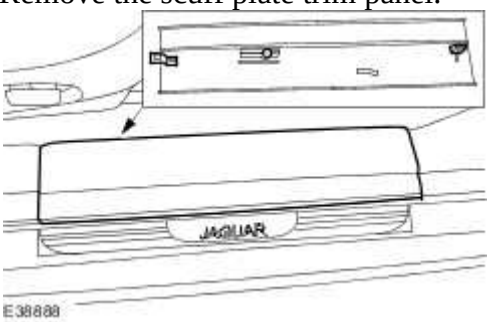
E103210

Scuff Plate Trim Panel (76.13.81)

Removal

1 . **NOTE:**
Front shown, rear similar.

Remove the scuff plate trim panel.



Installation

1 . To install, reverse the removal procedure.

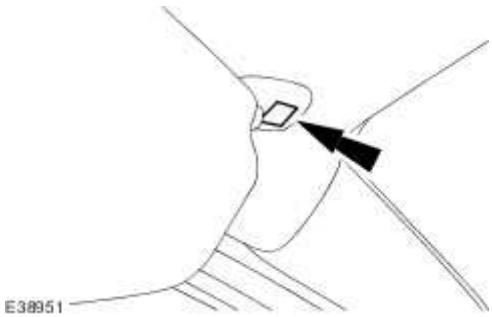
Sun Visor (76.10.48)

Removal

1 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the sun visor trim.



2 . **NOTE:**

Left-hand shown, right-hand similar.

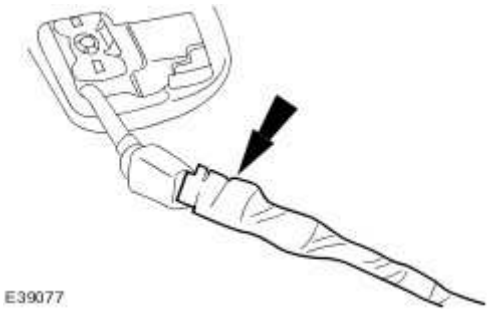
Detach the sun visor.

3 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the sun visor.

- Disconnect the vanity mirror electrical connector.



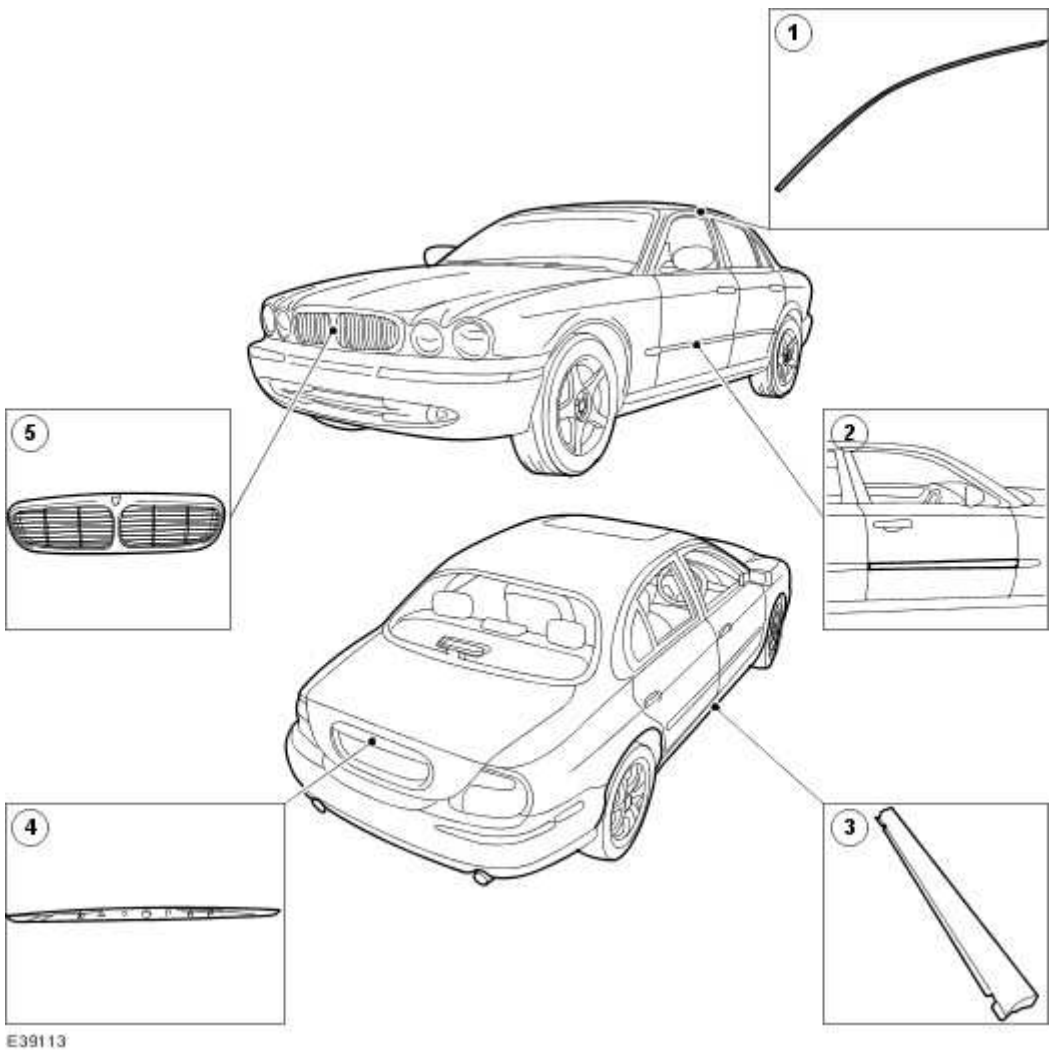
Installation

1 . To install, reverse the removal procedure.

501-08 : Exterior Trim and Ornementation

Description and operation

Exterior Trim

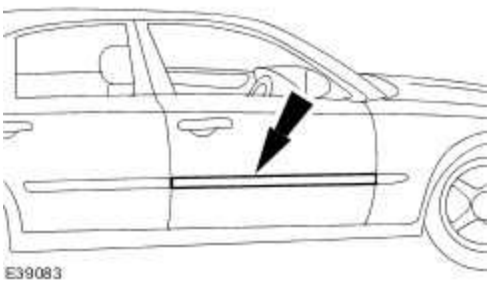


Item	Part Number	Description
1	—	Front door window moulding
2	—	Door moulding
3	—	Rocker panel
4	—	Luggage compartment lid moulding
5	—	Radiator Grille

Door Moulding (76.43.72)

Removal

1 . Apply suitable protective tape to adjacent areas of paintworks.



2 . Using a hand-held heat gun, apply heat uniformly along the moulding length.

3
· **CAUTION: Do not lever the door moulding away from the door panel. Faliure to follow this instruction may result in damage to the vehicle.**

Applying local heat at one end and using a suitable nylon banding tape or string progessively ease the door moulding away from the door panel.

4 . Discard the moulding and remove protective tape.

5 . Remove any residual adhesive and thoroughly clean area using white spirit.

Installation

1 **NOTE:**
· Optimum adhesion is achieved by warming body panel and moulding to 30°C (86°F)

Using white spirit make sure that mounting area is clean, dry and de-greased.

2 . Remove protective backing tape from the moulding.

3 **NOTE:**

· Do not allow the moulding to contact the body panel until it is correctly aligned.

Aligning with adjacent mouldings or to match opposite side of vehicle, press the new moulding firmly onto the body panel.

4 . Apply hand pressure along the moulding length to make sure satisfactory adhesion.

5 . Allow the moulding and door panel to cool, then thoroughly clean both using white spirit.

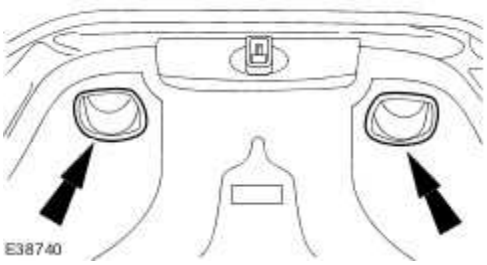
6 . Apply a coat of suitable polish to the moulding and body panel.

Luggage Compartment Lid Moulding - VIN Range: G00442->H18679 (76.43.79)

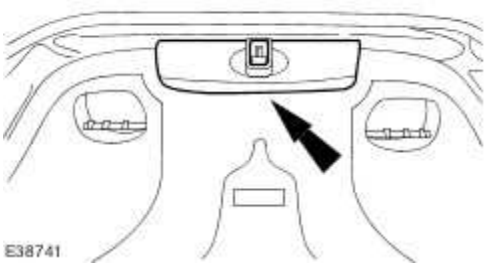
Removal

1 . Remove the warning triangle.

2 . Remove the luggage compartment lid grab handles.

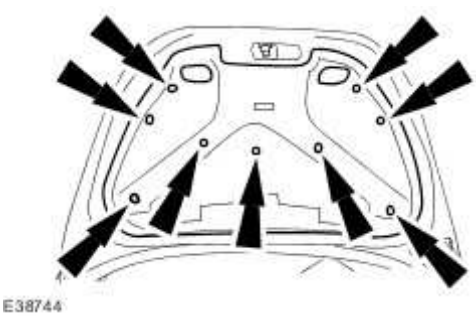


3 . Remove the luggage compartment lid latch trim cover.



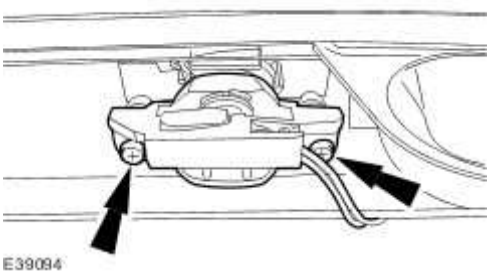
4 . Remove the luggage compartment lid liner.

- Remove the courtesy lamp.



5 . Detach the luggage compartment lid moulding.

6 . Remove the luggage compartment lid moulding.



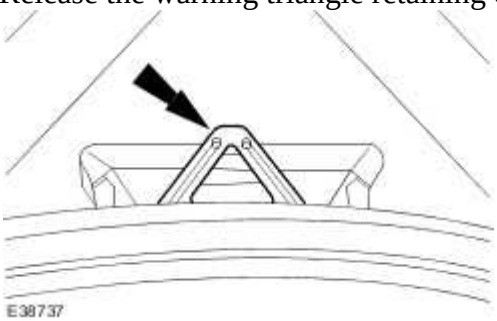
Installation

1 . To install, reverse the removal procedure.
- Tighten to 2 Nm.

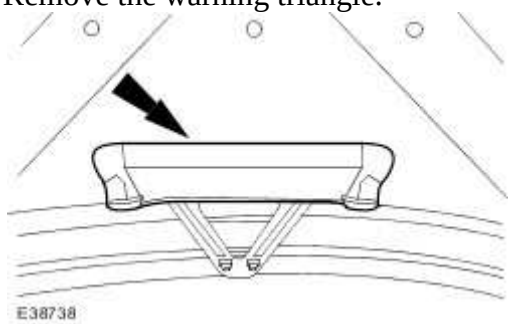
Luggage Compartment Lid Moulding - VIN Range: H18680->H99999 (76.43.79)

Removal

1 . Release the warning triangle retaining clip.

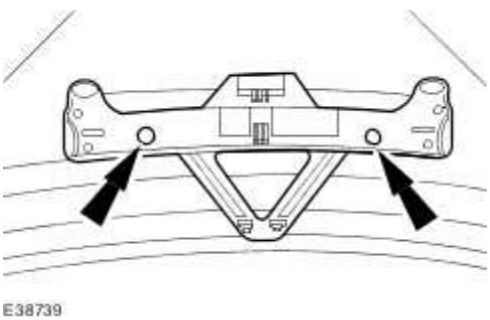


2 . Remove the warning triangle.



3 . Remove the warning triangle retaining bracket.

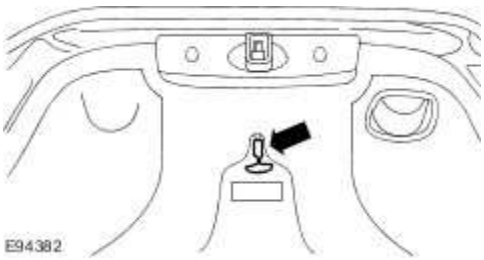
- Remove the retaining bolts.



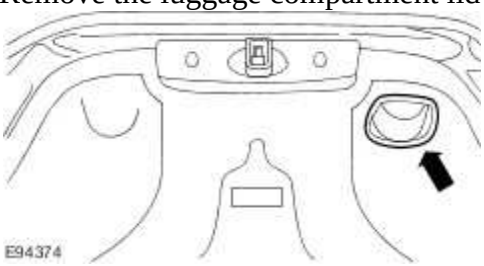
4 . **NOTE:**

Federal market vehicles only.

Detach the luggage compartment emergency release handle.

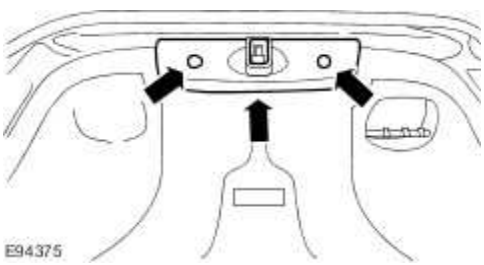


5 . Remove the luggage compartment lid grab handle.

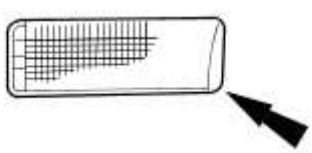


6 . Remove the luggage compartment lid latch trim cover.

- Remove the retaining clips.



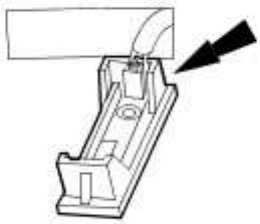
7 . Detach the luggage compartment lid courtesy lamp.



8 Remove the luggage compartment lid courtesy lamp.

·

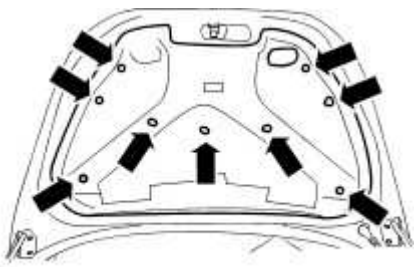
- Disconnect the luggage compartment lid courtesy lamp electrical connector.



E38743

9 . Remove the luggage compartment lid liner.

- Remove the retaining clips.
- Disconnect the courtesy lamp electrical connector.



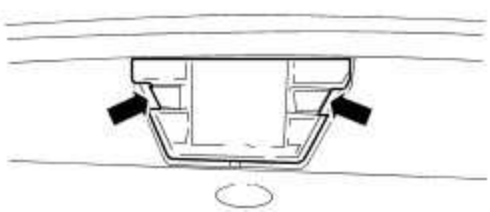
E94376

10 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the licence plate lamp.

- Release the retaining tangs.



E94488

11 . Detach the luggage compartment lid moulding.

- Remove the retaining nuts.

Installation

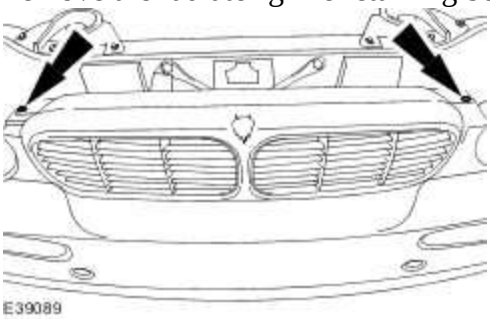
1 . To install, reverse the removal procedure.

- Tighten to 2 Nm.

Radiator Grille (76.55.03)

Removal

1 . Remove the radiator grille retaining bolts.



2 . **NOTE:**

Left-hand shown, right-hand similar.

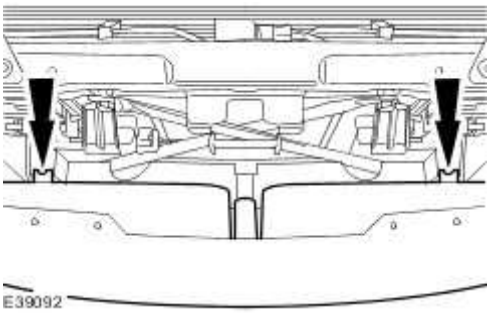
Remove the air deflector.

3 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the radiator grille.

4 . Remove the radiator grille.



Installation

1 **NOTE:**

· Check the lower radiator grille retaining legs are fully seated by lifting the rubber skirts after installation.

To install, reverse the removal procedure.

Rocker Panel Moulding (76.11.36)

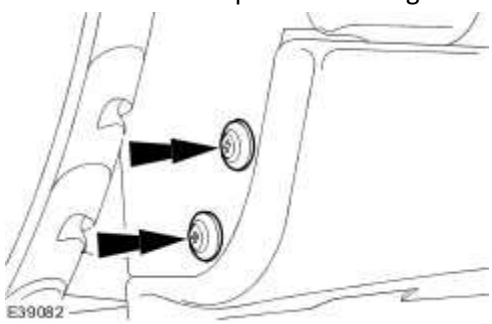
Removal

Short wheelbase

1 . **NOTE:**

Left-hand shown, right-hand similar.

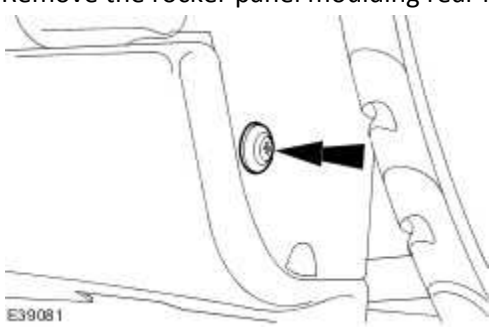
Remove the rocker panel moulding front retaining screws.



2 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rocker panel moulding rear retaining screw.

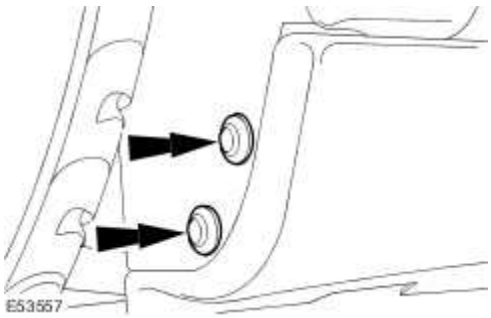


Long wheelbase

3 . **NOTE:**

Left-hand shown, right-hand similar.

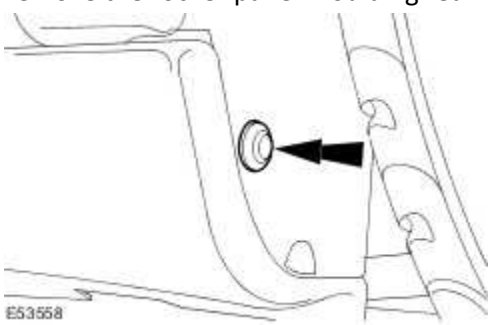
Remove the rocker panel moulding front retaining clips.



4 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rocker panel moulding rear retaining clip.

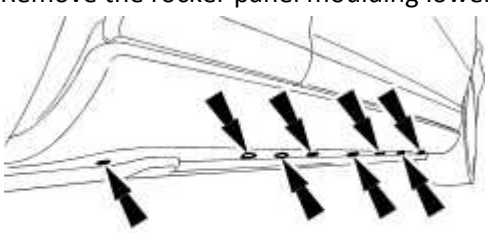


Short wheelbase

5 . **NOTE:**

Left-hand shown, right-hand similar.

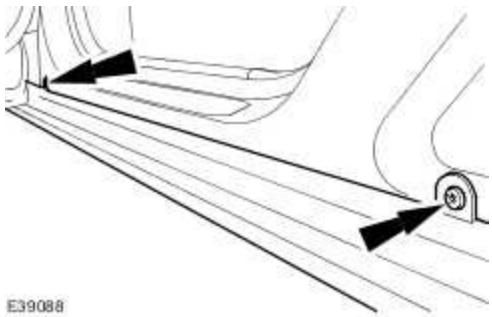
Remove the rocker panel moulding lower retaining fixings.



6 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rocker panel moulding.

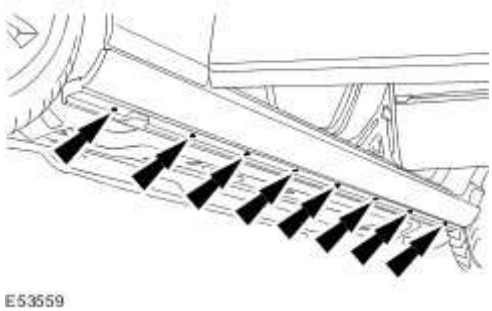


Long wheelbase

7 . **NOTE:**

Left-hand shown, right-hand similar.

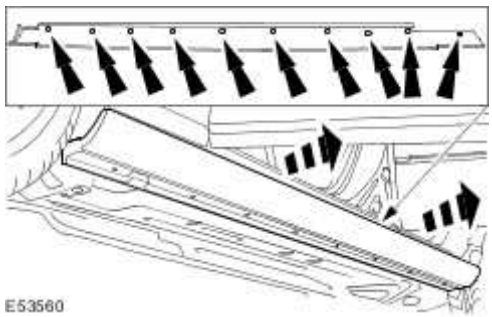
Remove the rocker panel moulding lower retaining fixings.



8 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rocker panel moulding.



Installation

1 . To install, reverse the removal procedure.

Window Moulding (76.43.20)

Removal

1 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the door margin seal to the waist of the door.
1) Remove the retaining peg.
2) Detach the door margin seal to the waist of the door.

2 . Remove the front door trim panel. <<501-05>>

3 . Remove the rear view mirror. <<501-09>>

4 . **NOTE:**
Right-hand shown, left-hand similar.

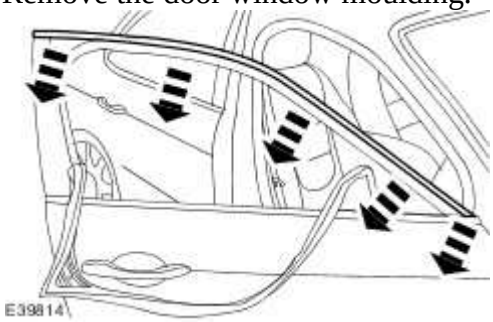
Detach the front door glass channeling.

5 **NOTE:**
· Right-hand shown, left-hand similar.

NOTE:
Starting at the upper outer corner and using a suitable trim tool remove the door

window moulding.

Remove the door window moulding.



Installation

1 **NOTE:**

- Using a suitable tool, align the window moulding to the door at the upper outer corner using the aperture provided.

To install, reverse the removal procedure.

Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Exterior mirror retaining bolts	8	—	53
Exterior mirror motor retaining screws	1	—	9

Rear View Mirrors

The manual dipping mirror is a prismatic unit with mirror dipping achieved by pulling the lever forward.

Where fitted, electrochromic mirrors automatically darken to prevent glare from following vehicle lights. The mirrors are equipped with a reflecting surface light sensor to enable this feature.

During daytime driving, the ambient light sensor will detect high ambient light levels and control the electrochromic rear view mirrors to provide a full, clear reflection. During night driving, the ambient light sensor will detect low ambient light levels and automatic glare reduction will occur.

A switch on the interior rear view mirror allows the driver to select the automatic glare reduction function "AUTO" or to de-select all automatic glare reduction functions "OFF".

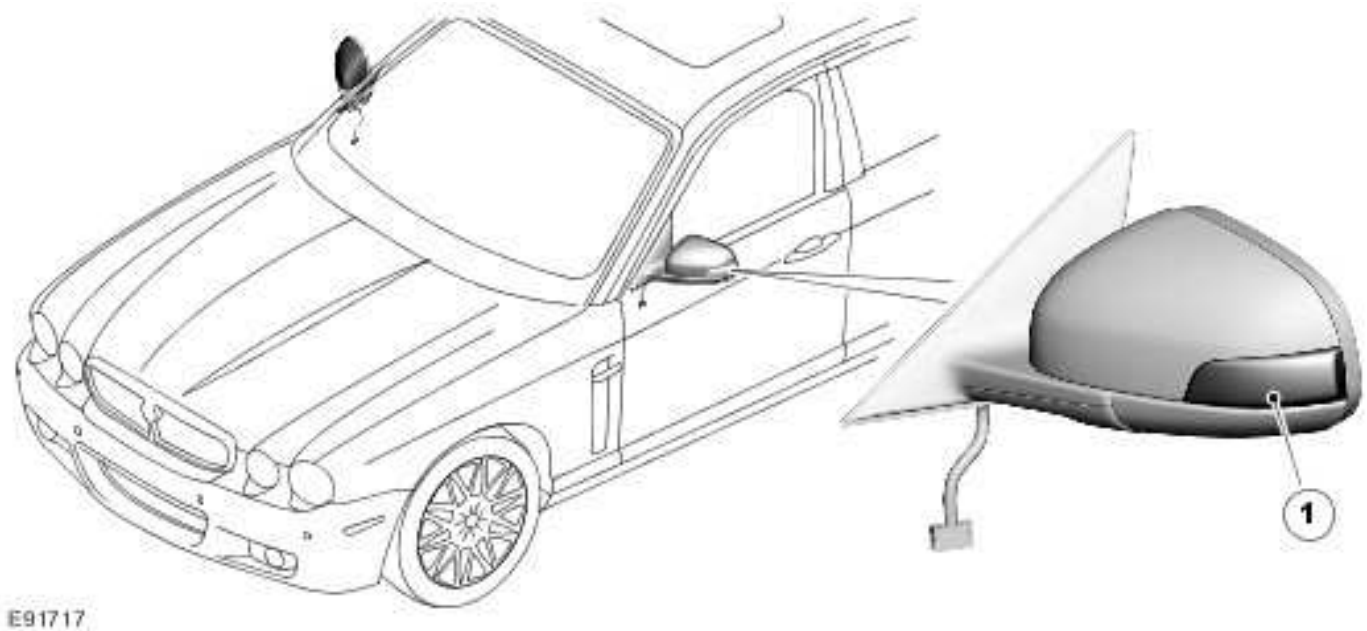
The exterior mirrors are cheater mounted, color-coded, remote electrically adjustable and heated. Adjustment of both mirrors is carried out from the driver door switch pack. A rocker switch selects the mirror to be adjusted, and a toggle switch adjusts the selected mirror to the required position.

Automatic dipping of the exterior mirrors when reversing is fitted as part of the memory pack. With the ignition switch in position II and the reverse gear selected, automatic dipping will be initiated.

Where fitted, power fold back mirrors can be operated by the exterior mirror fold back switch incorporated in the window switch. The power fold back mirrors only operate when the mirror select switch is in the middle position, and the vehicle speed is below 19 km/h (12 mile/h).

The exterior mirrors incorporate ground illumination, which is activated when the vehicle is locked and unlocked under low ambient light conditions. The ground illumination is timed to stay on for the same amount of time as the interior light.

External Rear View Mirrors - (X358) 2007 MY. onwards.



OVERVIEW

Vehicles built from June 2007 feature direction indicator repeaters located in the exterior rear view mirrors. The functionality and operation of the direction indicator repeaters remains the same as the previous fender mounted items. For additional information, refer to Exterior Lighting (417-01)

In the event of a bulb failure, the mirror glass will need to be removed.

Rear View Mirrors

1 . Verify the customer concern.

2 . Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Exterior mirror(s)	• Fuse(s) • Relay • Electrical connector(s) • Switch

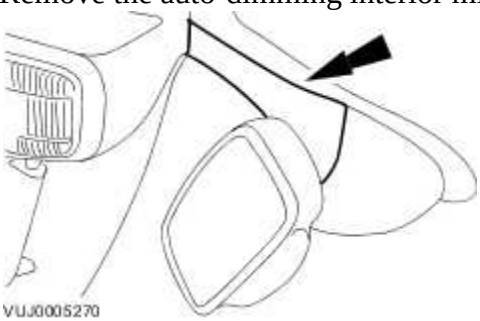
1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

2 . If the cause is not visually evident, verify the symptom and refer to the Jaguar Approved Diagnostic System.

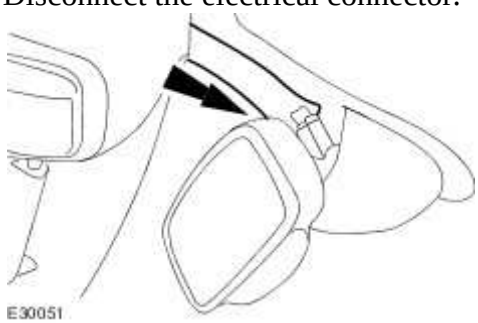
Auto-Dimming Interior Mirror (76.10.56)

Removal

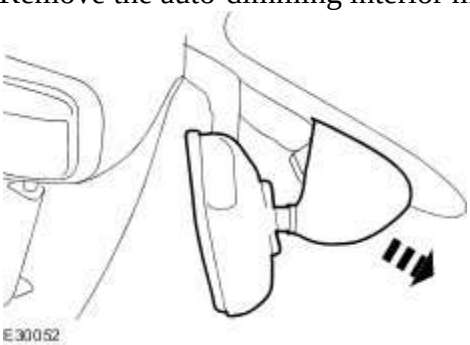
1 . Remove the auto-dimming interior mirror trim panel.



2 . Disconnect the electrical connector.



3 . Remove the auto-dimming interior mirror.



Installation

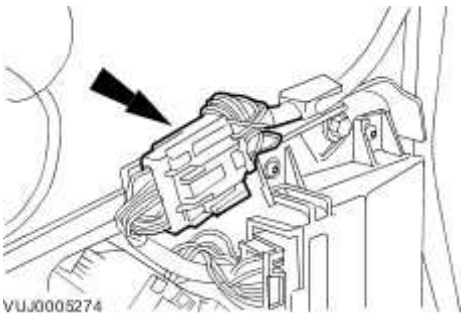
1 . To install, reverse the removal procedure.

Exterior Mirror (76.10.52)

Removal

1 . Remove the front door trim panel. <<501-05>>

2 . Disconnect the exterior mirror electrical connector.

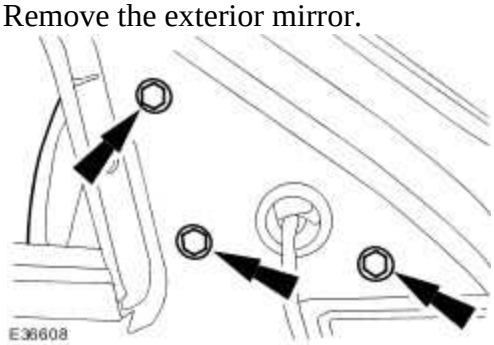


3 . Detach the front door window glass interior trim panel.

4 . **NOTE:**

Hold the exterior mirror while removing the retaining bolts.

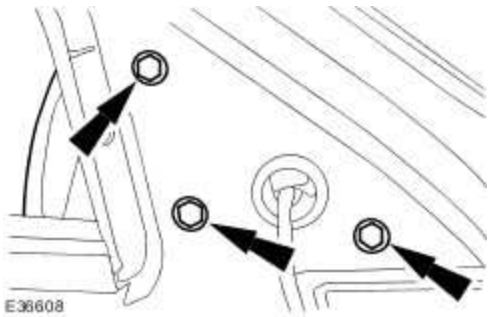
Remove the exterior mirror.



Installation

1 . To install, reverse the removal procedure.

- Tighten to 8 Nm.

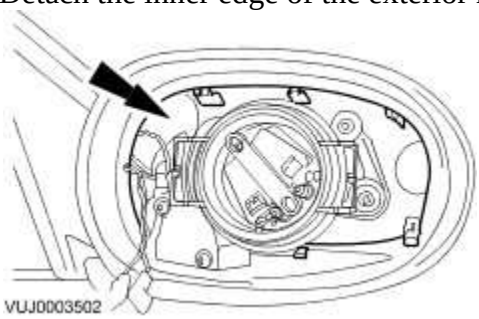


Exterior Mirror Cover (76.10.55)

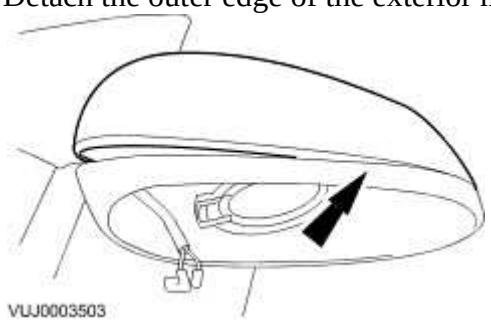
Removal

1 . Remove the exterior mirror glass.
For additional information, refer to Exterior Mirror Glass (76.10.53)

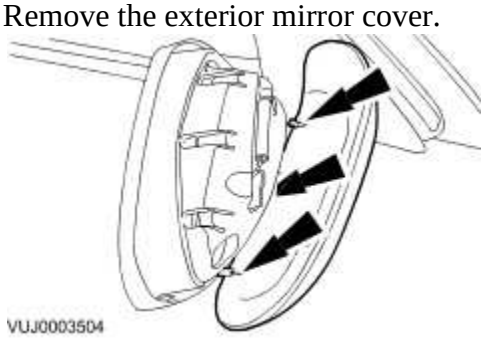
2 . Detach the inner edge of the exterior mirror cover.



3 . Detach the outer edge of the exterior mirror cover.



4 . Remove the exterior mirror cover.



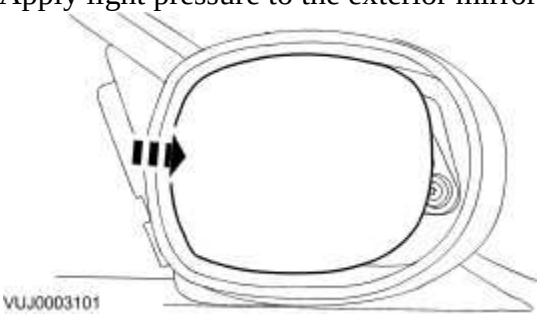
Installation

1 . To install, reverse the removal procedure.

Exterior Mirror Glass (76.10.53)

Removal

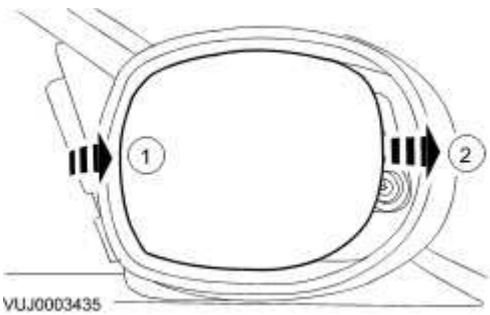
1 . Apply light pressure to the exterior mirror glass.



2 . Detach the mirror glass.

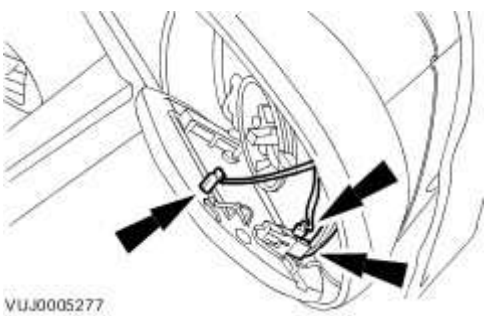
1) Apply light pressure to the inner edge of the mirror glass.

2) Pull the outer edge of the mirror glass to detach the mirror glass.



3 . Remove the exterior mirror glass.

- Disconnect the electrical connectors.



Installation

1 . To install, reverse the removal procedure.

Exterior Mirror Motor - VIN Range: G00442->H18679 (76.10.57)

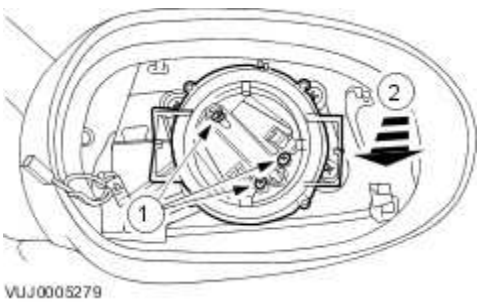
Removal

1 . Remove the exterior mirror glass.
For additional information, refer to Exterior Mirror Glass (76.10.53)

2 . Detach the exterior mirror motor.

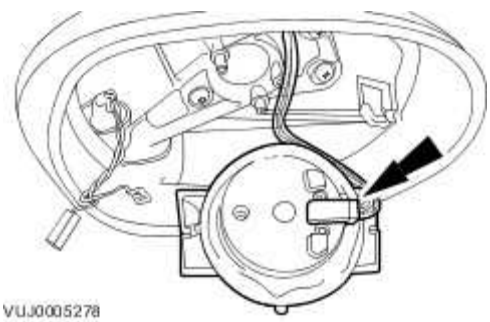
1) Remove the exterior mirror motor retaining screws.

2) Detach the exterior mirror motor.



3 . Remove the exterior mirror motor.

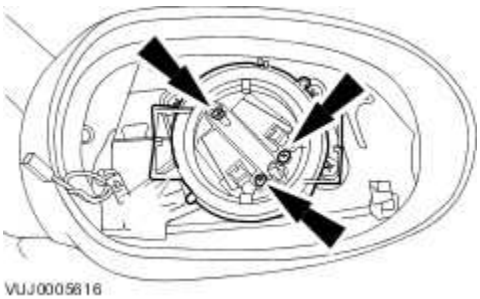
- Disconnect the electrical connector.



Installation

1 . To install, reverse the removal procedure.

- Tighten to 1 Nm.



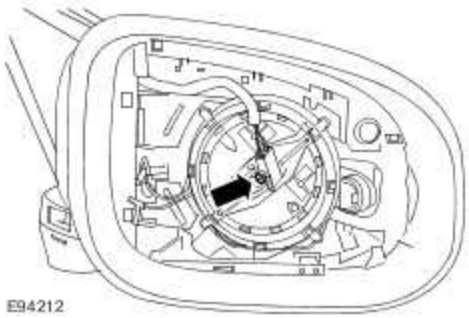
VUJ0005616

Exterior Mirror Motor - VIN Range: H18680->H99999 (76.10.57)

Removal

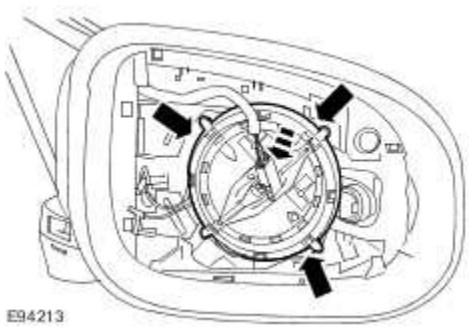
1 . Remove the exterior mirror glass.
For additional information, refer to Exterior Mirror Glass (76.10.53)

2 . Remove the exterior mirror motor retaining bolt.



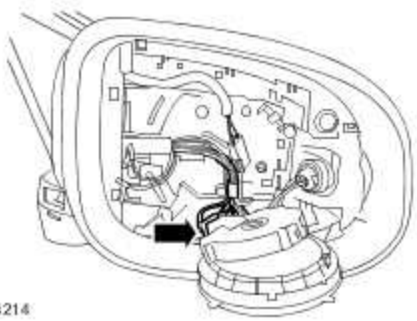
3 . Detach and reposition the exterior mirror motor.

- Release the retaining tangs.



4 . Remove the exterior mirror motor.

- Disconnect the electrical connector.



Installation

1 . To install, reverse the removal procedure.

Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front seat backrest retaining bolts	25	18	-
Front safety belt to seat base retaining bolt	35	26	-
Front seat rear retaining bolts	47	35	-
Front seat front retaining bolts	47	35	-
Front safety belt buckle retaining bolt	35	26	-
Side airbag module retaining nuts	7	-	62

Seats - VIN Range: G00442->H18679

Front Seats

E39529

Item	Part Number	Description
1		Front seat head restraint
2		Front seat backrest
3		Seat base
4		Front seat control switch
5		Front seat cushion

Each front seat has a handed seat cushion, a common backrest frame and seat adjuster mechanism. Switch packs are installed on the outer side of the driver and passenger seats. Both driver and passenger seats are retained to the vehicle floorpan at four points.

The driver and passenger seats, although almost identical, have some unique components fitted. The driver seat has a seat track position sensor and the passenger seat has an occupant weight sensing system, both the components form an integral part of the occupant restraints system.

The front seats have a side airbag module fitted to the outer side of the front seat backrest and the front seat backrest cover has an integral chute to aid in the deployment of the side air bag.

An anti-whiplash system is fitted to both front seats, the system has no serviceable

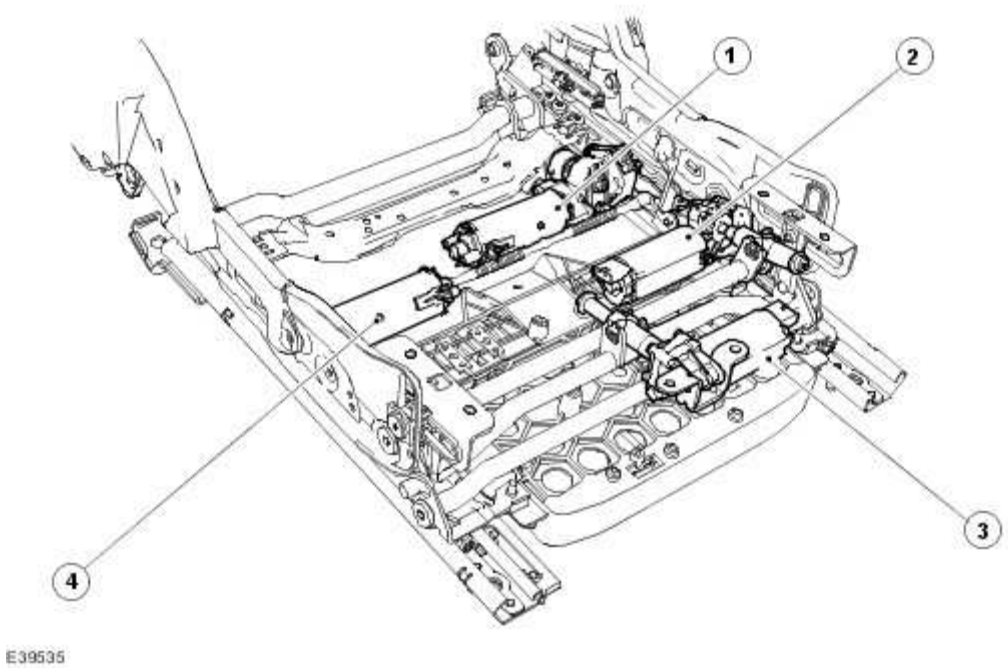
components and after it has been activated the complete front seat backrest must be replaced.

The standard front seat is equipped with electric height adjustment, forward and rearward adjustment, seat cushion tilt, head restraint and seat backrest recline motors. The standard front seat also incorporates a two way lumbar support assembly that is fitted to the seat backrest and inflates an air filled bladder to give the required support. The electrical functions can be utilized by operating the front seat control switch and then the driver seat position can be stored by the driver door module (DDM). The driver seat can be programmed for up to three different driver seat configurations and the seat memory switch located in the driver door switch pack, can be used to retrieve the programmed configurations.

In addition to the standard front seat functionality the 16 way high level front seat incorporates:

- a four way lumbar support assembly.
- an extendible seat cushion.
- head restraints incorporating video display (optional).

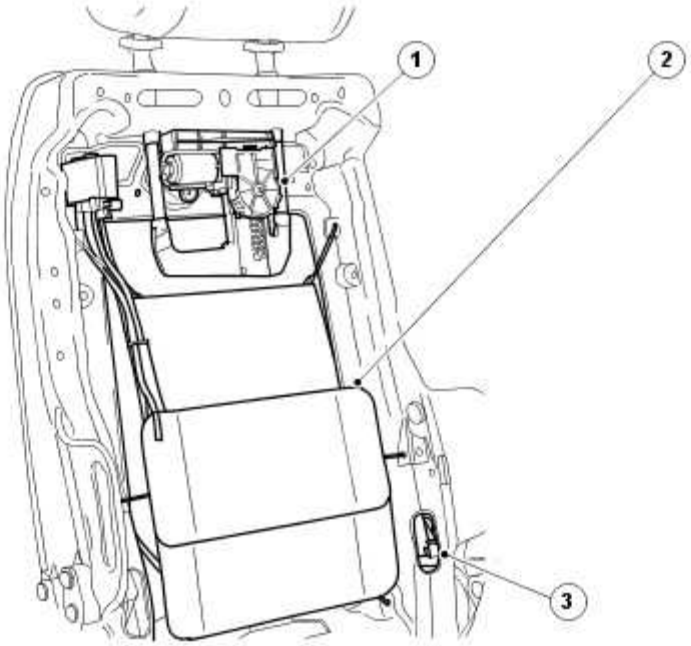
Seat Base Motors



E39535

Item	Part Number	Description
1		Height adjustment motor
2		Seat cushion tilt motor
3		Seat cushion extend motor
4		Forward and rearward adjustment motor

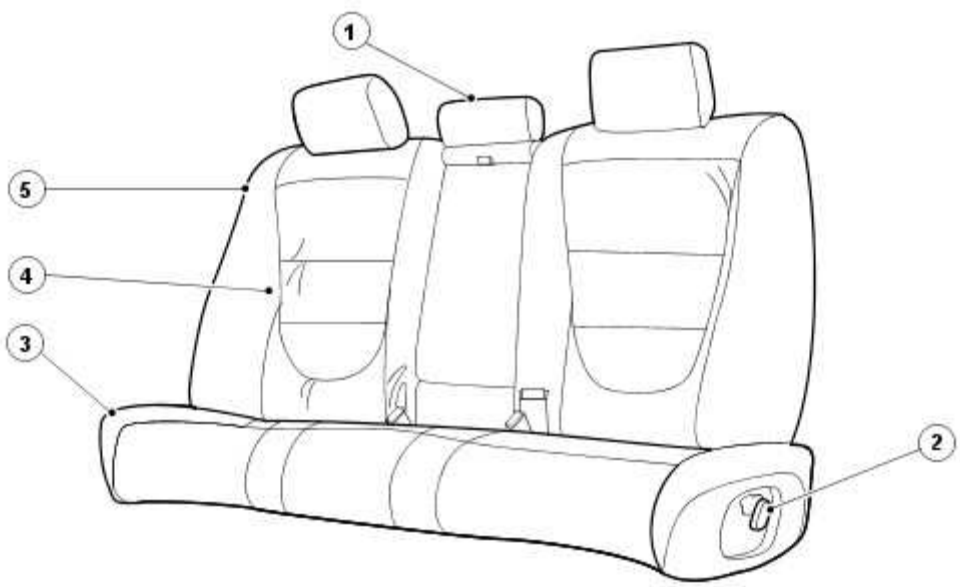
Front Seat Backrest Motors



E39536

Item	Part Number	Description
1		Front seat head restraint motor
2		Front lumbar motor
3		Front seat recline motor

Rear Seats



E39526

Item	Part Number	Description

1		Seat armrest
2		Rear seat control switch
3		Rear seat cushion
4		Rear outer seat backrest
5		Rear seat head restraint

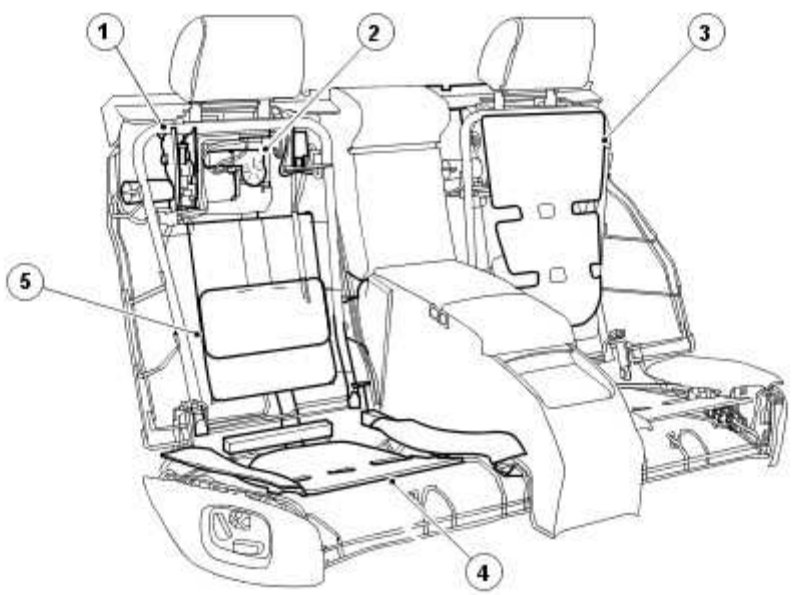
Depending on the vehicle specification the rear seats will be one of the following:

- Fixed bench style with an integral armrest.
- Electrically adjustable outer seat backrests with a bench style cushion and separate armrest.
- Electrically adjustable twin rear seats with a full floor console.

The standard rear seat is of a bench type with full width removable cushion and integral armrest.

The electrically adjustable outer seat backrests can be fitted with either a bench style cushion that incorporates both the rear seat control switches or single rear seat cushions that incorporate the rear seat control switch for the corresponding side.

Rear Seat Backrest Motors



E39537

Item	Part Number	Description
1		Rear seat recline motor
2		Rear seat head restraint motor
3		Rear outer seat backrest heater pad (incorporated into the rear outer seat

		backrest cushion)
4		Rear outer seat backrest heater pad (incorporated into the rear outer seat cushion)
5		Rear lumbar motor

The rear outer seat backrests are equipped with electric four way lumbar adjustment, rear seat head restraint adjustment, and rear outer seat backrest recline adjustment motors. The electrical functions can be utilized by operating the rear seat control switches and then rear outer seat backrest positions can be stored by the rear seat module (RSM). The rear outer seat backrests can be programmed for up to three different seat configurations each. The seat memory switch located on the rear door trim panel can be used to retrieve the programmed configurations.

Lumbar Motors

The front and rear seats have a two or four way lumbar motor system depending on the specification of the vehicle. The system uses a single motor driven pump, which inflates or deflates air cells, as required, to provide upper and lower lumbar support. The lumbar motors are operated from the seat control switches. Depending on the direction the switch is operated in, one of four solenoids housed within the solenoid pack (integral component of the lumbar assembly) is connected to the pump, which provides lumbar support by adjusting the amount of air in the appropriate cell.

Heated Seats

The heated seat system is available on all the seats except the standard rear seat option.

The heated seat system comprises of:

- heated seat switches.
- backrest heater pad.
- cushion heater pad and thermostat.
- front electronic module (FEM).

The FEM controls the seat heating function by providing the appropriate response depending on the status of the heated seat switches. The heated seat functionality is constantly monitored by the electronic load management system (ELMS). The ELMS dictates that in circumstances where the generated electrical power is less than the electrical consumption, selected systems may be inhibited or operated using reduced power for as long as is necessary.

With the ignition in the `ON` position, pressing a heated seat switch will select the maximum heat setting for the chosen seat and is confirmed by three illuminated light emitting diodes (LED) next to the switch. A second press selects the intermediate heat setting and two LEDs are illuminated next to the switch. A third press selects the lowest heating setting, which is displayed by one LED illuminating and a fourth press will deactivate the heated seat.

If the heated seat function has been activated, it will continue to operate until one of the following conditions is met:

- a fixed period of time has expired (10 minutes)
- the function is deactivated by pressing the heated seat switch for a fourth time
- the ignition key is turned to the `ON` position
- a malfunction is detected by the FEM

The heated seat function is designed to operate at temperatures below a predetermined limit and the operation may be inhibited by a heated garage, body heat or warm ambient temperatures.

Seats - VIN Range: H18680->H99999

OVERVIEW

Two variants of driver and passenger seat are available; 12-way sports and 16-way luxury each availble in 3 trim styles; Comfort, R and VDP. The front seats are equipped with the following:

- Seat control switches (seat mounted)
- Front seat cushion front height adjustment
- Front seat cushion rear height adjustment
- Front seat backrest adjustment
- Front seat head restraint adjustment
- Lumbar adjustment
- Front seat forward and backward adjustment
- Side air bag module
- Front seat backrest heating
- Front seat cushion heating
- Extendible seat-cushion (luxury variant only)
- Seat memory switches (door mounted)
- Seat heating and cooling

 **WARNING: Prior to removal of the front seats and before disconnecting the front seat wiring harness electrical connectors (which includes the side air bag module electrical connectors), the battery ground cable should be disconnected and a period of at least 1 minute allowed to elapse. The same amount of care should be taken when handling and storing the front seats, as would be taken when handling and storing air bag modules.**

The driver and passenger front seats, although almost identical, have some unique components. The front driver seat has a seat position sensor and the front passenger seat has a occupancy sensing system. In both instances the components form an integral part of the air bag Supplemental Restraint System (SRS).

FRONT SEATS

E39529

Item	Part Number	Description
1		Front seat head restraint
2		Front seat backrest
3		Seat base
4		Front seat control switch
5		Front seat cushion

Each front seat has a handed seat cushion, a common backrest frame and seat adjuster mechanism. Switch packs are installed on the outer side of the driver and passenger seats. Both driver and passenger seats are retained to the vehicle floorpan at four points.

The driver and passenger seats, although almost identical, have some unique components fitted. The driver seat has a seat track position sensor and the passenger seat has an occupant weight sensing system cupled with a track position sensor, both the components form an integral part of the occupant restraints system.

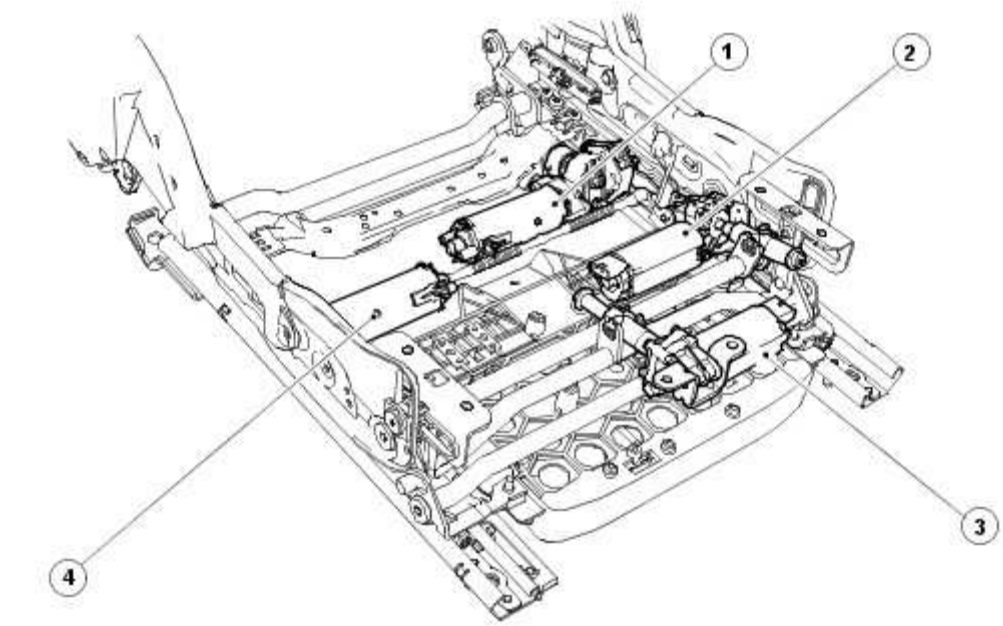
The front seats have a side airbag module fitted to the outer side of the front seat backrest and the front seat backrest cover has an integral chute to aid in the deployment of the side air bag.

The standard front seat is equipped with electric height adjustment, forward and rearward adjustment, seat cushion tilt, head restraint and seat backrest recline motors. The standard front seat also incorporates a two way lumbar support assembly that is fitted to the seat backrest and inflates an air filled bladder to give the required support. The electrical functions can be utilized by operating the front seat control switch and then the driver seat memory position is stored by the DDM (driver door module) using the memory switch pack mounted in the driver door trim. The driver seat can be programmed for up to three different driver seat memory configurations, the seat memory switch located in the driver door trim, can also be used to retrieve the programmed memory configurations.

In addition to the standard front seat functionality the 16 way high level front seat incorporates:

- A four way lumbar support assembly.
- An extendible seat cushion.
- Head restraints incorporating video display (optional).

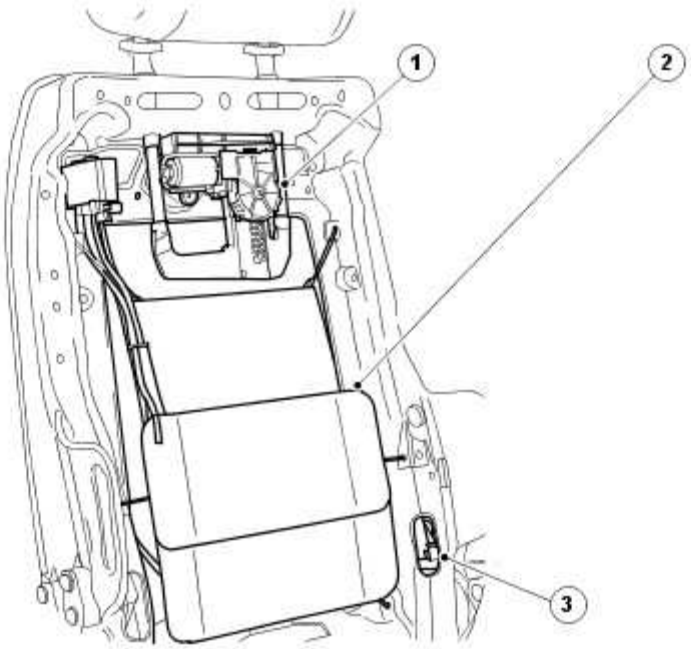
Seat Base Motors



E39535

Item	Part Number	Description
1		Height adjustment motor
2		Seat cushion tilt motor
3		Seat cushion extend motor
4		Forward and rearward adjustment motor

Front Seat Backrest Motors

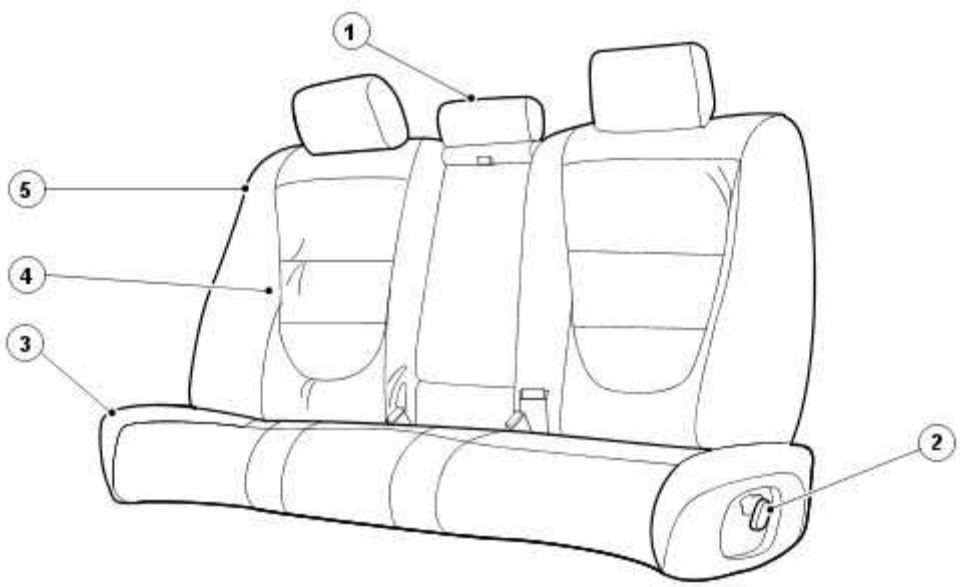


E39536

Item	Part Number	Description
1		Front seat head restraint motor
2		Front lumbar motor
3		Front seat recline motor

REAR SEATS

Rear Seats



E39526

Item	Part Number	Description
1		Seat armrest
2		Rear seat control switch
3		Rear seat cushion
4		Rear outer seat backrest
5		Rear seat head restraint

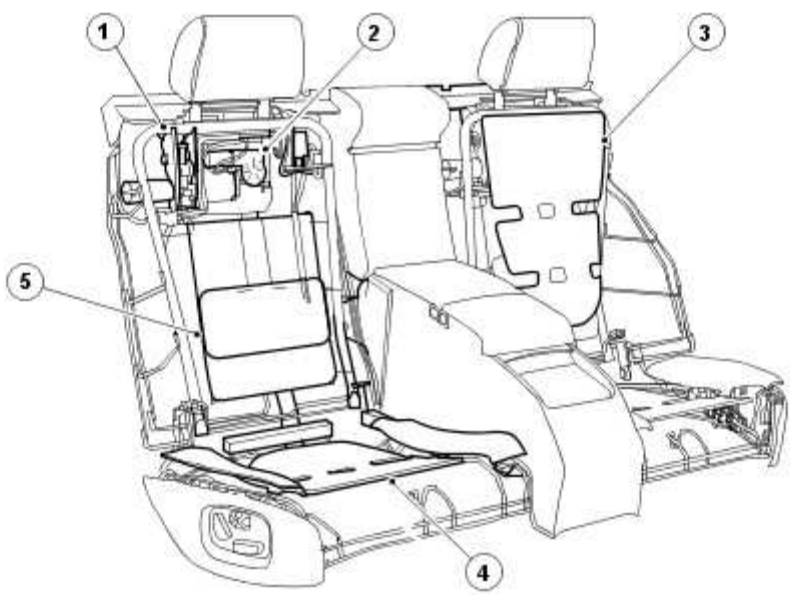
Depending on the vehicle specification the rear seats will be one of the following:

- Fixed bench style with an integral armrest.
- Electrically adjustable outer seat backrests with a bench style cushion and separate armrest.
- Electrically adjustable twin rear seats with a full floor console.

The standard rear seat is of a bench type with full width removable cushion and integral armrest.

The electrically adjustable outer seat backrests can be fitted with either a bench style cushion that incorporates both the rear seat control switches or single rear seat cushions that incorporate the rear seat control switch for the corresponding side.

Rear Seat Backrest Motors



E39537

Item	Part Number	Description
1		Rear seat recline motor
2		Rear seat head restraint motor

3		Rear outer seat backrest heater pad (incorporated into the rear outer seat backrest cushion)
4		Rear outer seat backrest heater pad (incorporated into the rear outer seat cushion)
5		Rear lumbar motor

The rear outer seat backrests are equipped with electric four way lumbar adjustment, rear seat head restraint adjustment, and rear outer seat backrest recline adjustment motors. The electrical functions can be utilized by operating the rear seat control switches and then rear outer seat backrest memory positions can be stored by the RSM (rear seat module) . The rear outer seat backrest/headrest can be programmed for up to three different seat memory configurations. The seat memory switch located within the rear door trim panel can be used to retrieve the programmed memory configurations.

LUMBAR MOTORS

The front and rear seats have a two or four way lumbar motor system depending on the specification of the vehicle. The system uses a single motor driven pump, which inflates or deflates air cells, as required, to provide upper and lower lumbar support. The lumbar motors are operated from the seat control switches. Depending on the direction the switch is operated in, one of four solenoids (for 4 way lumbar) or one solenoid (for two way lumbar) housed within the solenoid pack (integral component of the lumbar assembly) is connected to the pump, which provides lumbar support by adjusting the amount of air in the appropriate cell.

SEAT MEMORY FUNCTION

he memory control module can store up to three different driver seating, mirror and steering column positions. The three, numbered memory and single memory store switches control memory storage and recall operations. Each switch is a momentary action push switch.

Memory Recall

Memory recall has three memory positions stored for the seats, steering column and exterior mirrors. The switches for this function are located within driver's door trim panel. Pressing the appropriate numbered memory switch allows the seat to start moving to the position appropriate to that memory.

The following procedure will store a memory position:

- Ensure the ignition key is in
- Ensure reverse gear is not engaged
- Manually adjust the seat to the desired position, using the seat switches
- Press and release the 'memory store' switch
- Press and release the desired numbered memory switch within 5 seconds

A single chime will be emitted from the instrument cluster to indicate that the store operation has been successful.

When a memory recall is initiated, to limit the overall current consumption, only two-seat axis will move towards their intended position at any one time. To minimize current load as the motors start, the initiation of each axis is phased with a 100ms delay between each motor starting. Memory recall occurs only when the park brake is ON for manual vehicles or the gear position is in the PARK position for automatic vehicles.

Steering Column Memory

The memory control module controls the electric adjustable steering column in a rake (up and down) and reach (in and out). The steering column can be adjusted for rake and reach by operating the rotary joystick control switch on the LH side of the steering column.

To adjust the steering column:

- Turn the switch to the 'Column' or 'Auto' position
- Move the switch forwards or backwards to adjust the reach
- Move the switch up or down to adjust the rake.

Entry/Exit Mode

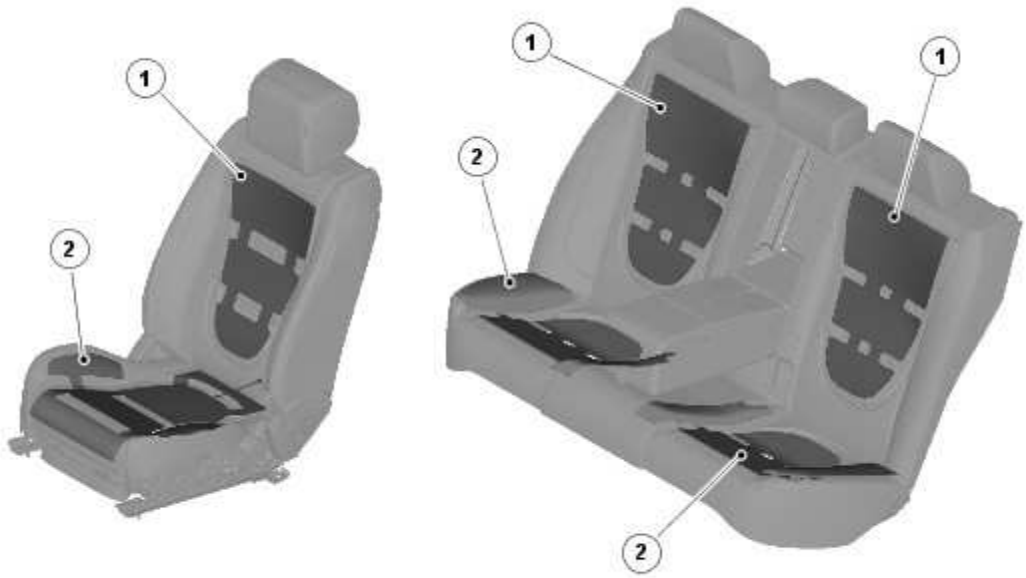
Entry/Exit mode provides automatic movement of the steering column and driver's seat to allow easier entry to or exit from the vehicle.

Entry/Exit mode is selected by setting the steering column adjustment switch to the 'AUTO' position.

NOTE:

If the adjustment switch is moved away from 'AUTO' whilst the steering column is tilted away, the steering column will move back to it's memorized position when the key is next inserted in the ignition. Entry/Exit mode will then be cancelled. If the adjustment switch is moved during entry/exit operation, steering column movement will stop.

HEATED SEATS



E93539

Item	Part Number	Description
1		Seat backrest heaters
2		Seat squab heater pads

The heated seat system is available on all the seats except the standard rear seat option.

The heated seat system comprises of:

- Heated seat switches
- Backrest heater pad
- Cushion heater pad and thermostat
- FEM (front electronic module)

The FEM (front electronic module) controls the seat heating function by providing the appropriate response depending on the status of the heated seat switches. The heated seat functionality is constantly monitored by the electronic load management system (ELMS). The ELMS dictates that in circumstances where the generated electrical power is less than the electrical consumption, selected systems may be inhibited or operated using reduced power for as long as is necessary.

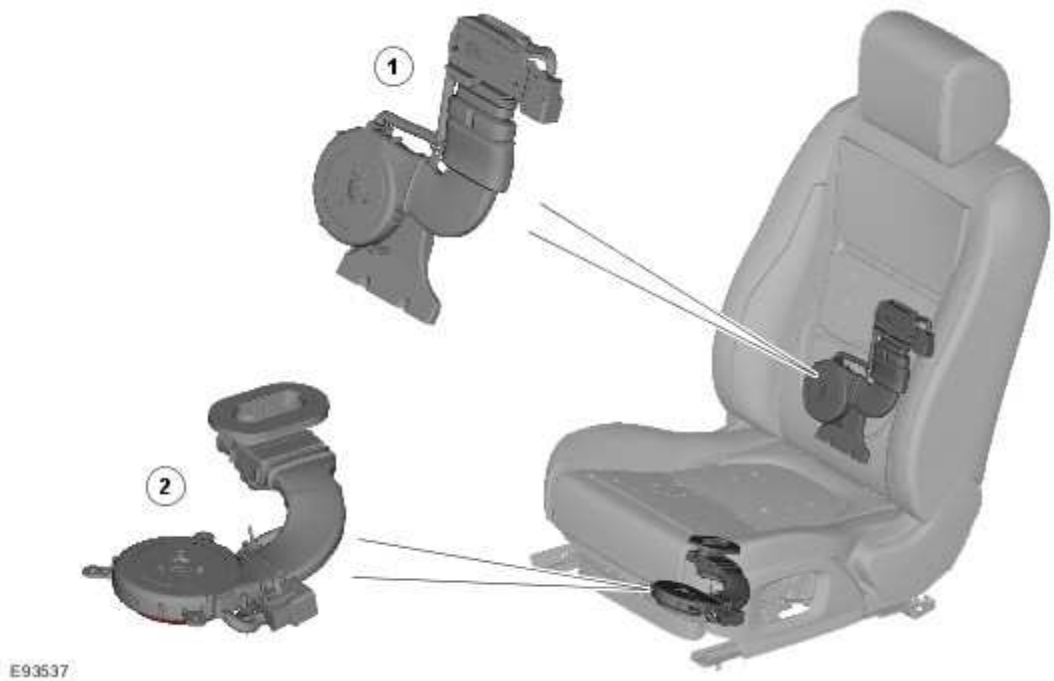
With the ignition in the `ON` position, pressing a heated seat switch will select the maximum heat setting for the chosen seat and is confirmed by three illuminated light emitting diodes (LED) next to the switch. A second press selects the intermediate heat setting and two LEDs are illuminated next to the switch. A third press selects the lowest heating setting, which is displayed by one LED illuminating and a fourth press will deactivate the heated seat.

If the heated seat function has been activated, it will continue to operate until one of the following conditions is met:

- A fixed period of time has expired (10 minutes)
- The function is deactivated by pressing the heated seat switch for a fourth time
- The ignition key is turned to the `ON` position
- A malfunction is detected by the FEM (front electronic module) .

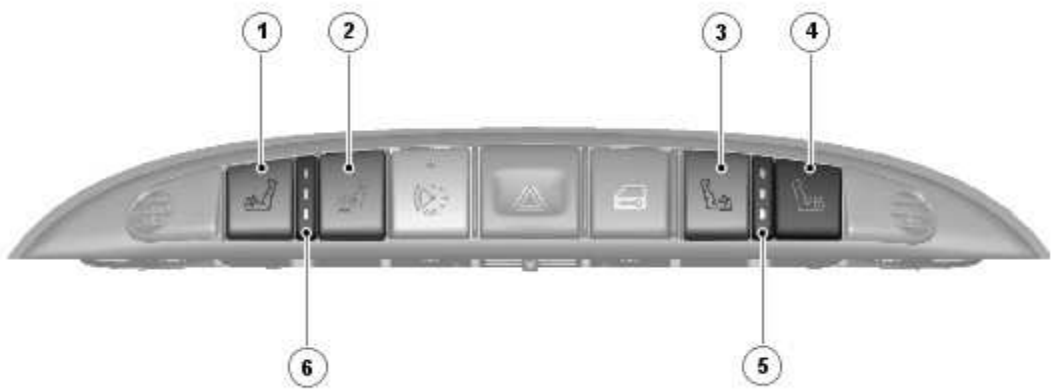
The heated seat function is designed to operate at temperatures below a predetermined limit and the operation may be inhibited by a heated garage, body heat or warm ambient temperatures.

CLIMATE SEATS



Item	Part Number	Description
1		Seat back climate unit
2		Seat squab climate unit

On vehicles fitted with climatic seats, cooling as well as heating can be delivered to the front seat occupants. Vehicles fitted with climatic seats feature 2 additional temperature switches located in the instrument panel switch pack, above the touch screen display (TSD) for operation of the front seats. The switches are momentary contact non latching switches that increase and decrease the temperature for the individual seats. The switches provide a PWM (pulse width modulation) signal to the control module.



E93538

Item	Part Number	Description
1		LH (left-hand) Seat cool button
2		LH (left-hand) Seat heat button
3		RH (right-hand) Seat cool button
4		RH (right-hand) Seat heat button
5		RH (right-hand) Temperature level indicator
6		LH (left-hand) Temperature level indicator

NOTE:

The seat heating and cooling buttons will operate as folows for each press; OFF MAXIMUM, MEDIUM, MINIMUM OFF.

NOTE:

The ATC (automatic temperature control) module does not control any aspect of climatic seat operation.

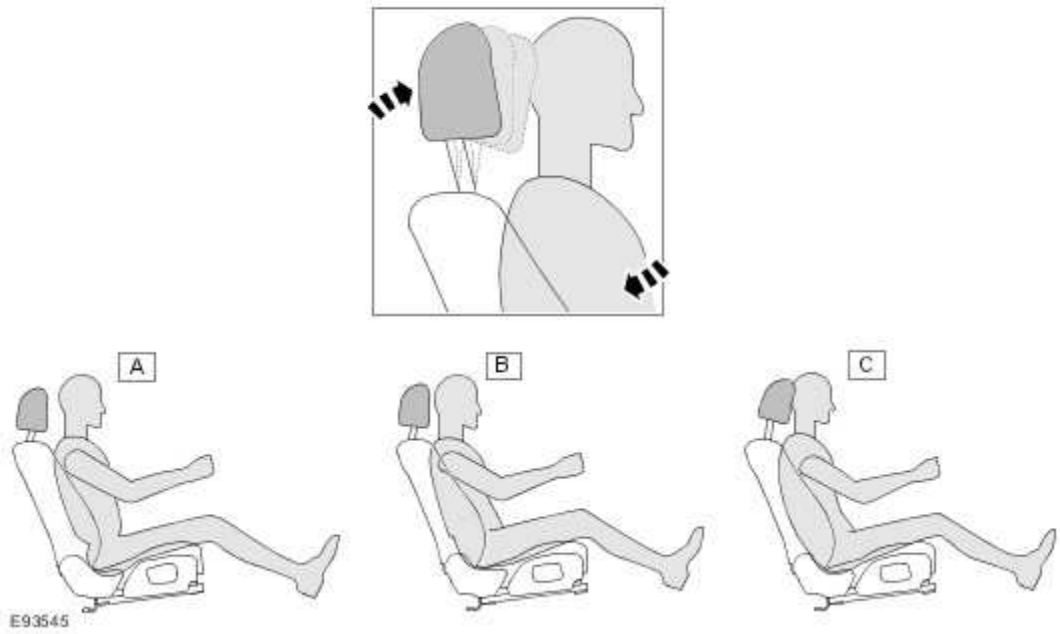
The controlling software for the climatic seats is contained within a control module mounted behind the instument panel.

Each climatic seat contains 2 climate units. Each unit contains a fan, which blows air over Peltier cells to distribute heating or cooling throughout the seat.

The climatic seat control module monitors seat heating through a NTC (negative temperature coefficient) temperature sensor located in the unit. The temperature sensor is only used to monitor seat heating. Seat cooling is open loop, with no temperature signal provided back to the control module.

Although the switch LED (light emitting diode) will illuminate if a selection is made when the ignition is switched on, the Peltier cells will not operate until the engine is running.

ACTIVE HEAD RESTRAINTS



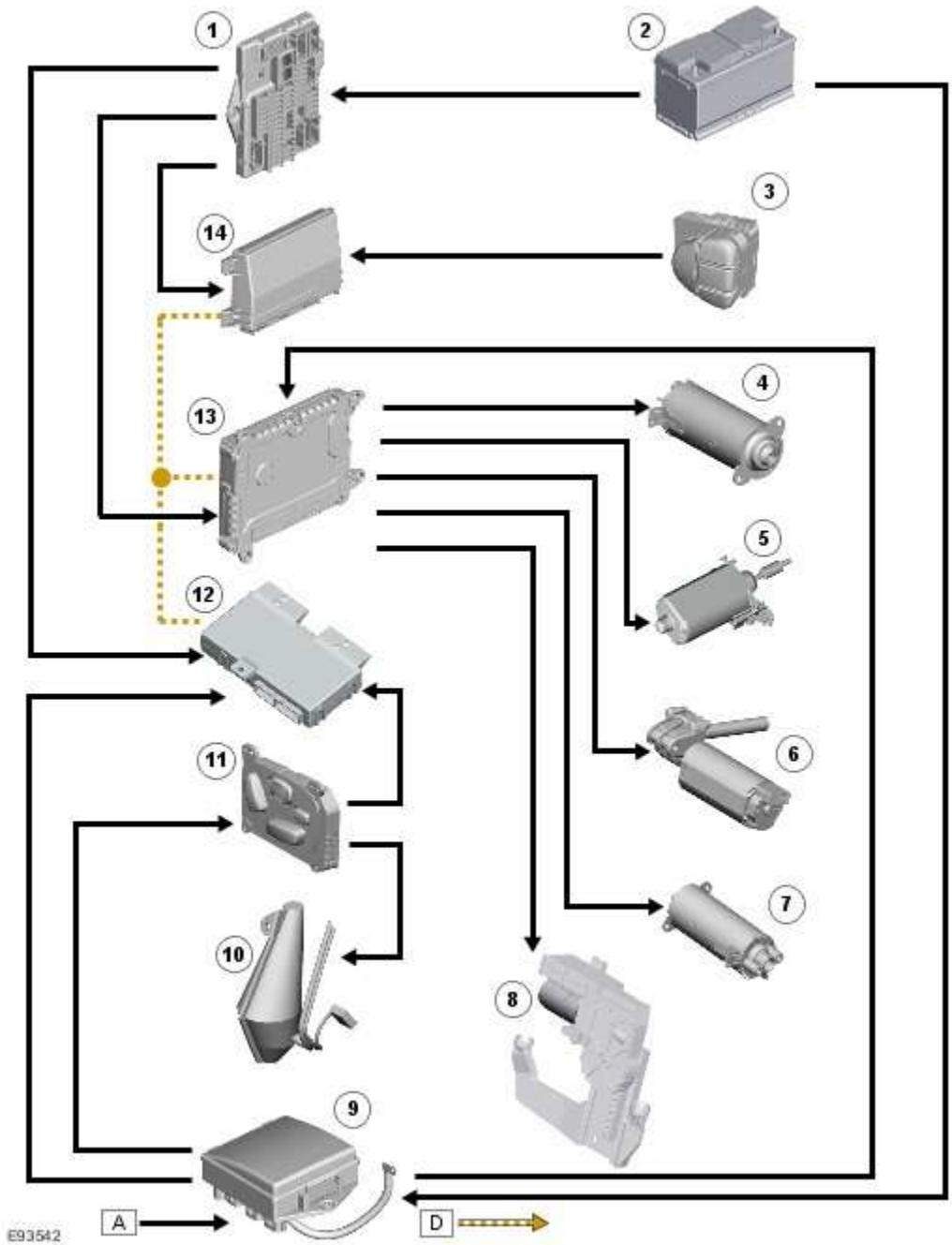
Item	Part Number	Description
A		Normal position.
B		Weight forced into seat head restraint moves forward.
C		Weight fully forced into seat head restraint fully forward.

Both front seats are fitted with mechanical active head restraints that reduce injuries to the spinal column and possible whiplash in the event of a rear collision. The 2 supports of the head restraints inside the seat backrest are attached to pressure plate in the seat back. In a collision from the rear, the occupant is pressed into the backrest, moving the pressure plate towards the rear. As the seat occupant’s back and body weight presses against the pressure plate the head restraint moves upwards and forwards mechanically by means of a pivot point. The movement of the headrest cushions the occupant’s head, altering the posture and reducing the relative motion between the body and the head. The head restraint then returns to it’s original position using a spring return mechanism. Precise activation of the system is determined by the force with which the occupant's back is pressed against the backrest, the magnitude of the collision, and the occupant's weight.

DRIVER MEMORY SEAT CONTROL DIAGRAM

NOTE:

A = Hardwired; **D** = High speed CAN bus



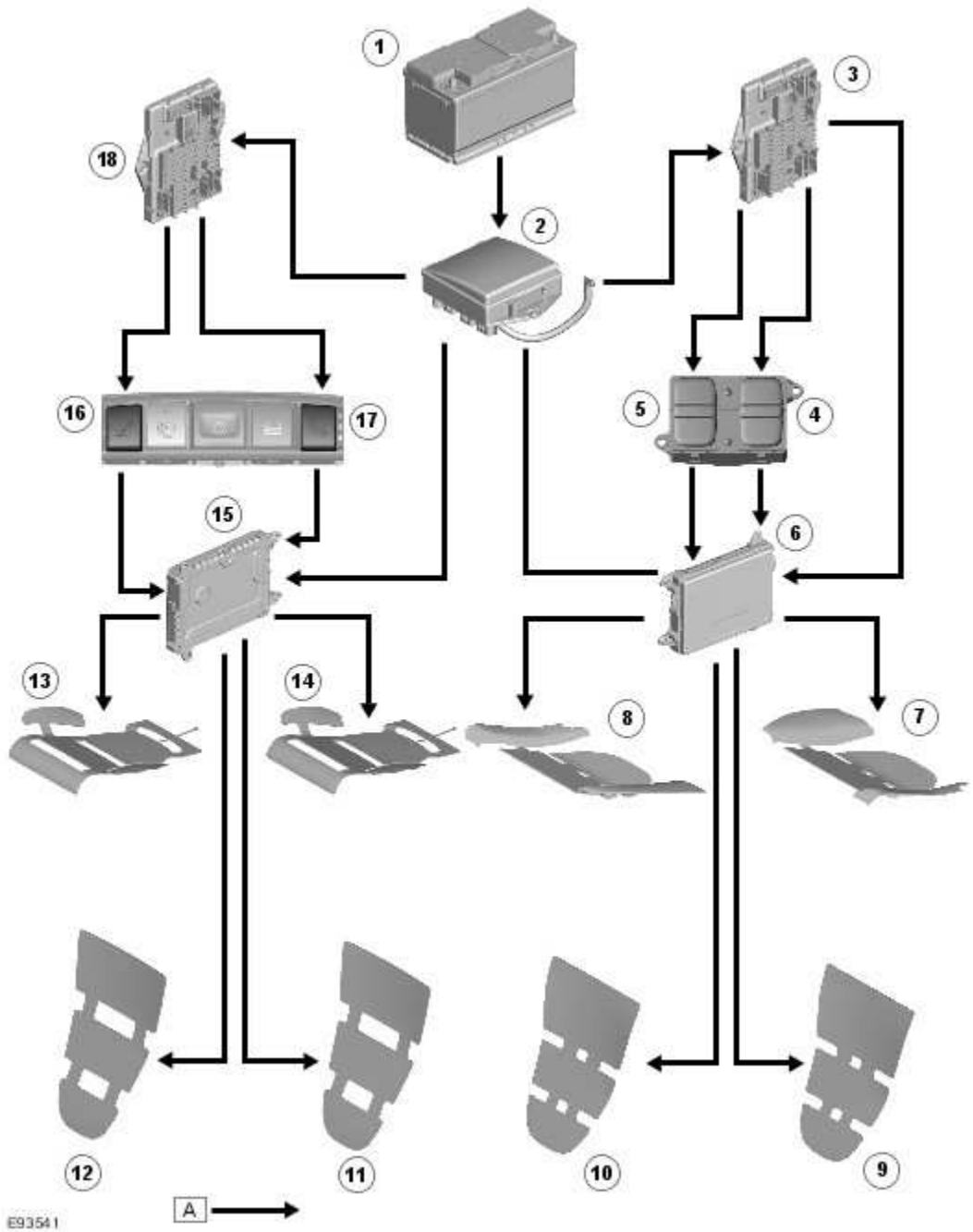
Item	Part Number	Description
1		CJB (central junction box)
2		Battery
3		Memory seat switches
4		Rear height motor
5		Front height motor
6		Squab recline motor
7		Seat fore/aft motor
8		Head restraint adjustment motor

9		RJB (rear junction box)
10		Lumbar pump motor
11		Drivers seat switch pack
12		Seat control module
13		Front electrical module
14		Driver door module

HEATED SEAT CONTROL DIAGRAM

NOTE:

A = Hardwired



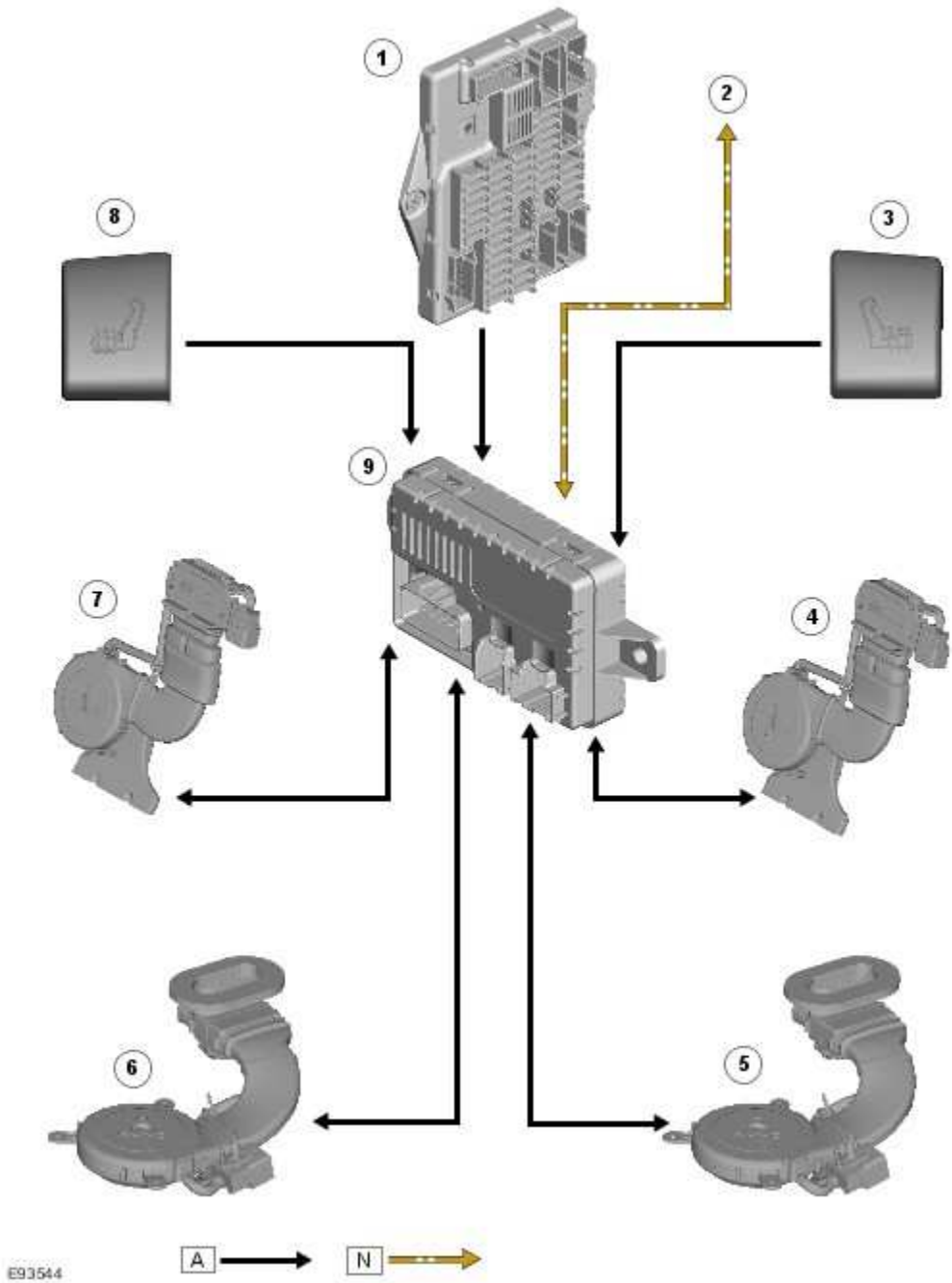
Item	Part Number	Description
1		Battery
2		RJB (rear junction box)
3		CJB (central junction box)
4		RH (right-hand) rear seat heater control switch
5		LH (left-hand) rear seat heater control switch
6		FEM (front electronic module)
7		RH (right-hand) rear seat heater
8		LH (left-hand) rear seat heater

9		RH (right-hand) rear seat back heater
10		LH (left-hand) rear seat back heater
11		RH (right-hand) front seat back heater
12		LH (left-hand) front seat back heater
13		LH (left-hand) front seat heater
14		RH (right-hand) front seat heater
15		REM (rear electronic module)
16		LH (left-hand) front seat heater control switch
17		RH (right-hand) front seat heater control switch
18		CJB (central junction box)

CLIMATE SEAT CONTROL DIAGRAM

NOTE:

A = Hardwired; **N** = Medium speed CAN bus



Item	Part Number	Description
1		CJB (central junction box)
2		Medium speed CAN (controller area network) to other vehicle systems
3		Front RH (right-hand) climate seat control switch
4		Front RH (right-hand) seat back climate unit
5		Front RH (right-hand) seat base climate unit
6		Front LH (left-hand) seat base climate unit
7		Front LH (left-hand) seat back climate unit
8		Front LH (left-hand) climate seat control switch

9		Climate seat control module

Seats - VIN Range: G00442->H18679

Principles of Operation

For a detailed description of the Seat Control System, refer to the relevant Description and Operation sections in the workshop manual.
Seats - VIN Range: G00442->H18679

Inspection and Verification

NOTE:

Prior to carrying out any diagnosis, ensure the vehicle battery is in a good serviceable condition, refer to the battery care manual.

1 . Verify the customer concern.

2 . Visually inspect for obvious signs of electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Seat Movement Mechanism • Seat Movement Motor • Center Console or Seat Control Switchpack	• Fuses/Relays • Damaged, Loose or Corroded Connector(s) • Damage to Wiring Loom/Incorrect Location, Stretched or Taught

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

2 . If the cause is not visually evident, verify the symptom and refer to the Symptom Chart below, alternatively, check for Diagnostic Trouble Codes (DTC) and refer to DTC Index.

Symptom Chart

Symptom	Possible Cause	Action
No driver seat movement from driver switch-pack (including no memory recall).	• Driver Seat Module has gone into sleep mode.	Switch ignition ON. Check seat functions from switch packs.
No driver seat axis or driver	• No power or ground	Check fuse. Check power/ground

lumbar movement from driver switch-pack.	to driver seat switch-pack.	circuits.
No driver seat axis or driver lumbar movement from driver switch-pack.	• No power or ground to driver seat module.	Check DSM power fuses and power/ground circuits, refer to circuit diagram.
No individual driver seat axis movement (headrest/rear height/squab/front height/cushion extend/slide/lumbar) from driver seat switch-pack.	• Switch-pack open circuit.	Check switch-pack wiring. Refer to circuit diagram.
No individual driver seat axis movement (headrest/rear height/squab/front height/cushion extend/slide/lumbar) from driver seat switch-pack.	• Switch-pack short circuit to power.	Check for DSM DTC B2147, fault PID A103 indicates affected axis.
No memory recall function however driver seat axis and driver seat lumbar functions correctly.	• DDM (Driver Door Module).	With ignition in RUN press memory set button (M button, the red LED should light up for 5 seconds), during this 5 second period if a 1, 2 or 3 button is pressed to save a memory position a chime should be heard and the LED extinguished. If this does not happen check the following, Check for DDM DTC B1529 Memory Set Switch Circuit Short To Power. Check for DDM DTC B1530 Memory Set Switch Circuit Short To Ground. Check for DDM DTC B2084 Memory Set Indicator Short To Ground for switch-pack connectivity issues. Check the SCP connections between the DDM and the Instrument cluster and Driver Seat Module.
No memory recall or memory save operations at all however driver seat axis and driver seat lumbar functions correctly.	• DDM power/ground connectivity issue.	Check DDM logic/power/ground circuits. Refer to circuit diagram.
No seat memory recall or save function however	• DSM SCP	Check SCP bus is connected to DSM. Refer to circuit diagram.

driver seat axis and driver seat lumbar functions correctly.	connectivity issue.	
No seat memory recall function however memory save function appears to be ok and driver seat axis and driver seat lumbar functions correctly.	• A seat axis has gone out of calibration.	Check for DSM DTC A309. Fault PID A106 will indicate affected axis. If DTC A309 is present the affected axis has gone out of calibration. Therefore run the Driver Seat recalibration routine via IDS. Note, always ignore DSM DTC 9940 and do not recalibrate when this DTC is detected.
Easy Entry Exit does not function at all.	• Easy Entry Exit not enabled via column adjust switch.	Turn the column adjust switch to Auto position to enable Easy Entry Exit.
Easy Entry Exit does not function on the Driver Seat, either on the Height axis or the Fore/Aft axis (or both). But it does function on the Steering column.	• Either the Driver Seat Fore/Aft axis or the Driver Seat Height axis has gone out of calibration.	Check for DSM DTC A309. Fault PID A106 will indicate affected axis. If DTC A309 is present the affected axis has gone out of calibration. Therefore run the Driver Seat recalibration routine via IDS. Note, always ignore DSM DTC 9940 and do not recalibrate when this DTC is detected.
A Driver Seat axis repeatedly goes out of calibration even after an IDS Driver Seat re-calibration. The affected axis can be identified from DTC A309 in conjunction with fault PID A106.	• Incorrect Driver Seat Module fitted to the X358 vehicle. X358 XJ vehicles are fitted with new Driver Seat which has longer axis lengths. Therefore correct Driver Seat Module needs to be fitted to these new seats.	Ensure that the following Driver Seat Modules are fitted to X358 XJ Driver X358 DSM part numbers 8 way DSM 8W9F-14C708-DH 10 way DSM 8W9F-14C708-AH 12 way DSM 8W9F-14C708-CH DSM part number (pre- X358) 8 way DSM 2W9F-13C789-DH 10 way DSM 2W9F-13C789-AH 12 way DSM 2W9F-13C789-CH Note to Service, the X358 DSMs listed above can be fitted to pre X358 XJ Memory Driver Seats (X350) and S Type Memory Driver Seats (2002.5MY onwards). These later DSMs are therefore backward compatible however older DSMs part numbers listed above (pre-X358) can not be fitted to the new X358 XJ memory Driver Seats.

No driver seat movement from driver switch-pack (including no memory recall).	• Driver Seat Module has gone into sleep mode.	Switch ignition ON. Check seat functions from switch packs.
No driver seat axis or driver lumbar movement from driver switch-pack.	• No power or ground to driver seat switch-pack.	Check Rear Power Distribution Board (RPBD) fuse F16. Check power/ground circuits.
No driver seat axis or driver lumbar movement from driver switch-pack.	• No power or ground to driver seat module.	Check DSM power fuses and power/ground circuits, refer to circuit diagram.
No individual driver seat axis movement (headrest/rear height/squab/front height/cushion extend/slide/lumbar) from driver seat switch-pack.	• Switch-pack open circuit.	Check switch-pack wiring. Refer to circuit diagram.
No individual driver seat axis movement (headrest/rear height/squab/front height/cushion extend/slide/lumbar) from driver seat switch-pack.	• Switch-pack short circuit to power.	Check for DSM DTC B2147, fault PID A103 indicates affected axis.
No memory recall function however driver seat axis and driver seat lumbar functions correctly.	• DDM (Driver Door Module).	With ignition in RUN press memory set button (M button, the red LED should light up for 5 seconds), during this 5 second period if a 1, 2 or 3 button is pressed to save a memory position a chime should be heard and the LED extinguished. If this does not happen check the following, Check for DDM DTC B1529 Memory Set Switch Circuit Short To Battery. Check for DDM DTC B1530 Memory Set Switch Circuit Short To Ground. Check for DDM DTC B2084 Memory Set Indicator Short To Ground for switch-pack connectivity issues. Check the SCP connections between the DDM and the Instrument cluster and Driver Seat Module.
No memory recall or memory save operations at	• DDM power/ground	Check DDM logic/power/ground circuits. Refer to circuit diagram.

all however driver seat axis and driver seat lumbar functions correctly.	connectivity issue.	
No seat memory recall or save function however driver seat axis and driver seat lumbar functions correctly.	• DSM SCP connectivity issue.	Check SCP bus is connected to DSM. Refer to circuit diagram.
No seat memory recall function however memory save function appears to be ok and driver seat axis and driver seat lumbar functions correctly.	• A seat axis has gone out of calibration.	Check for DSM DTC A309. Fault PID A106 will indicate affected axis. If DTC A309 is present the affected axis has gone out of calibration. Therefore run the Driver Seat recalibration routine via IDS. Note, always ignore DSM DTC 9940 and do not recalibrate when this DTC is detected.
Easy Entry Exit does not function at all.	• Easy Entry Exit not enabled via column adjust switch.	Turn the column adjust switch to Auto position to enable Easy Entry Exit.
Easy Entry Exit does not function on the Driver Seat, either on the Height axis or the Fore/Aft axis (or both). But it does function on the Steering column.	• Either the Driver Seat Fore/Aft axis or the Driver Seat Height axis has gone out of calibration.	Check for DSM DTC A309. Fault PID A106 will indicate affected axis. If DTC A309 is present the affected axis has gone out of calibration. Therefore run the Driver Seat recalibration routine via IDS. Note, always ignore DSM DTC 9940 and do not recalibrate when this DTC is detected.
A Driver Seat axis repeatedly goes out of calibration even after an IDS Driver Seat re-calibration. The affected axis can be identified from DTC A309 in conjunction with fault PID A106.	• Incorrect Driver Seat Module fitted to the X358 vehicle. X358 XJ vehicles are fitted with new Driver Seat which has longer axis lengths. Therefore correct Driver Seat Module needs to be fitted to these new seats.	Ensure that the following Driver Seat Modules are fitted to X358 XJ Driver X358 DSM part numbers 8 way DSM 8W9F-14C708-DH 10 way DSM 8W9F-14C708-AH 12 way DSM 8W9F-14C708-CH DSM part number (pre- X358) 8 way DSM 2W9F-13C789-DH 10 way DSM 2W9F-13C789-AH 12 way DSM 2W9F-13C789-CH Note to Service, the X358 DSMs listed above can be fitted to pre X358 XJ Memory Driver Seats (X350) and S Type Memory Driver Seats (2002.5MY onwards). These later DSMs are

		therefore backward compatible however older DSMs part numbers listed above (pre-X358) can not be fitted to the new X358 XJ memory Driver Seats.
Front seat fore/aft movement not functioning	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1034557p1.
Front seat excessive fore/aft free play	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1034557p2.
Front seat fore/aft movement noisy	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1034557p3.
Front seat height, tilt and/or seat extension motor movement not functioning	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1034557p4.
Front seat height, tilt and/or extension movement noisy	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1034557p5.

Rear Memory Module failure modes Symptom Chart

Symptom	Possible Cause	Action
No rear seat movement from rear seat switch-pack (including no memory recall).	• Rear Memory Module has gone into sleep mode.	Switch ignition ON. Check seat functions from switch packs. Ensure rear passenger lock out button (on driver window switch pack) is off.
No rear seat axis or rear lumbar movement from rear switch-pack.	• No power or ground to rear seat switch-pack.	Check fuse. Check power/ground circuits.
No individual rear seat axis movement (headrest/squab/lumbar) from rear seat switch-pack.	• Switch-pack open circuit.	Check switch-pack wiring. Refer to circuit diagram.
No individual rear seat axis movement (headrest/squab)	• Switch-pack short circuit to	Check for Rear Memory Control Module (REAR MEMORY

from rear seat switch-pack.	power.	CONTROL MODULE (RMM) DTC B2171/B2173, fault PIDs A104/A105 indicates affected axis.
No rear memory recall or rear memory save operations at all however rear seat axis or rear seat lumbar functions correctly.	• Rear memory switchpack connectivity issue.	Monitor REAR MEMORY CONTROL MODULE (RMM) fault PID A501whilst pressing the appropriate rear memory switches to confirm connectivity.
No rear seat memory recall or save function.	• REAR MEMORY CONTROL MODULE (RMM) SCP connectivity issue.	Check SCP bus is connected to REAR MEMORY CONTROL MODULE (RMM). Refer to circuit diagram.
No rear seat memory recall function however memory save function appears to be ok and rear seat axis and rear seat lumbar functions correctly.	• A seat axis has gone out of calibration.	Check for REAR MEMORY CONTROL MODULE (RMM) DTC A309. Fault PID A106 will indicate affected axis. If DTC A309 is present the affected axis has gone out of calibration. Therefore run the Rear Seat recalibration routine via IDS. Note, always ignore REAR MEMORY CONTROL MODULE (RMM) DTC 9940 and do not recalibrate when this DTC is detected.

DTC Index

Drivers Seat/Rear Memory Control Module

CAUTION: When probing connectors to take measurements in the course of the pinpoint tests, use the adaptor kit, part number 3548-1358-00

NOTE:

If the control module/component is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual (section B1.2), or determine if any prior approval program is in operation, prior to the installation of a new module/component.

NOTE:

When performing voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places and with a current calibration certificate. When testing

resistance, always take the resistance of the DMM leads into account.

NOTE:

Check and rectify basic faults before beginning diagnostic routines that involve pinpoint tests.

NOTE:

Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.

NOTE:

If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.

DTC	Description	Possible Causes	Action
B1940	Seat Memory Position Out Of Range	• Seat movement motor has moved beyond expected limit	Ignore this DTC. Do not perform any action if this DTC is flagged. If this DTC is flagged within the DSM then no action is required within the DSM (Driver Seat Module). If this DTC is flagged within the Rear Memory Control Module (REAR MEMORY CONTROL MODULE (REAR MEMORY CONTROL MODULE (RMM) then no action is required the REAR MEMORY CONTROL MODULE (REAR MEMORY CONTROL MODULE (RMM).
B2147	Driver Seat Switch Fault	• Drivers seat module, driver seat switch - input short circuit to power or switch contact closed when opposite switch becomes closed	Refer to electrical circuit diagrams, notes and check driver seat switch and circuit for fault
B2171	LH Rear Seat Switch Fault	• Rear memory module, left rear seat switch - input short circuit to power or switch contact closed when opposite switch becomes closed	Refer to electrical circuit diagrams, notes and check left rear seat switch and circuit for fault
B2173	RH Rear Seat Switch Fault	• Rear memory module, right rear seat switch - input short circuit to	Refer to electrical circuit diagrams, notes and check right rear seat switch and circuit for fault

		power or switch contact closed when opposite switch becomes closed	
B2207	ECU ROM Checksum Error	• Program or EEPROM memory is corrupted	Suspect the drivers seat module if this DTC occurs within DSM or Rear Memory Module if this DTC occurs within REAR MEMORY CONTROL MODULE (REAR MEMORY CONTROL MODULE (RMM), check and install a new module as required, refer to the new module installation note at the top of the DTC Index
B2309	Seat Motor Out Of Range	• Drivers seat module or rear memory module, seat axis has moved beyond expected limits - too many hall pulses between end stops	Check seat movement for correct operation (DSM for driver seat movement, REAR MEMORY CONTROL MODULE (REAR MEMORY CONTROL MODULE (RMM) for Rear seat movement) if no mechanical cause is found. Refer to electrical circuit diagrams, notes and check seat position sensor circuit for fault. Recalibrate affected seats memory positions using the manufacturer approved process

Pinpoint Tests

PINPOINT TEST G1034557p1 : Front seat fore/aft movement not functioning

G1034557t1 : Check for front seat forward-rearward seat motor operation

1.

WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.

Set ignition status to ' ON'. 2. From the switch pack, operate the front seat forward-rearward seat motor switch and listen for evidence of the motor operating.

- **Does the motor operate?**

-> Yes
GO to Pinpoint Test G1034557t2.

-> No
GO to Pinpoint Test G1034557t3.

G1034557t2 : Check front seat forward-rearward seat motor drive bar

1. Check front seat drive bar for correct installation and condition

- **Is the front seat drive bar correctly installed and in a serviceable condition?**

-> Yes
Re-check for correct front seat forward-rearward movement. Remove seat to allow for further investigation if required.

-> No
Correctly install front seat forward-rearward seat motor drive bar, or replace if required.

G1034557t3 : Check front seat forward-rearward seat motor

1. Set ignition status to 'OFF'. 2. Disconnect front seat forward-rearward seat motor connector. 3. **NOTE:**

> It may be that the seat has been driven to the limit of travel along the relevant axis, and when the link harness is connected, the seat will remain in the same position. If this is the case, a jolt may be felt from the motor. To confirm the motor operation, swap the link harness to alternate motor pin connections and the seat should travel in the opposite direction.

Using a locally made fused link harness and power supply, connect power and ground to forward-rearward seat motor.

Battery positive terminal	Battery negative terminal
forward-rearward seat motor pin 1	forward-rearward seat motor pin 2

- **Does the motor operate?**

-> Yes
Using manufacturer approved diagnostic system, check for related Diagnostic Trouble Codes (DTCs) and carry out the repair operations specified. Alternatively, refer to the electrical circuit diagrams and check front seat forward-rearward seat motor circuits.

-> No
Replace front seat forward-rearward seat motor. Refer to relevant section of workshop manual.

PINPOINT TEST G1034557p2 : Front seat excessive forward-rearward free play

G1034557t4 : Check front seat for excessive forward-rearward free play

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Check all accessible front seat frame fixings are installed and to the correct torque.

- **Are all accessible front seat frame fixings installed and to the correct torque?**

-> Yes
GO to Pinpoint Test G1034557t5.

-> No
Install and tighten all accessible front seat frame fixings to correct torque and re-check for excessive free play.

G1034557t5 : Compare the front seat forward-rearward free play against a similar seat

1. Compare the front seat forward-rearward free play against a similar seat.

- **Is the front seat forward-rearward free play excessive when compared to a similar seat?**

-> Yes
GO to Pinpoint Test G1034557t6.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1034557t6 : Check remaining front seat frame fixings

1. Remove front seat and/or any seat covers/trim to allow access to check remaining front seat frame fixings are all installed and to the correct torque.

- **Are all remaining front seat frame fixings installed and to the correct torque?**

-> Yes
Replace front seat frame. Refer to the relevant section of the workshop manual.

-> No
Install and tighten all remaining front seat frame fixings to correct torque and re-check for excessive free play.

PINPOINT TEST G1034557p3 : Front seat forward-rearward movement noisy

G1034557t7 : Compare front seat forward-rearward movement noise to other front seat

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Compare the front seat forward-rearward movement noise to other front seat.

- **Is the front seat forward-rearward movement noise excessive when compared to other front seat?**

-> Yes
GO to Pinpoint Test G1034557t8.

-> No
GO to Pinpoint Test G1034557t9.

G1034557t8 : Compare front seat forward-rearward movement noise to front seat in other vehicle

1. Compare the front seat forward-rearward movement noise to front seat in other vehicle.

- **Is the front seat forward-rearward movement noise excessive when compared to front seat in other vehicle?**

-> Yes
GO to Pinpoint Test G1034557t9.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1034557t9 : Check for debris obstructing seat movement

1. Check for debris obstructing seat movement.

- **Is the front seat forward-rearward movement obstructed by debris?**

-> Yes
Remove obstruction and re-check for noisy forward-rearward seat movement.

-> No
GO to Pinpoint Test G1034557t10.

G1034557t10 : Re-align front seat frame

1. Loosen front seat frame fixings. 2. Set ignition status to 'ON'. 3. Using the front seat switch pack drive the front seat fully forward then fully rearward. 4. Tighten front seat frame fixings to the correct torque. 5. Re-check for noisy seat movement.

- **Is the front seat forward-rearward movement still noisy?**

-> Yes
GO to Pinpoint Test G1034557t11.

-> No
The front seat frame is now operating correctly.

G1034557t11 : Check front seat forward-rearward seat motor drive bar

1. Check front seat drive bar for correct installation and condition.

- **Is the front seat drive bar correctly installed and in a serviceable condition?**

-> Yes
Replace front seat forward-rearward seat motor. Refer to relevant section of workshop

manual.

-> No
Correctly install front seat forward-rearward seat motor drive bar, or replace if required.

PINPOINT TEST G1034557p4 : Front seat height, tilt and/or seat extension motor movement not functioning

G1034557t12 : Check front seat height, tilt or extension motor

1. Set ignition status to ' OFF'. 2. Disconnect front seat height, tilt or extension motor connector. 3. **NOTE:**

> It may be that the seat has been driven to the limit of travel along the relevant axis, and when the link harness is connected, the seat will remain in the same position. If this is the case, a jolt may be felt from the motor. To confirm the motor operation, swap the link harness to alternate motor pin connections and the seat should travel in the opposite direction.

Using a locally made fused link harness and power supply, connect power and ground to relevant motor.

Battery positive terminal	Battery negative terminal
motor pin 1	motor pin 2

- **Does the motor operate?**

-> Yes
Using manufacturer approved diagnostic system, check for related Diagnostic Trouble Codes (DTCs) and carry out the repair operations specified. Alternatively, refer to the electrical circuit diagrams and check relevant motor circuits.

-> No
Replace the relevant motor. Refer to relevant section of workshop manual.

PINPOINT TEST G1034557p5 : Front seat height, tilt and/or extension movement noisy

G1034557t13 : Compare the height, tilt or extension movement noise with the other front seat

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Compare the front seat movement noise to other front seat.

- **Is the front seat height, tilt or extension movement noise excessive when compared to other front seat?**

-> Yes
GO to Pinpoint Test G1034557t14.

-> No
GO to Pinpoint Test G1034557t15.

G1034557t14 : Compare front seat height, tilt or extension movement noise to front seat in other vehicle

1. Compare the front seat height, tilt or extension movement noise to front seat in other vehicle.

- **Is the front seat height, tilt or extension movement noise excessive when compared to front seat in other vehicle?**

-> Yes
GO to Pinpoint Test G1034557t15.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1034557t15 : Check for debris obstructing seat movement

1. Check for debris obstructing seat movement.

- **Is the front seat height, tilt or extension movement obstructed by debris?**

-> Yes
Remove obstruction and re-check for noisy height, tilt or extension seat movement. If still noisy GO to Pinpoint Test G1034557t16.

-> No
GO to Pinpoint Test G1034557t16.

G1034557t16 : Check for height, tilt or extension movement mechanism lubrication

1. Check and apply manufacturer approved lubrication to seat height, tilt or extension movement mechanism and re-test for noise.

- **Is the front seat height, tilt or extension noise still apparent?**

-> Yes
Replace the relevant motor. Refer to relevant section of workshop manual.

-> No
The front seat height, tilt or extension motor is operating correctly.

Seats - VIN Range: H18680->H99999

Principles of Operation

For a detailed description of the Climate Seat Control System, refer to the relevant Description and Operation sections in the workshop manual.
Seats - VIN Range: H18680->H99999

Inspection and Verification

NOTE:

Prior to carrying out any diagnosis, ensure the vehicle battery is in a good serviceable condition, refer to the battery care manual.

1 . Verify the customer concern.

2 . Visually inspect for obvious signs of electrical damage.

Visual Inspection Chart

Electrical
• Fuses/Relays • Damaged, Loose or Corroded Connector(s) • Damage to Wiring Loom/Incorrect Location, Stretched or Taught

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

2 . If the cause is not visually evident, verify the symptom and refer to the Symptom Chart below, alternatively check for Diagnostic Trouble Codes (DTCs) and refer to the DTC Index.

Symptom Chart

Symptom	Possible Cause	Action
Front seat fore/aft movement not functioning	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p1.
Front seat excessive fore/aft free play	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p2.
Front seat fore/aft movement noisy	• Carry out the pinpoint test	GO to Pinpoint Test

	associated to this Symptom	G1014305p3.
Front seat height, tilt and/or seat extension motor movement not functioning	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p4.
Front seat height, tilt and/or extension movement noisy	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p5.
Heating And Cooling - Inoperative	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p6.
Heating And Cooling - Noisy Operation	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p7.
Heating And Cooling - Poor Heat Or Cool Efficiency	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p8.
Heating And Cooling - Heat Or Cool Operation Slow	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p9.
Heating And Cooling - Intermittent Operation	• Carry out the pinpoint test associated to this Symptom	GO to Pinpoint Test G1014305p10.

DTC Index

Climate Seat Control Module

CAUTION: When probing connectors to take measurements in the course of the pinpoint tests, use the adaptor kit, part number 3548-1358-00

NOTE:

If the control module/component is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual (section B1.2), or determine if any prior approval program is in operation, prior to the installation of a new module/component.

NOTE:

When performing voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places and with a current calibration certificate. When testing resistance, always take the resistance of the DMM leads into account.

NOTE:

Check and rectify basic faults before beginning diagnostic routines that involve pinpoint tests.

NOTE:

Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.

NOTE:

If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.

DTC	Description	Possible cause	Action
B10B913	Blower control	• The drivers seat cushion heater and blower assembly circuit open circuit. • The drivers seat backrest heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the drivers seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B10B94B	Blower control	• The drivers seat cushion heater and blower assembly circuit short circuit to ground. • The drivers seat backrest heater and blower assembly circuit short circuit to ground. • Mechanical restriction in the heater and	Check the drivers seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the

		blower assembly housing. • Climate controlled seat module (CCS) failure.	ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114B13	Passenger thermal electric device control	• The passenger seat cushion heater and blower assembly circuit open. • The passenger seat backrest heater and blower assembly circuit open circuit. • Passenger seat heater and blower assembly failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114B19	Passenger thermal electric device control	• The passenger seat cushion heater and blower assembly circuit short circuit to ground. • The passenger seat backrest heater and blower assembly short circuit to ground. • Passenger seat heater and blower assembly failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114B4B	Passenger thermal electric device control	• Passenger seat cushion heater and blower assembly circuit short circuit to ground. • The passenger seat backrest heater and blower assembly short circuit to ground.	Check the passenger seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation.

		• Passenger seat heater and blower assembly failure. • Climate controlled seat module (CCS) failure. • Possible restricted duct.	Check the passenger seat and make sure nothing is restricting the seat heater and blower assembly blower duct Rectify as necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114C13	Driver thermal electric device control	• The drivers seat cushion heater and blower assembly circuit open circuit. • The drivers seat backrest heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the drivers seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114C19	Driver thermal electric device control	• The drivers seat cushion heater and blower assembly circuit short circuit to ground. • The drivers seat backrest heater and blower assembly circuit short circuit to ground. • Mechanical restriction in the heater and blower assembly housing. • Climate controlled seat	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the drivers seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the

		module (CCS) failure.	ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114C4B	Driver thermal electric device control	• The drivers seat cushion heater and blower assembly circuit short circuit to ground. • The drivers seat backrest heater and blower assembly circuit short circuit to ground. • Mechanical restriction in the heater and blower assembly housing. • Possible restricted duct. • Climate controlled seat module (CCS) failure.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the drivers seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the driver seat cushion and backrest, make sure nothing is restricting the seat heater and blower assembly blower duct. Rectify as necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114D11	Passenger seat cushion blower speed sensor	• The passenger seat cushion seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module

			is suspect.
B114D12	Passenger seat cushion blower speed sensor	• The passenger seat cushion seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114E11	Passenger seat back blower speed sensor	• The passenger seat backrest seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114E12	Passenger seat back blower speed sensor	• The passenger seat backrest seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the passenger seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the

			warranty policy and procedures manual if a module is suspect.
B114F11	Driver seat cushion blower speed sensor	• The driver seat cushion seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the driver seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B114F12	Driver seat cushion blower speed sensor	• The driver seat cushion seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the driver seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B115011	Driver seat back blower speed sensor	• The driver seat backrest seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the driver seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If

			the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B115012	Driver seat back blower speed sensor	• The driver seat backrest seat heater and blower assembly circuit short circuit to ground. • Internal motor failure. • Climate controlled seat module (CCS) failure.	Check the driver seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B115113	Passenger seat cushion	• Passenger seat cushion temperature sensor - circuit open	Refer to electrical circuit diagrams, notes and check passenger seat cushion temperature sensor for circuit open
B115198	Passenger seat cushion	• Passenger seat cushion over temperature fault. • Possible restricted duct.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the passenger seat cushion, make sure nothing is restricting the seat heater and blower assembly blower duct. Rectify as necessary. Clear the DTCs and test for normal operation.
B115213	Passenger seat back	• Passenger seat back temperature sensor - circuit open	Refer to electrical circuit diagrams, notes and check passenger seat back temperature sensor for circuit open
B115298	Passenger seat back	• Passenger seat back over temperature fault. • Possible restricted duct.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the passenger seat

			backrest, make sure nothing is restricting the seat heater and blower assembly blower duct. Rectify as necessary. Clear the DTCs and test for normal operation.
B115313	Driver seat cushion	• Driver seat cushion temperature sensor - circuit open	Refer to electrical circuit diagrams, notes and check driver seat cushion temperature sensor for circuit open
B115398	Driver seat cushion	• Driver seat cushion over temperature fault. • Possible restricted duct.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the driver seat cushion, make sure nothing is restricting the seat heater and blower assembly blower duct. Rectify as necessary. Clear the DTCs and test for normal operation.
B115413	Driver seat back	• Driver seat back temperature sensor - circuit open	Refer to electrical circuit diagrams, notes and check driver seat back temperature sensor for circuit open
B115498	Driver seat back	• Driver seat back over temperature fault. • Possible restricted duct.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the driver seat backrest, make sure nothing is restricting the seat heater and blower assembly blower duct. Rectify as necessary. Clear the DTCs and test for normal operation.
B11557A	Passenger seat	• Possible restricted blower duct on the passenger cushion heater and blower assembly. • Possible restricted blower duct on the passenger backrest heater and blower assembly. • Possible blower duct	Check the passenger side front seat and make sure the blower duct is not adrift from the heater and blower assembly. Make sure nothing is restricting the seat heater and blower assembly blower duct check the exhaust outlet of each heater and blower assembly. Rectify as necessary. Clear the DTCs and

		adrift.	test for normal operation.
B11567A	Driver seat	• Possible restricted blower duct on the driver cushion heater and blower assembly. • Possible restricted blower duct on the driver backrest heater and blower assembly. • Possible blower duct adrift.	Check the driver side front seat and make sure the blower duct is not adrift from the heater and blower assembly. Make sure nothing is restricting the seat heater and blower assembly blower duct check the exhaust outlet of each heater and blower assembly. Rectify as necessary. Clear the DTCs and test for normal operation.
B115713	Blower control B	• The passenger seat cushion heater and blower assembly circuit open circuit. • The passenger seat backrest heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the passenger seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B11574B	Blower control B	• The passenger seat cushion heater and blower assembly circuit short circuit to ground. • The passenger seat backrest heater and blower assembly circuit short circuit to ground. • Mechanical restriction in the heater and blower assembly housing. • Climate controlled seat module (CCS) failure.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the passenger seat heater and blower assembly for the cushion and backrest circuit. Refer to the electrical guides. Install a new heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If

			the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B120813	Driver seat cushion temperature sensor	• The driver seat cushion heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the drivers seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new drivers seat heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B120913	Driver seat back temperature sensor	• The driver seat backrest heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the drivers seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new drivers seat heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B120A13	Passenger seat cushion temperature sensor	• Passenger seat cushion seat heater and blower assembly circuit open circuit. • Climate controlled seat module (CCS) failure.	Check the passenger seat cushion heater and blower assembly circuit. Refer to the electrical guides. Install a new passenger seat heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical

			guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
B120B13	Passenger seat back temperature sensor	• Passenger seat backrest front seat heater and blower assembly circuit open circuit. • Passenger seat backrest over temperature fault. • Climate controlled seat module (CCS) failure.	Check the passenger seat backrest heater and blower assembly circuit. Refer to the electrical guides. Install a new front seat heater and blower assembly if necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
U000188	High speed controller area network (CAN) communication bus	• CAN signal fault. • Climate controlled seat module (CCS) failure.	Check the CAN circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation. Check the CCS ground supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
U014000	Lost Communication With Body Control Module	• CAN Bus circuit fault - body control module (Front Smart Junction Box)	Check other modules for stored DTC's. Refer to electrical circuit diagrams, notes and check CAN Bus circuit to body control module (Front Smart Junction Box) for fault.
U014200	Lost Communication With Body Control Module "B"	• CAN Bus circuit fault - body control module (B) (Rear Smart	Check other modules for stored DTC's. Refer to electrical circuit diagrams, notes and check CAN Bus

		Junction Box)	circuit to body control module (B) (Rear Smart Junction Box) for fault.
U015500	Lost Communication With Instrument Panel Cluster (IPC) Control Module	• CAN Bus circuit fault - instrument panel cluster	Check other modules for stored DTC's. Refer to electrical circuit diagrams, notes and check CAN Bus circuit to instrument panel cluster for fault.
U015600	Lost Communication With Information Centre "A"	• CAN Bus circuit fault - Information Centre (Infotainment Control Module)	Check other modules for stored DTC's. Refer to electrical circuit diagrams, notes and check CAN Bus circuit to information centre "A" (Infotainment Control Module) for fault.
U030000	Internal Control Module Software Incompatibility	• Configuration fault	The module can be configured using the new module procedure.
U040100	Invalid Data Received From ECM/PCM	• CAN Bus circuit fault - engine control module	Check other modules for stored DTC's. Refer to electrical circuit diagrams, notes and check CAN Bus circuit to engine control module for fault.
U210100	Control module configuration incompatible	• Module not Configured. • Incorrect module fitted.	Check the control module power supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
U210538	Switch pack signal A	• Possible open circuit. • Short circuit to power. • Pulse width modulated (PWM) signal from switchpack to climate controlled seat module (CCSM) is potentially corrupt.	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Check the driver PWM signals and circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation.
U210638	Switch pack signal B	• Possible open circuit. • Short circuit to power. • Pulse width modulated (PWM) signal from	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system.

		switchpack to climate controlled seat module (CCSM) is potentially corrupt.	Check the passenger PWM signals and circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation.
U300004	Control module	• Climate controlled seat module (CCSM) failure.	Check the control module power supply and relay circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTC. Cycle the ignition and retest. If the DTC resets suspect the control module. Refer to the warranty policy and procedures manual if a module is suspect.
U300362	Battery Voltage	• Climate controlled seat module power supply circuit fault	Refer to electrical circuit diagrams, notes and check climate controlled seat module power and ground circuit for fault.

Pinpoint Tests

PINPOINT TEST G1014305p1 : Front seat fore/aft movement not functioning

G1014305t1 : Check for front seat forward-rearward seat motor operation

1.

WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.

Set ignition status to ' ON'. 2. From the switch pack, operate the front seat forward-rearward seat motor switch and listen for evidence of the motor operating.

- **Does the motor operate?**

-> Yes
GO to Pinpoint Test G1014305t2.

-> No
GO to Pinpoint Test G1014305t3.

G1014305t2 : Check front seat forward-rearward seat motor drive bar

1. Check front seat drive bar for correct installation and condition

- **Is the front seat drive bar correctly installed and in a serviceable condition?**

-> Yes
Re-check for correct front seat forward-rearward movement. Remove seat to allow for further investigation if required.

-> No
Correctly install front seat forward-rearward seat motor drive bar, or replace if required.

G1014305t3 : Check front seat forward-rearward seat motor

1. Set ignition status to 'OFF'. 2. Disconnect front seat forward-rearward seat motor connector. 3. **NOTE:**

> It may be that the seat has been driven to the limit of travel along the relevant axis, and when the link harness is connected, the seat will remain in the same position. If this is the case, a jolt may be felt from the motor. To confirm the motor operation, swap the link harness to alternate motor pin connections and the seat should travel in the opposite direction.

Using a locally made fused link harness and power supply, connect power and ground to forward-rearward seat motor.

Battery positive terminal	Battery negative terminal
forward-rearward seat motor pin 1	forward-rearward seat motor pin 2

- **Does the motor operate?**

-> Yes
Using manufacturer approved diagnostic system, check for related Diagnostic Trouble Codes (DTCs) and carry out the repair operations specified. Alternatively, refer to the electrical circuit diagrams and check front seat forward-rearward seat motor circuits.

-> No
Replace front seat forward-rearward seat motor. Refer to relevant section of workshop manual.

PINPOINT TEST G1014305p2 : Front seat excessive forward-rearward free play

G1014305t4 : Check front seat for excessive forward-rearward free play

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Check all accessible front seat frame fixings are installed and to the correct torque.

- **Are all accessible front seat frame fixings installed and to the correct torque?**

-> Yes
GO to Pinpoint Test G1014305t5.

-> No
Install and tighten all accessible front seat frame fixings to correct torque and re-check for excessive free play.

G1014305t5 : Compare the front seat forward-rearward free play against a similar seat

1. Compare the front seat forward-rearward free play against a similar seat.

- **Is the front seat forward-rearward free play excessive when compared to a similar seat?**

-> Yes
GO to Pinpoint Test G1014305t6.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1014305t6 : Check remaining front seat frame fixings

1. Remove front seat and/or any seat covers/trim to allow access to check remaining front seat frame fixings are all installed and to the correct torque.

- **Are all remaining front seat frame fixings installed and to the correct torque?**

-> Yes
Replace front seat frame. Refer to the relevant section of the workshop manual.

-> No
Install and tighten all remaining front seat frame fixings to correct torque and re-check for excessive free play.

PINPOINT TEST G1014305p3 : Front seat forward-rearward movement noisy

G1014305t7 : Compare front seat forward-rearward movement noise to other front seat

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Compare the front seat forward-rearward movement noise to other front seat.

- **Is the front seat forward-rearward movement noise excessive when compared to other front seat?**

-> Yes
GO to Pinpoint Test G1014305t8.

-> No
GO to Pinpoint Test G1014305t9.

G1014305t8 : Compare front seat forward-rearward movement noise to front seat in other vehicle

1. Compare the front seat forward-rearward movement noise to front seat in other vehicle.

- **Is the front seat forward-rearward movement noise excessive when compared to front seat in other vehicle?**

-> Yes
GO to Pinpoint Test G1014305t9.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1014305t9 : Check for debris obstructing seat movement

1. Check for debris obstructing seat movement.

- **Is the front seat forward-rearward movement obstructed by debris?**

-> Yes
Remove obstruction and re-check for noisy forward-rearward seat movement.

-> No
GO to Pinpoint Test G1014305t10.

G1014305t10 : Re-align front seat frame

1. Loosen front seat frame fixings. 2. Set ignition status to 'ON'. 3. Using the front seat switch pack drive the front seat fully forward then fully rearward. 4. Tighten front seat frame fixings to the correct torque. 5. Re-check for noisy seat movement.

- **Is the front seat forward-rearward movement still noisy?**

-> Yes
GO to Pinpoint Test G1014305t11.

-> No
The front seat frame is now operating correctly.

G1014305t11 : Check front seat forward-rearward seat motor drive bar

1. Check front seat drive bar for correct installation and condition.

- **Is the front seat drive bar correctly installed and in a serviceable condition?**

-> Yes
Replace front seat forward-rearward seat motor. Refer to relevant section of workshop manual.

-> No
Correctly install front seat forward-rearward seat motor drive bar, or replace if required.

PINPOINT TEST G1014305p4 : Front seat height, tilt and/or seat extension motor movement not functioning

G1014305t12 : Check front seat height, tilt or extension motor

1. Set ignition status to ' OFF'. 2. Disconnect front seat height, tilt or extension motor connector. 3. **NOTE:**

> It may be that the seat has been driven to the limit of travel along the relevant axis, and when the link harness is connected, the seat will remain in the same position. If this is the case, a jolt may be felt from the motor. To confirm the motor operation, swap the link harness to alternate motor pin connections and the seat should travel in the opposite direction.

Using a locally made fused link harness and power supply, connect power and ground to relevant motor.

Battery positive terminal	Battery negative terminal
motor pin 1	motor pin 2

- **Does the motor operate?**

-> Yes
Using manufacturer approved diagnostic system, check for related Diagnostic Trouble Codes (DTCs) and carry out the repair operations specified. Alternatively, refer to the electrical circuit diagrams and check relevant motor circuits.

-> No
Replace the relevant motor. Refer to relevant section of workshop manual.

PINPOINT TEST G1014305p5 : Front seat height, tilt and/or extension movement noisy

G1014305t13 : Compare the height, tilt or extension movement noise with the other front seat

1.

 **WARNING: Before work is carried out, make the air bag supplemental restraint system safe. For additional information, refer to Standard Workshop Practices section of workshop manual.**

Compare the front seat movement noise to other front seat.

- **Is the front seat height, tilt or extension movement noise excessive when compared to other front seat?**

-> Yes
GO to Pinpoint Test G1014305t14.

-> No
GO to Pinpoint Test G1014305t15.

G1014305t14 : Compare front seat height, tilt or extension movement noise to front seat in other vehicle

1. Compare the front seat height, tilt or extension movement noise to front seat in other vehicle.

- **Is the front seat height, tilt or extension movement noise excessive when compared to front seat in other vehicle?**

-> Yes
GO to Pinpoint Test G1014305t15.

-> No
The front seat frame is operating correctly. Submit Electronic Product Quality Report (EPQR) with any further query.

G1014305t15 : Check for debris obstructing seat movement

1. Check for debris obstructing seat movement.

- **Is the front seat height, tilt or extension movement obstructed by debris?**

-> Yes
Remove obstruction and re-check for noisy height, tilt or extension seat movement. If still noisy GO to Pinpoint Test G1014305t16.

-> No
GO to Pinpoint Test G1014305t16.

G1014305t16 : Check for height, tilt or extension movement mechanism lubrication

1. Check and apply manufacturer approved lubrication to seat height, tilt or extension movement mechanism and re-test for noise.

- **Is the front seat height, tilt or extension noise still apparent?**

-> Yes
Replace the relevant motor. Refer to relevant section of workshop manual.

-> No
The front seat height, tilt or extension motor is operating correctly.

PINPOINT TEST G1014305p6 : Heater And Cooling - Inoperative

G1014305t17 : Check For Stored DTC

1. Check the Climate Controlled Seat Module for stored DTC's.

- **Are there any stored DTC's?**

-> Yes
For information on stored DTC's refer to the information in the Climate Controlled Seat Module DTC index.

-> No
GO to Pinpoint Test G1014305t18.

G1014305t18 : Driver Or Front Passenger Seat Backrest Climate Assembly - Functionality Check

1. Check the heat and cool function of the backrest.

- **Does the backrest heat and cool function operate correctly?**

-> Yes
GO to Pinpoint Test G1014305t19.

-> No
GO to Pinpoint Test G1014305t21.

G1014305t19 : Driver Or Front Passenger Seat Cushion Climate Assembly - Functionality Check

1. Check the heat and cool function at the cushion.

- **Does the cushion heat and cool function operate correctly?**

-> Yes
If there are no faults evident, verify the customer concern.

-> No
GO to Pinpoint Test G1014305t20.

G1014305t20 : Cushion Bellows

1. Check the condition of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component.

G1014305t21 : Backrest Bellows Duct

1. Check the security of the bellows duct.

- **Is the bellows duct correctly installed?**

-> Yes
GO to Pinpoint Test G1014305t22.

-> No
Securely reconnect the bellows duct.

G1014305t22 : Backrest Bellows

1. Check the security of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component. Follow the link below to check operation of the Driver or Front Passenger Seat Cushion Climate Assembly. GO to Pinpoint Test G1014305t18.

PINPOINT TEST G1014305p7 : Heating And Cooling - Noisy Operation

G1014305t23 : Check For Stored DTC

1. Check the Climate Controlled Seat Module for stored DTC's.

- **Are there any stored DTC's?**

-> Yes
For information on stored DTC's refer to the information in the Climate Controlled Seat Module DTC index.

-> No
GO to Pinpoint Test G1014305t24.

G1014305t24 : Driver Or Front Passenger Seat Backrest Climate Assembly - Noise

1. There is a known issue which effects a limited number of vehicles where under acceleration of the vehicle the occupant of seat can deform the suspension mat (snake wire) which then presses on the casing of the seat backrest climate assembly, this causes the casing to distort and the noise issue to occur. If contact has occurred there will be a witness mark on the casing. Carry out visual inspection of the seat backrest climate assembly that has been identified as noisy by the customer.

- **Is there a witness mark on the casing?**

-> Yes
Contact the local in market support for further information.

-> No
GO to Pinpoint Test G1014305t25.

G1014305t25 : Driver Or Front Passenger Seat Climate Assembly - Noise 2

1. Operate the heat and cool function of the seat. Listen for a 'WAH WAH' noise (the fan speeds up and slows down repeatedly).

- **Does the fan speeds up and slow down repeatedly?**

-> Yes
Confirm the latest Strategy and Calibration software is installed, using the manufacturer approved diagnostic system carry out the new Climate Controlled Seat Module application and update the Climate Controlled Seat Module software if required. If the noise is still evident after software update follow link below. GO to Pinpoint Test G1014305t26.

-> No
GO to Pinpoint Test G1014305t26.

G1014305t26 : Driver Or Front Passenger Seat Backrest Climate Assembly - Noise level Comparison

1. Compare the noise level of the suspect climate seat assembly to another climate seat assembly.

- **Is the noise level equal between the two seats?**

-> Yes
The noise level is standard and comparable to the design intent.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component.

PINPOINT TEST G1014305p8 : Heating And Cooling - Poor Heat Or Cool Efficiency

G1014305t27 : Check For Stored DTC

1. Check the Climate Controlled Seat Module for stored DTC's.

- **Are there any stored DTC's?**

-> Yes
For information on stored DTC's refer to the information in the Climate Controlled Seat Module DTC index.

-> No
GO to Pinpoint Test G1014305t28.

G1014305t28 : Driver Or Front Passenger Seat Backrest Climate Assembly - Functionality Check

1. Check the heat and cool function of the backrest.

- **Does the backrest heat and cool function operate correctly?**

-> Yes
GO to Pinpoint Test G1014305t29.

-> No
GO to Pinpoint Test G1014305t31.

G1014305t29 : Driver Or Front Passenger Seat Cushion Climate Assembly - Functionality Check

1. Check the heat and cool function at the cushion.

- **Does the cushion heat and cool function operate correctly?**

-> Yes
If there are no faults evident, verify the customer concern.

-> No
GO to Pinpoint Test G1014305t30.

G1014305t30 : Cushion Bellows

1. Check the condition of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
GO to Pinpoint Test G1014305t33.

G1014305t31 : Backrest Bellows Duct

1. Check the security of the bellows duct.

- **Is the bellows duct correctly installed?**

-> Yes
GO to Pinpoint Test G1014305t32.

-> No
Securely reconnect the bellows duct.

G1014305t32 : Backrest Bellows

1. Check the security of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component. Follow the link below to check operation of the Driver or Front Passenger Seat Cushion Climate Assembly. GO to Pinpoint Test G1014305t28.

G1014305t33 : Driver Or Front Passenger Seat Backrest Climate Assembly -Efficiency Comparison

1. Compare the efficiency of the suspect climate seat assembly to another climate seat assembly.

- **Is the efficiency equal between the two seats?**

-> Yes
The efficiency is standard and comparable to the design intent.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component.

PINPOINT TEST G1014305p9 : Heating And Cooling - Heat Or Cool Operation Slow

G1014305t34 : Check For Stored DTC

1. Check the Climate Controlled Seat Module for stored DTC's.

- **Are there any stored DTC's?**

-> Yes
For information on stored DTC's refer to the information in the Climate Controlled Seat Module DTC index.

-> No
GO to Pinpoint Test G1014305t35.

G1014305t35 : Driver Or Front Passenger Seat Backrest Climate Assembly - Functionality Check

1. Check the heat and cool function of the backrest?

- **Does the backrest heat and cool function operate correctly?**

-> Yes
GO to Pinpoint Test G1014305t36.

-> No
GO to Pinpoint Test G1014305t38.

G1014305t36 : Driver Or Front Passenger Seat Cushion Climate Assembly - Functionality Check

1. Check the heat and cool function at the cushion.

- **Does the cushion heat and cool function operate correctly?**

-> Yes
If there are no faults evident, verify the customer concern.

-> No
GO to Pinpoint Test G1014305t37.

G1014305t37 : Cushion Bellows

1. Check the condition of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
GO to Pinpoint Test G1014305t40.

G1014305t38 : Backrest Bellows Duct

1. Check the security of the bellows duct.

- **Is the bellows duct correctly installed?**

-> Yes
GO to Pinpoint Test G1014305t39.

-> No
Securely reconnect the bellows duct.

G1014305t39 : Backrest Bellows

1. Check the security of the bellows.

- **Are the bellows obstructed, have they collapsed?**

-> Yes
Remove the obstruction or replace collapsed bellows.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component. Follow the link below to check operation of the Driver or Front Passenger Seat Cushion Climate Assembly. GO to Pinpoint Test G1014305t35.

G1014305t40 : Driver Or Front Passenger Seat Backrest Climate Assembly - Operation Comparison

1. Compare the operation of the suspect climate seat assembly to another climate seat assembly.

- **Is the operation equal between the two seats?**

-> Yes
The operation is standard and comparable to the design intent.

-> No
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component.

PINPOINT TEST G1014305p10 : Heating And Cooling - Intermittent Operation

G1014305t41 : Check For Stored DTC

1. Check the Climate Controlled Seat Module for stored DTC's.

- **Are there any stored DTC's?**

-> Yes
For information on stored DTC's refer to the information in the Climate Controlled Seat Module DTC index.

-> No
GO to Pinpoint Test G1014305t42.

G1014305t42 : Cable Connection Check

1. Identify from customer concern or stored DTC's which Seat Climate Assembly is operating intermittently and confirm the harness connector is fully connected.

- **Is the harness connector is fully connected?**

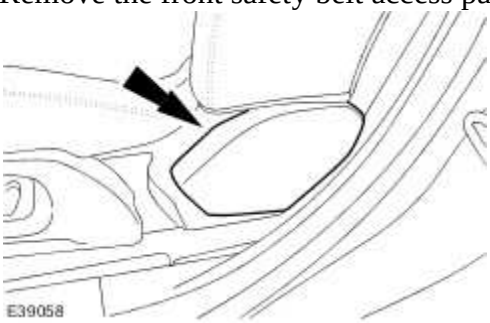
-> Yes
Suspect an internal fault with the Seat Climate Assembly. Replace as required, refer to the Warranty Policy and Procedures manual (section B1.2). Prior to installing a new component.

-> No
Disconnect the harness connector, inspect connector and terminals for damage. Repair or replace if required. Reconnect connector and check operation.

Front Seat (76.70.01)

Removal

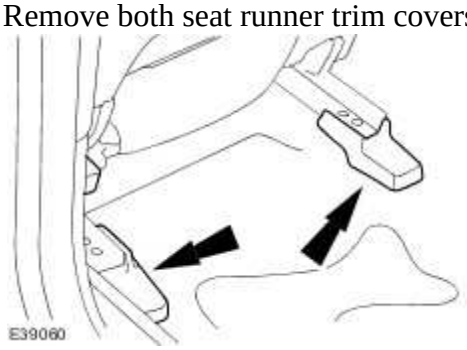
1 . Remove the front safety belt access panel.



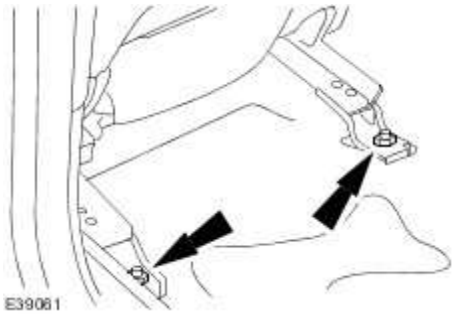
2 . Detach the front safety belt.

3 . Reposition the front seat fully forwards.

4 . Remove both seat runner trim covers.



5 . Remove both seat runner rear retaining bolts.

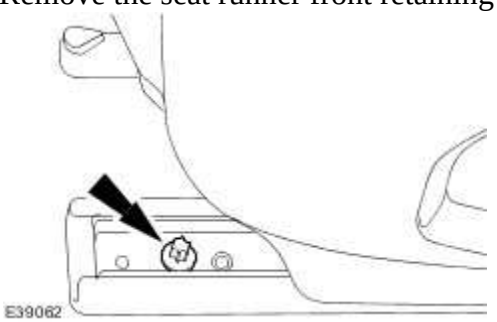


6 . Reposition the front seat fully rearwards.

7 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the seat runner front retaining bolt.



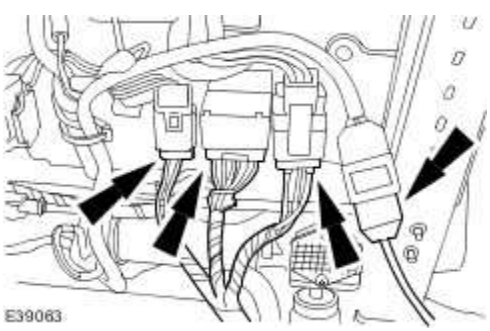
8 . Reposition the front seat 75 mm (2.95") forwards.

9 . Reposition the front seat head restraint and front seat base to the fully lowered position.

10 . Disconnect the battery ground cable. <<414-01>>

11 . Disconnect the front seat electrical connectors.

- Tilt the front seat rearwards to aid disconnecting the front seat electrical connectors.



12
. **CAUTION: Care must be taken when removing the seat not to damage the seat or the trim panels. Failure to follow this instruction may result in damage to the vehicle.**

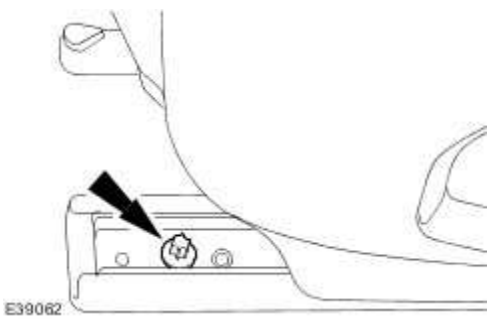
CAUTION: When lifting the seat care must be taken not to load or damage the seat runners located below the seat cushion. Failure to follow this instruction may result in damage to the vehicle.

Remove the front seat.

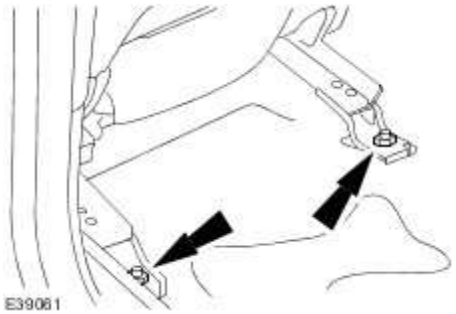
Installation

1 . **NOTE:**
Left-hand shown, right-hand similar.

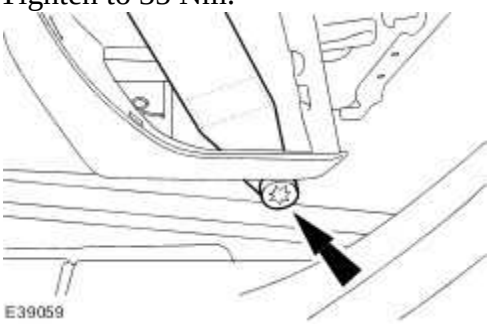
To install, reverse the removal procedure.
Tighten to 47 Nm.



2 . Tighten to 47 Nm.



3 . Tighten to 35 Nm.



Front Seat Backrest - VIN Range: G00442->H18679 (76.70.06)

Removal

1.  **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

 **WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.**

 **WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.**

 **WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.**

 **WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.**

 **WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.**

 **WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.**

 **WARNING: To avoid accidental deployment and possible personal injury,**

the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

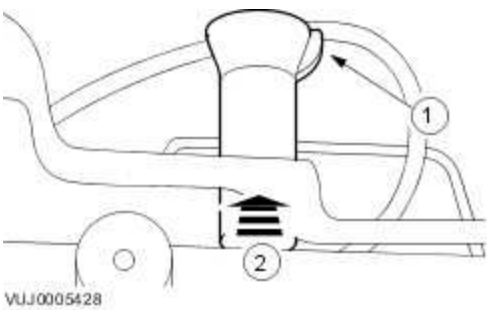
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Remove the front seat head restraint.
For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: G00442->H18679 (76.70.14)

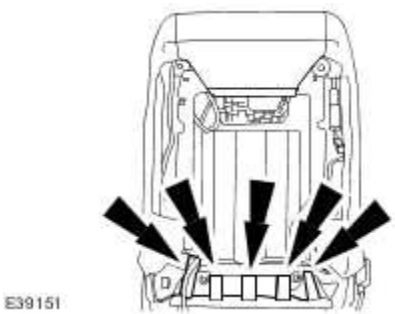
2 . Remove the front seat head restraint retaining post.

1) Release the retaining tang.

2) Remove the front seat head restraint retaining post.

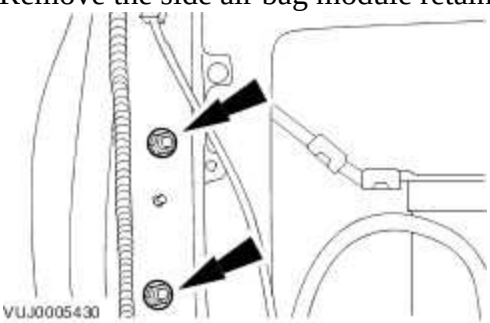


3 . Detach the front seat cushion cover.



4 . Detach the front seat backrest cover.

5 . Remove the side air bag module retaining nuts.

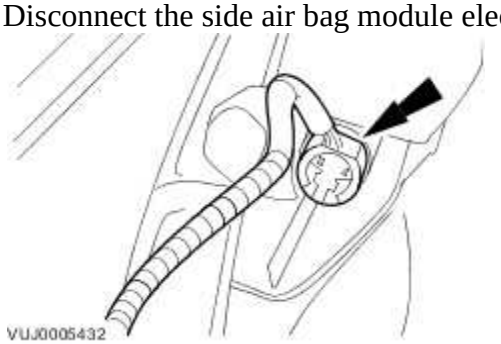


6 . Detach the front seat backrest cover and cushion.

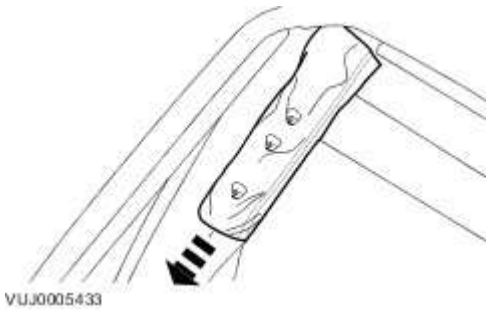
1) Reposition the front seat backrest cover and cushion.

2) Detach the front seat backrest cover and cushion.

7 . Disconnect the side air bag module electrical connector.

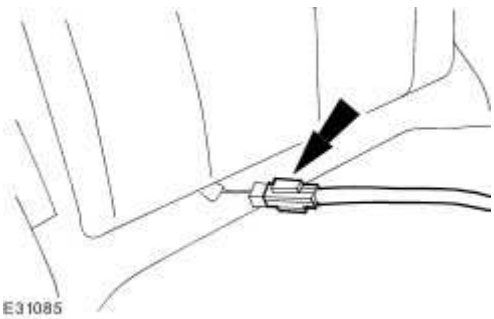


8 . Remove the side air bag module.

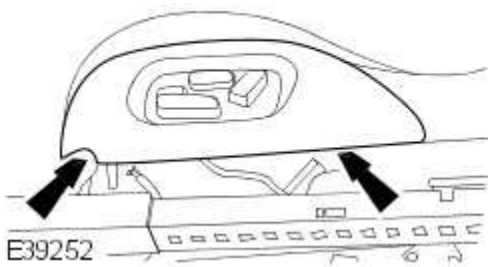


9 Remove the front seat backrest cover and cushion.

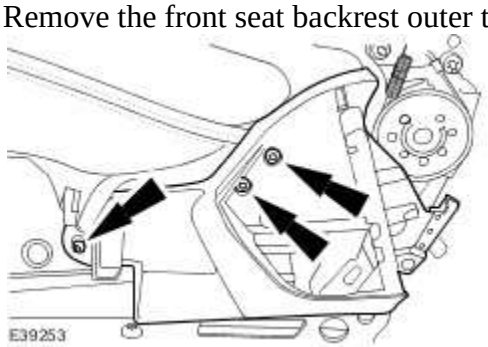
· Disconnect the front seat backrest cushion heater pad electrical connector.



10 . Detach the front seat control switch and trim panel assembly.



11 . Remove the front seat backrest outer trim panel.

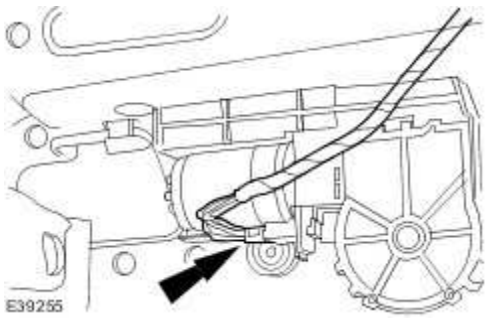


12 . **NOTE:**

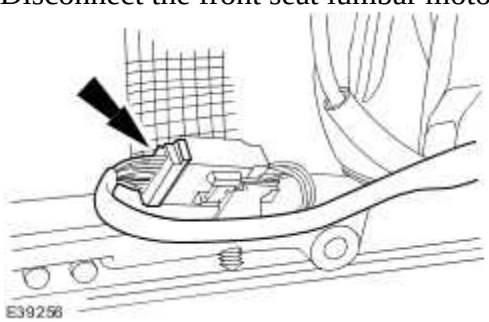
Right-hand shown, left-hand similar.

Remove the front seat hinge front inner trim cover.

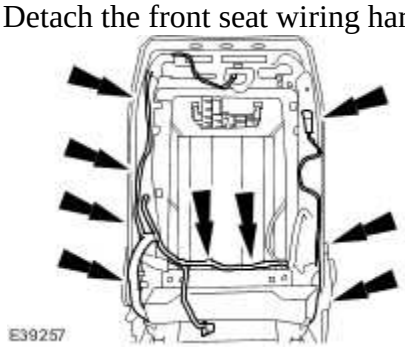
13 . Disconnect the front seat head restraint motor electrical connector.



14 . Disconnect the front seat lumbar motor electrical connector.



15 . Detach the front seat wiring harness.

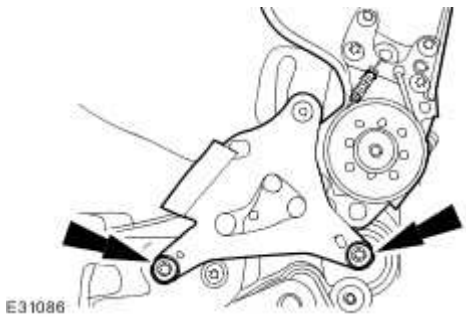


16 **NOTE:**

· Do not remove or carry out any repairs to the anti-whiplash system (AWS) on the front seat backrest. Left-hand shown, right-hand similar.

Remove the front seat backrest.

Remove the front seat backrest retaining bolts.



Installation

1 **NOTE:**

· Do not remove or carry out any repairs to the anti-whiplash system (AWS) on the front seat backrest.

NOTE:

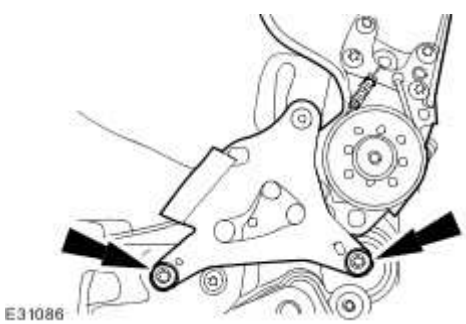
In the event of the AWS operating, there are no serviceable components.

NOTE:

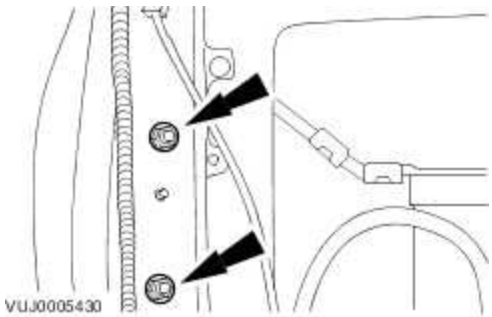
Left-hand shown, right-hand similar.

To install, reverse the removal procedure.

Tighten to 35 Nm.



2 . Tighten to 7 Nm.


VUJ0005430

Front Seat Backrest - VIN Range: H18680->H99999 (76.70.06)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

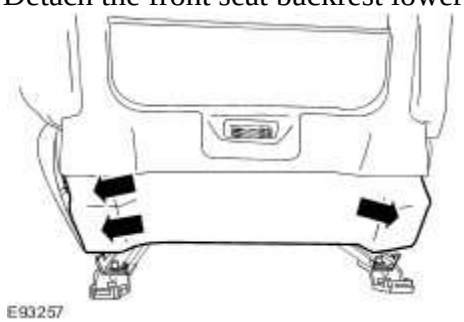
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Remove the front seat head restraint.
For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: H18680->H99999 (76.70.14)

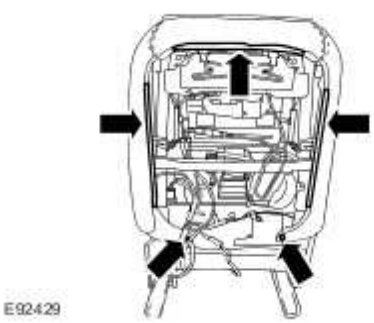
2 . **NOTE:**
Apply suitable protective tape around the right-hand head restraint guide tube.

Using a suitable tool, remove the front seat head restraint guide sleeve.

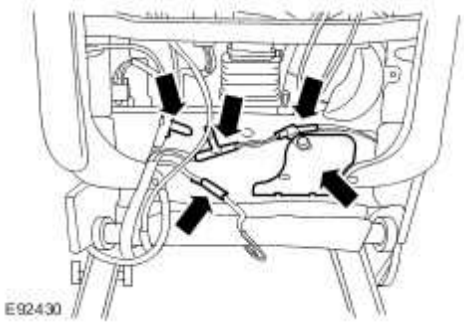
3 . Detach the front seat backrest lower rear cover.



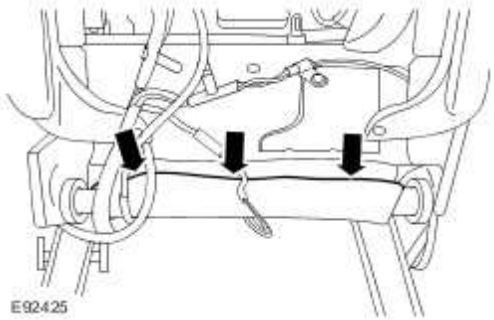
4 . Detach the front seat backrest cover from the front seat backrest frame.



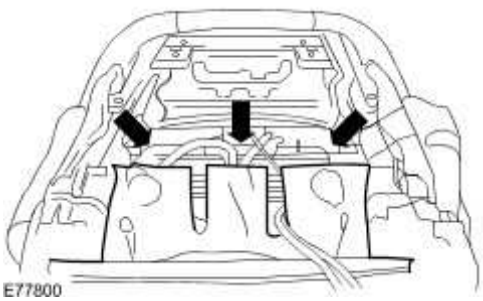
5 . Release the wiring harness and the front seat backrest thermo-electric device duct.



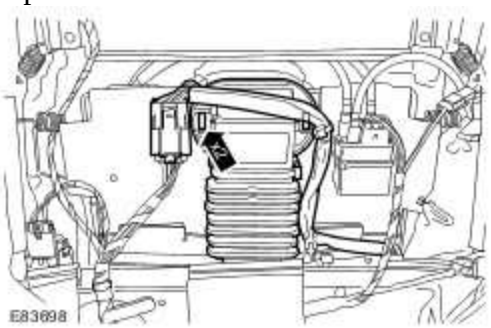
6 . Detach the front seat backrest cover velcro strap.



7 . Detach the tension straps from the front seat backrest.



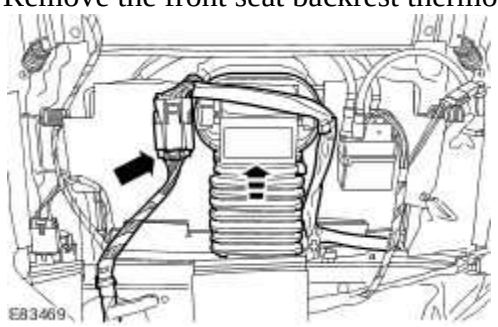
8 . Reposition the front seat backrest thermo-electric device.



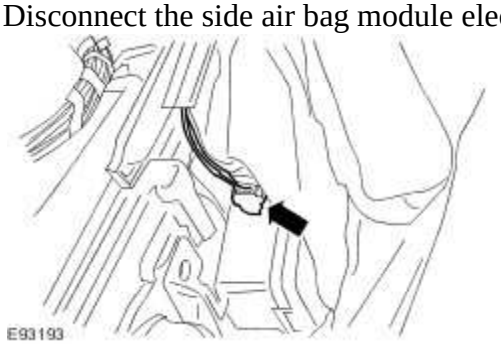
9 . Detach the front seat backrest thermo-electric device duct.

10 . Remove the front seat backrest thermo-electric device retaining bolts.

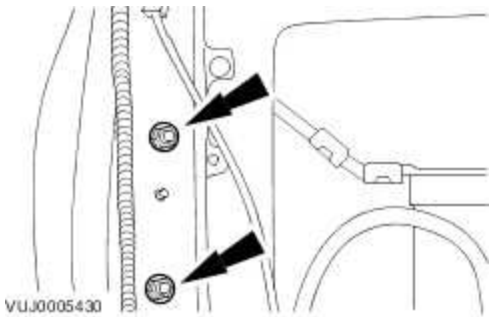
11 . Remove the front seat backrest thermo-electric device.



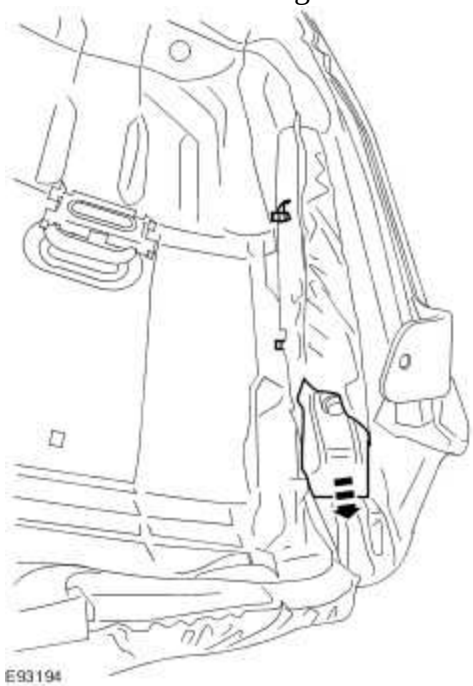
12 . Disconnect the side air bag module electrical connector.



13 . Remove the side air bag module retaining nuts.



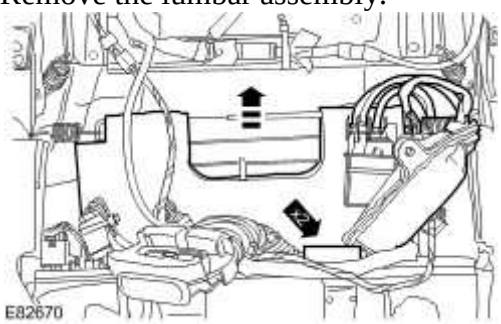
14 . Remove the side air bag module.



15 . Remove the front seat backrest cover and front seat backrest cushion.

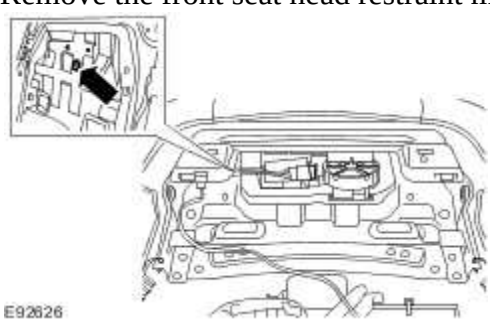
16 . Disconnect the lumber assembly electrical connectors.

17 . Remove the lumbar assembly.

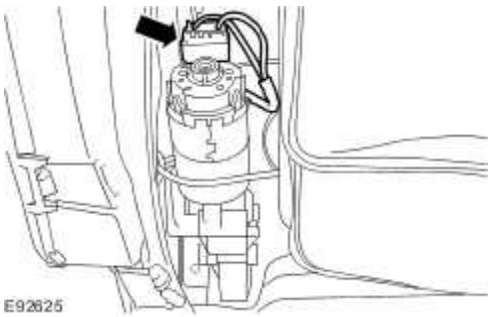


18 . Disconnect the front seat head restraint motor electrical connector.

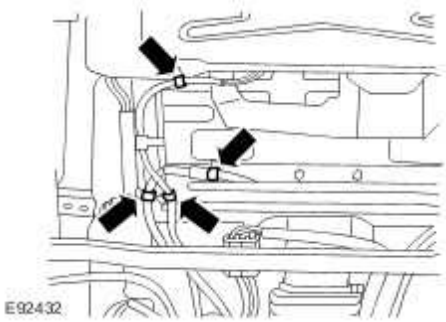
19 . Remove the front seat head restraint motor.



20 . Disconnect the front seat recliner motor electrical connector.

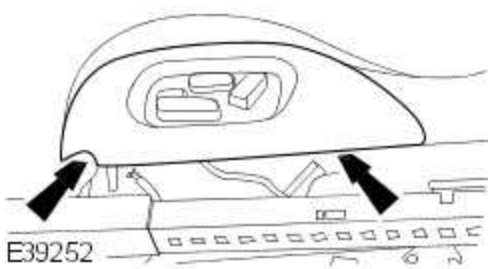


21 . Detach the wiring harness from the front seat backrest.

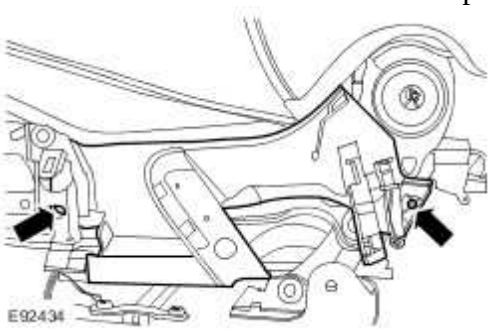


22 . Detach and reposition the front seat control switch and trim panel assembly.

- Remove the 2 retaining screws.



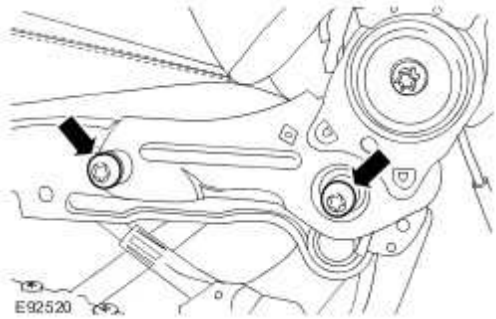
23 . Remove the front seat left-hand trim panel.



24 . **NOTE:**

Left-hand side shown, right-hand side similar.

Remove the front seat backrest.



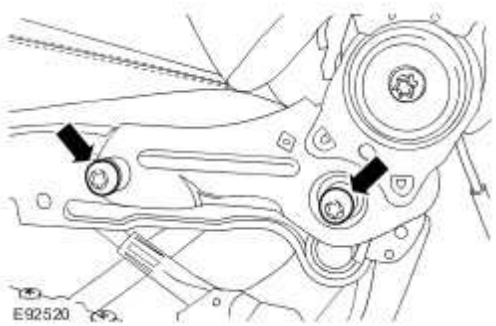
Installation

1 . **NOTE:**

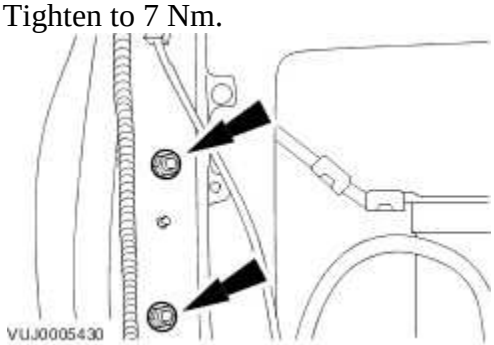
Left-hand side shown, right-hand side similar.

To install, reverse the removal procedure.

Tighten to 35 Nm.



2 . Tighten to 7 Nm.



Front Seat Backrest Cover - VIN Range: G00442->H18679 (76.70.15)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury,

the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

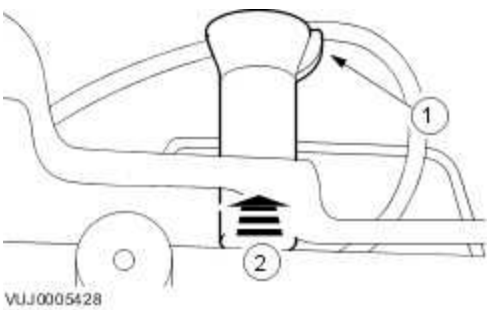
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Remove the front seat head restraint.
For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: G00442->H18679 (76.70.14)

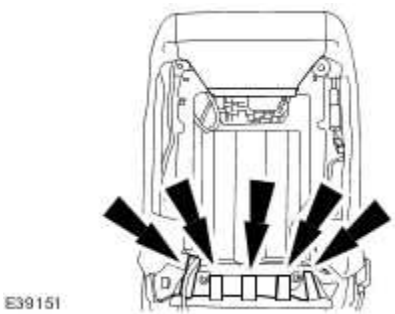
2 . Remove the front seat head restraint retaining post.

1) Release the retaining tang.

2) Remove the front seat head restraint retaining post.

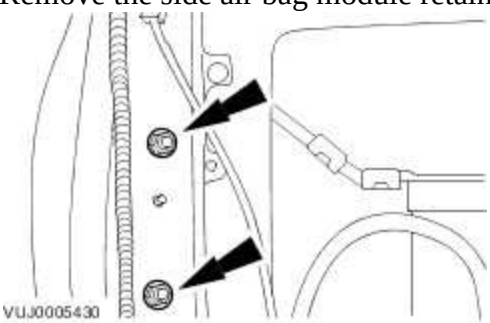


3 . Detach the front seat cushion cover.



4 . Detach the front seat backrest cover.

5 . Remove the side air bag module retaining nuts.

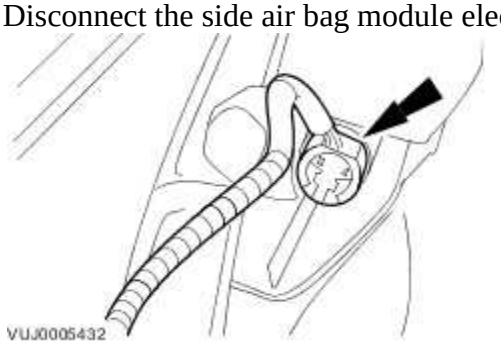


6 . Detach the seat backrest cover and cushion.

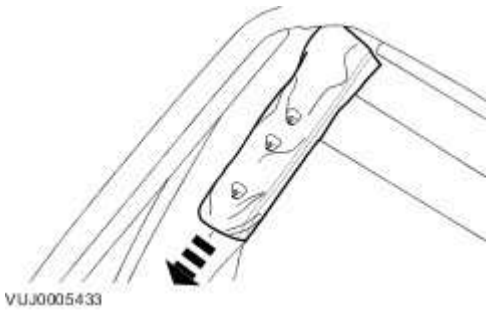
1) Reposition the seat backrest cover and cushion.

2) Detach the seat backrest cover and cushion.

7 . Disconnect the side air bag module electrical connector.

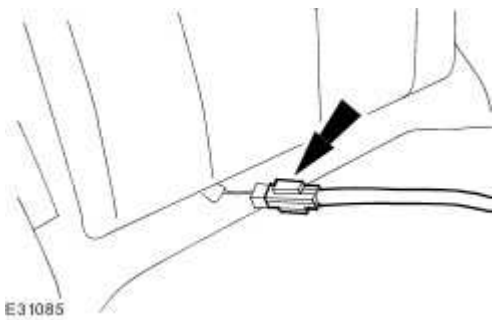


8 . Remove the side air bag module.

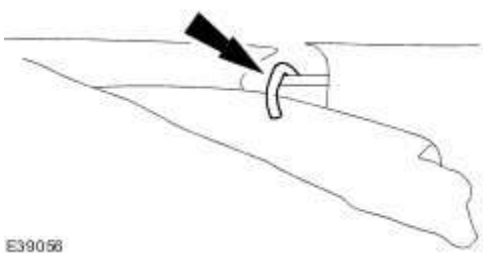


9 . Remove the front seat backrest cover and cushion.

- Disconnect the front seat cushion heater pad electrical connector.



10 . Remove and discard the front seat backrest cover retaining clips.



11 . Remove the front seat backrest cover.

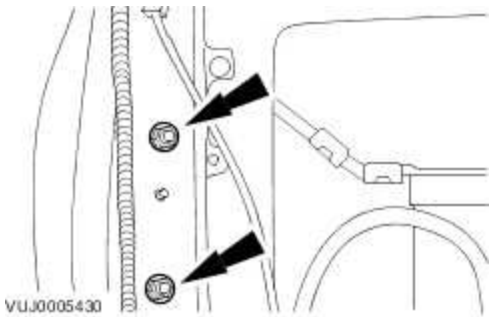
Installation

1 . **NOTE:**

Install new front seat backrest cover retaining clips.

To install, reverse the removal procedure.

Tighten to 7 Nm.



Front Seat Backrest Cover - VIN Range: H18680->H99999 (76.70.15)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury,

the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

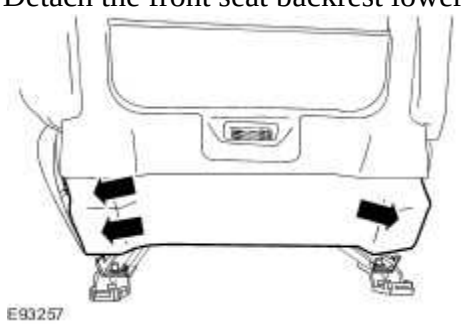
Remove the front seat head restraint.
For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: H18680->H99999 (76.70.14)

2 . **NOTE:**

Apply suitable protective tape around the right-hand head restraint guide tube.

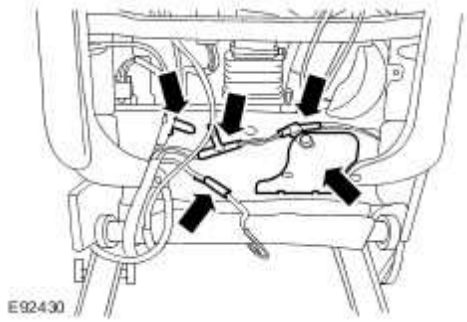
Using a suitable tool, remove the restraint guide sleeve.

3 . Detach the front seat backrest lower rear cover.

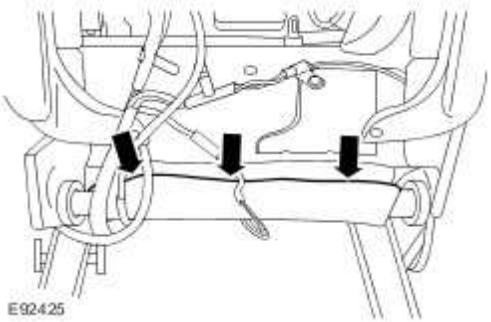


4 . Detach the front seat backrest cover from the front seat frame.

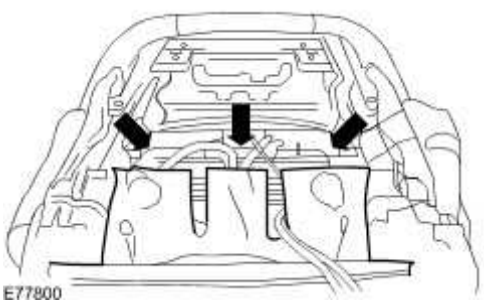
5 . Release the wiring harness and the front seat backrest thermo-electric device duct.



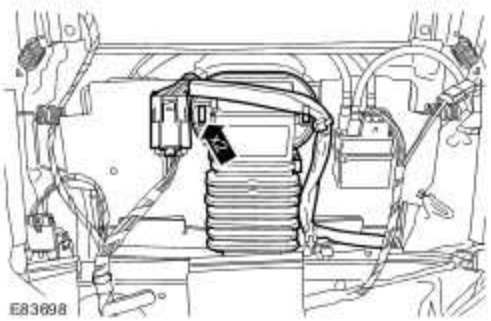
6 . Detach the seat backrest cover velcro strap.



7 . Release the tension straps from the front seat backrest.

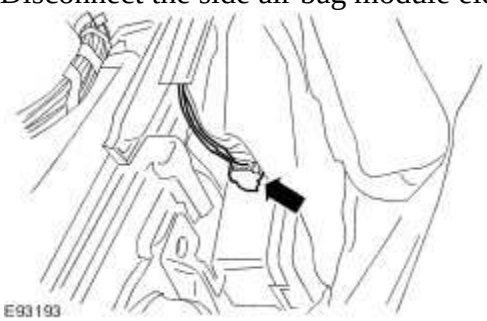


8 . Reposition the front seat backrest thermo-electric device.

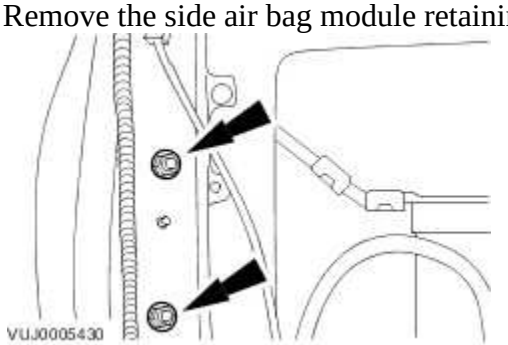


9 . Detach the front seat backrest thermo-electric device duct.

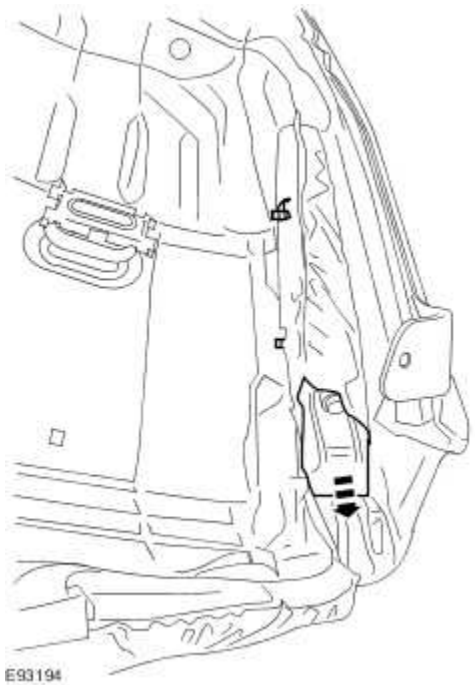
10 . Disconnect the side air bag module electrical connector.



11 . Remove the side air bag module retaining nuts.

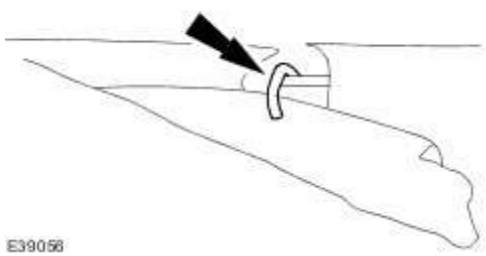


12 . Remove the side air bag module.



13 . Remove the front seat backrest cover and front seat backrest cushion.

14 . Remove and discard the front seat backrest cover hog rings.



15 . Remove the front seat backrest cover.

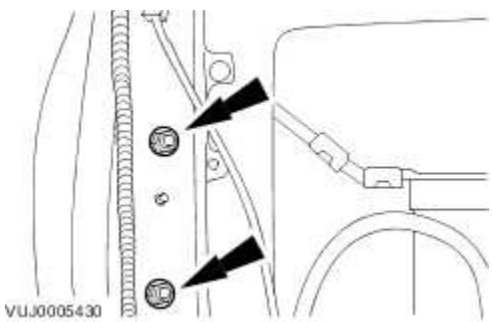
Installation

1 . **NOTE:**

Install new front seat backrest cover hog rings.

To install, reverse the removal procedure.

Tighten to 7 Nm.

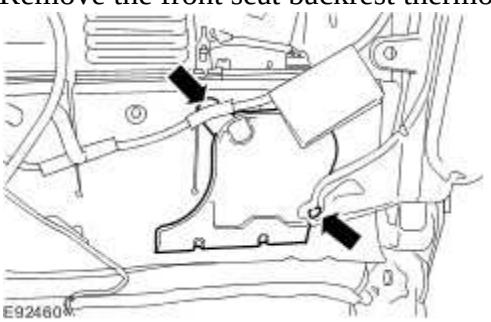


Front Seat Backrest Heater and Blower Assembly

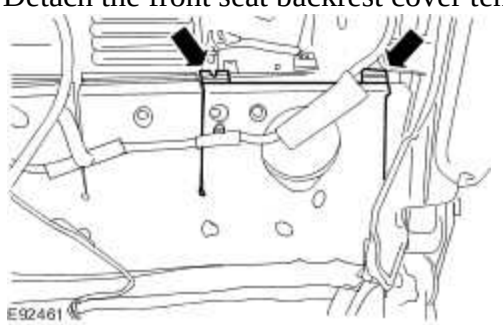
Removal

1 Remove the front seat backrest rear cover.
. For additional information, refer to Front Seat Backrest Rear Cover - VIN Range: H18680->H99999 (76.70.03)

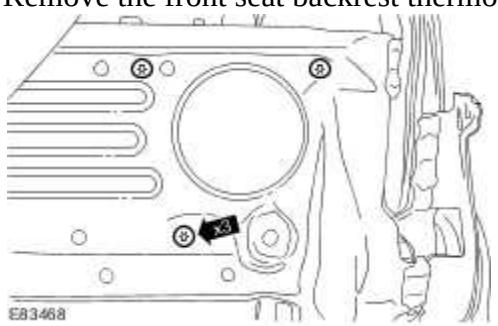
2 . Remove the front seat backrest thermo-electric device duct.



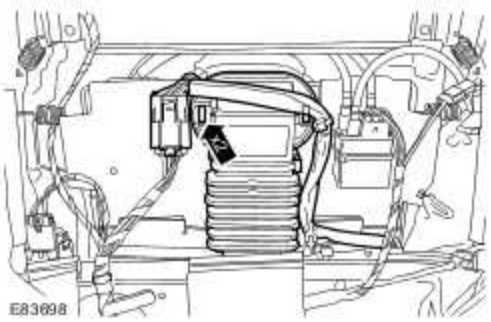
3 . Detach the front seat backrest cover tension strap.



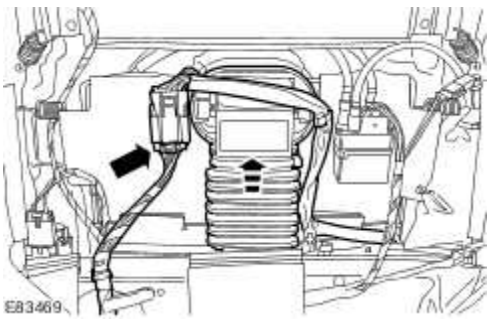
4 . Remove the front seat backrest thermo-electric device retaining bolts.



5 . Detach the front seat backrest thermo-electric device.



6 . Remove the front seat backrest thermo-electric device.



Installation

1 . To install, reverse the removal procedure.

Front Seat Backrest Rear Cover - VIN Range: G00442->H18679 (76.70.03)

Removal

All vehicles

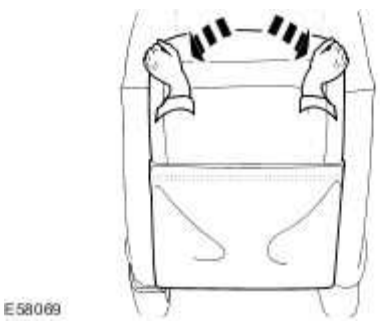
1 . Place the seat in the upright position.

Vehicles with sports seats

2 . **CAUTION: After a finger width is attained between the front seat back and the backrest trim panel, do not pull the front seat backrest trim panel any further rearwards. Failure to follow this instruction may result in damage to the front seat backrest trim panel.**

Detach the front seat backrest trim panel from the front seat back.

1) Place your fingers between the front seat backrest trim panel and the front seat back at a point close to the seat cover piping.

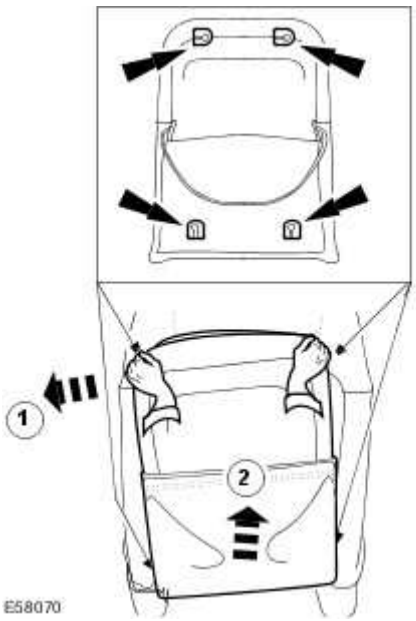


3 . **CAUTION: Take care not to damage the leather trim. Failure to follow this instruction may result in damage to the front seat.**

Detach the front seat backrest trim panel.

1) From the upper edge of the front seat backrest trim panel, slide the backrest trim panel to the left until the fir tree clips become detached.

2) Slide the front seat backrest trim panel upwards until the lower fir tree clips become detached.



Vehicles with standard seats

4. **CAUTION: Do not pull the front seat backrest rear cover from the middle of the top edge. Failure to follow this instruction may result in damage to the front seat backrest rear cover.**

CAUTION: Do not use a snatching motion when detaching the the fir tree clips. Failure to follow this instruction may result in damage to the front seat.

Detach the front seat backrest trim panel from the front seat back.

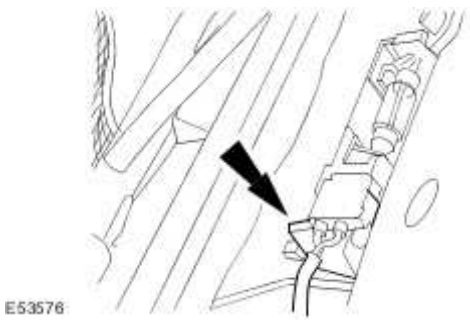
1) Position yourself directly behind the seat.

2) Place one hand on top of the squab shoulder and grasp the top corner of the front seat backrest rear cover with the other hand.

3) Pull the front seat backrest rear cover evenly towards you until the fir tree clip is detached from the squab frame.

4) Repeat the same operation for the other side.

5 . Disconnect the rear passenger footwell courtesy lamp electrical connector.

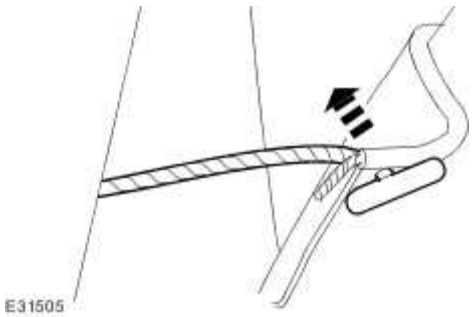


All vehicles

6 . Remove the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining tether.

2) Remove the fir tree clips and discard.



Installation

All vehicles

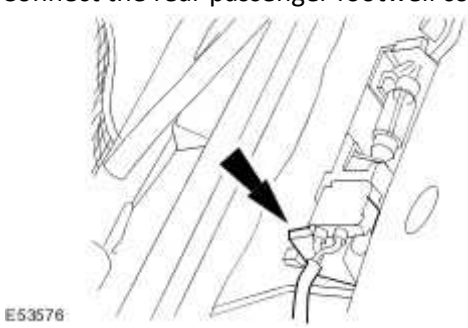
1 . **NOTE:**

To avoid damage to the leather trim fit suitable tape over the securing tether.

Attach the securing tether to the front seat backrest trim panel.

Vehicles with standard seats

2 . Connect the rear passenger footwell courtesy lamp electrical connector.

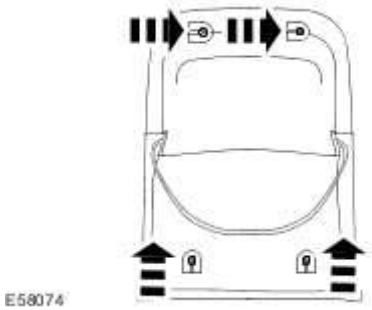


Vehicles with sports seats

3 . **NOTE:**

Make sure the fir tree clips are located fully into the carrier.

Install the new fir tree clips to the front seat backrest trim panel.



All vehicles

4 . **CAUTION: Do not strike the backrest trim panel to engage the fir tree clips. Failure to follow this instruction may result in damage to the front seat backrest rear cover.**

NOTE:

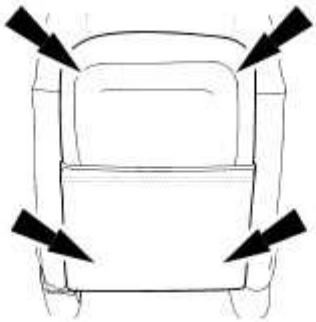
Vehicles with sports seats shown, vehicles with standard seats similar.

Install the front seat backrest rear cover.

1) Gently push on the backrest trim panel until the first barbs on the new fir tree clips are engaged into the frame.

2) Place one hand on the squab bolster.

3) Using even pressure firmly push the front seat backrest trim panel directly over the fir tree clips until fully seated.



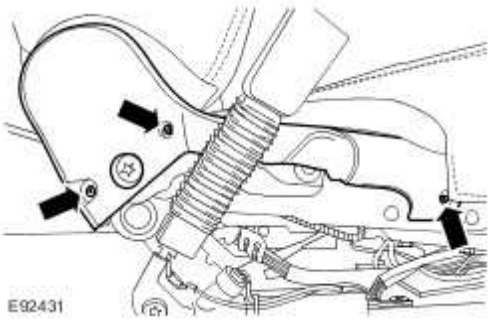
E58071

Front Seat Backrest Rear Cover - VIN Range: H18680->H99999 (76.70.03)

Removal

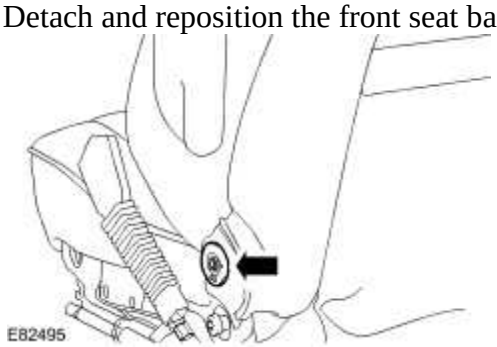
1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

2 . Remove the front seat right-hand trim cover.

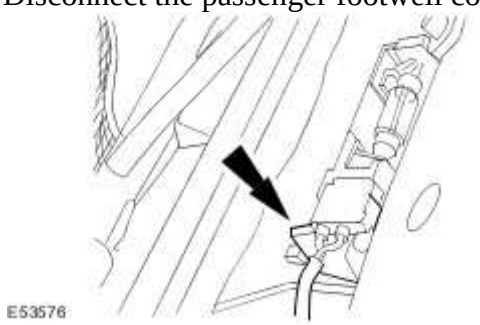


3 . **NOTE:**
Left-hand side shown, right-hand side similar.

Detach and reposition the front seat backrest rear cover.

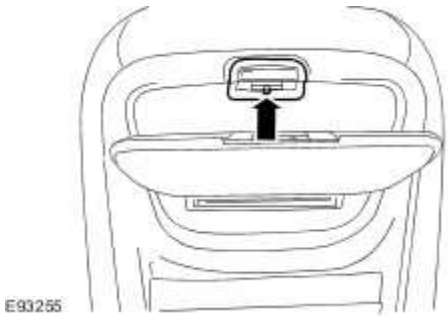


4 . Disconnect the passenger footwell courtesy lamp electrical connector.



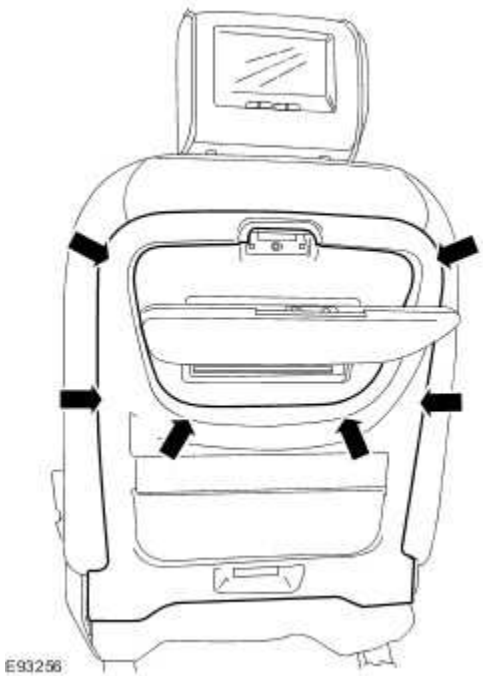
5 . Remove the business tray latch.

- Fully loosen the retaining screw.



6 . Remove the front seat backrest rear cover.

- Release the 6 retaining clips.



Installation

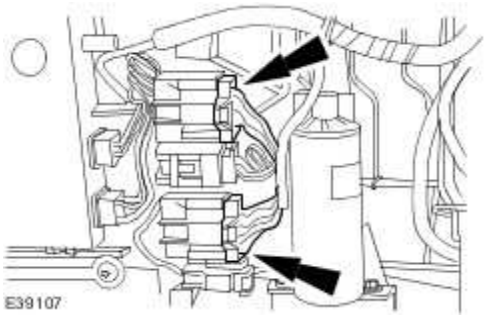
1 . To install, reverse the removal procedure.

Front Seat Control Switch (86.75.46)

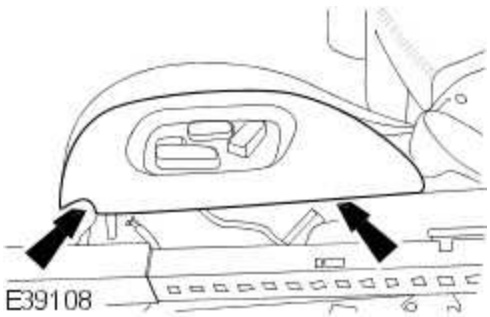
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

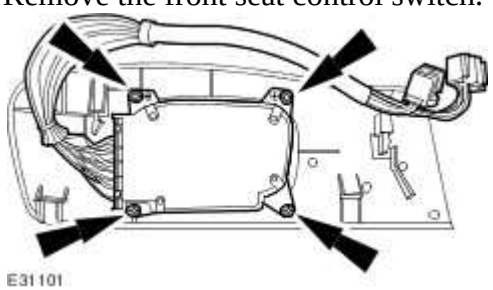
2 . Disconnect the front seat control switch electrical connectors.



3 . Remove the front seat control switch and trim panel assembly.



4 . Remove the front seat control switch.



Installation

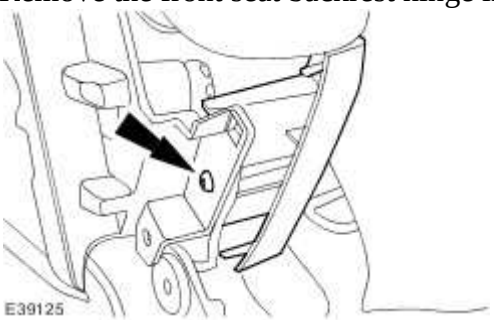
1 . To install, reverse the removal procedure.

Front Seat Cushion Cover - VIN Range: G00442->H18679 (76.70.33)

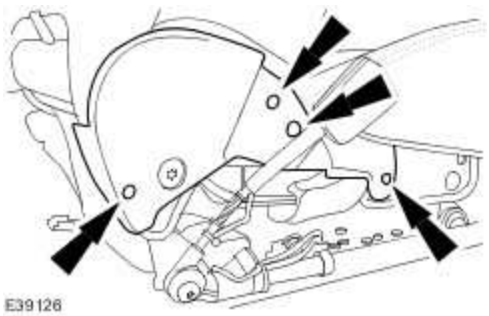
Removal

1 . Remove the front seat control switch.
For additional information, refer to Front Seat Control Switch (86.75.46)

2 . Remove the front seat backrest hinge inner trim panel.



3 . Remove the front seat backrest inner trim panel.



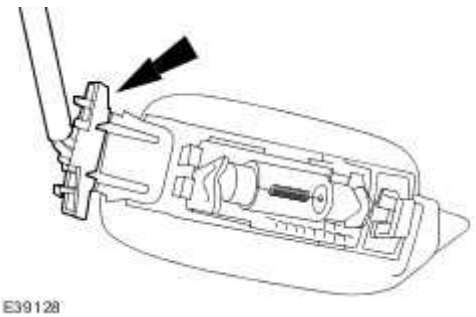
4 . Detach the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

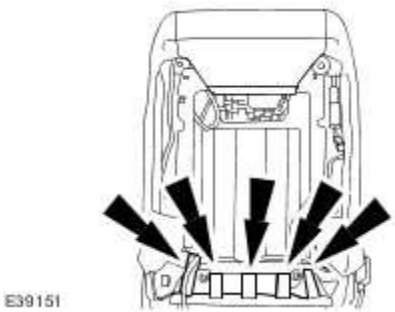
2) Detach the front seat backrest trim panel.

5 Remove the front seat backrest trim panel.

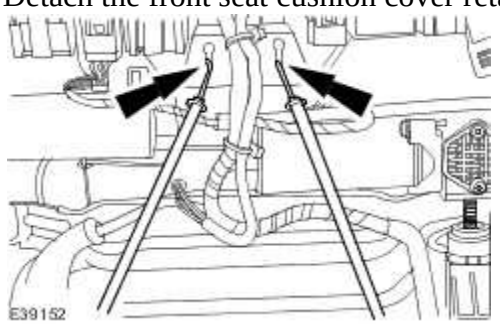
- Disconnect the rear passenger footwell courtesy lamp electrical connector.



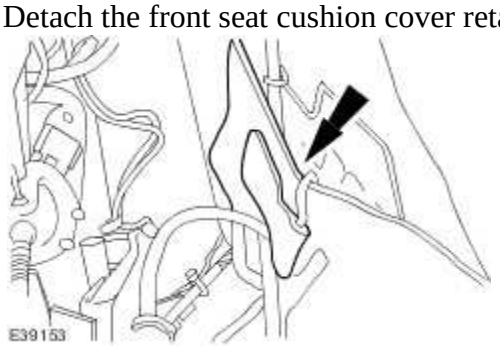
6 . Detach the front seat cushion cover.



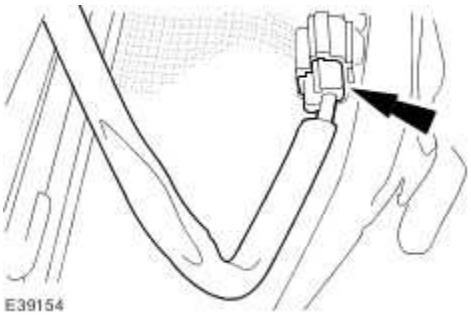
7 . Detach the front seat cushion cover retaining hooks.



8 . Detach the front seat cushion cover retaining strap.

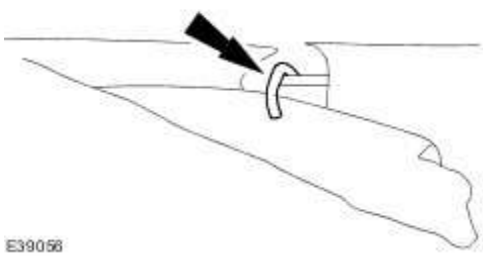


9 . Disconnect the front seat cushion heater pad electrical connector.

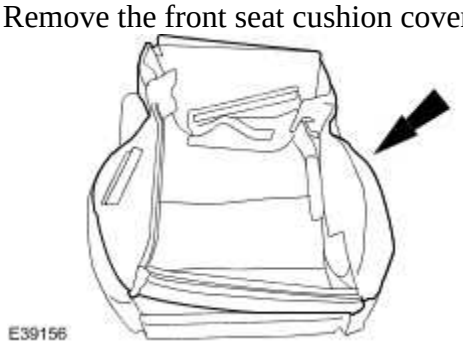


10 . Remove the front seat cushion cover and pad assembly.

11 . Remove the front seat cushion cover retaining clips.



12 . Remove the front seat cushion cover.



Installation

1 . **NOTE:**

Install new front seat cushion cover retaining clips.

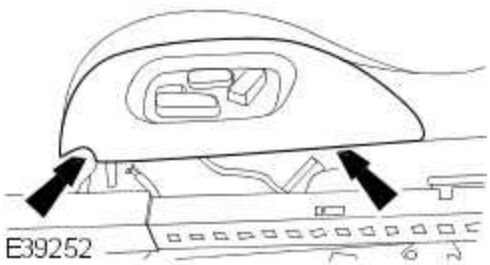
To install, reverse the removal procedure.

Front Seat Cushion Cover - VIN Range: H18680->H99999 (76.70.33)

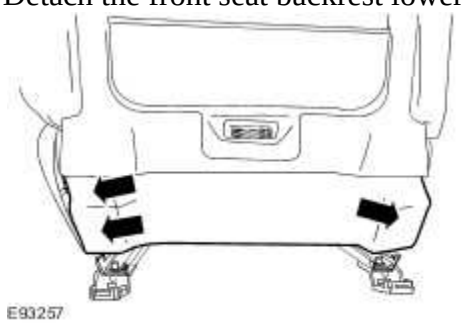
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

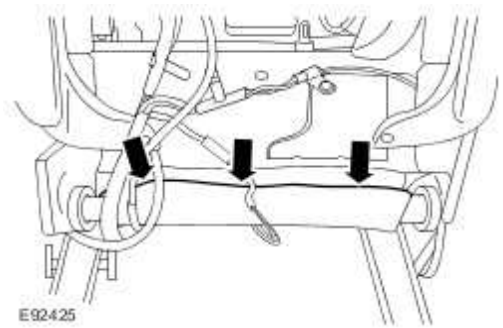
2 . Detach and reposition the front seat control switch and trim panel assembly.
- Remove the 2 retaining screws.



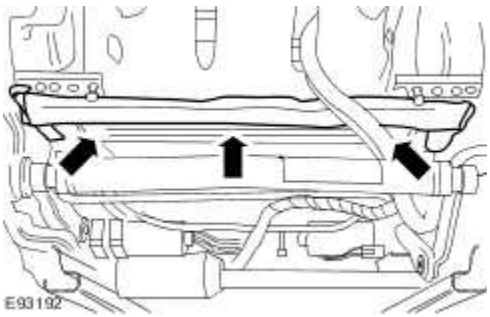
3 . Detach the front seat backrest lower rear cover.



4 . Detach the front seat backrest cover velcro strap.



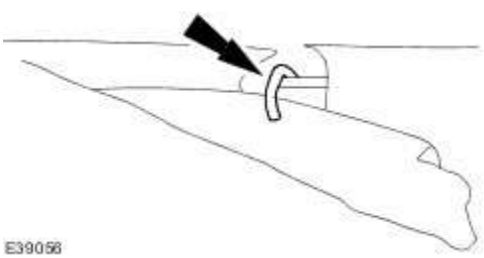
5 . Detach the front seat cushion cover.



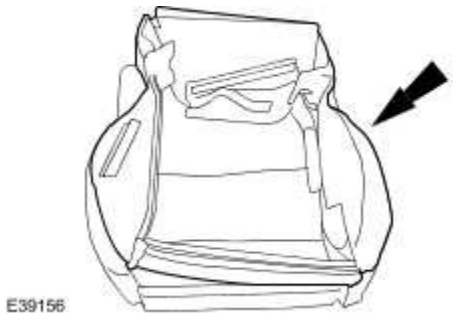
6 . Remove the front seat cushion cover and front seat cushion.

7 . Release the front seat cushion cover tension strap.

8 . Remove and discard the front seat cushion cover hog rings.



9 . Remove the front seat cushion cover.



Installation

1 . **NOTE:**
Install new front seat cushion cover hog rings.

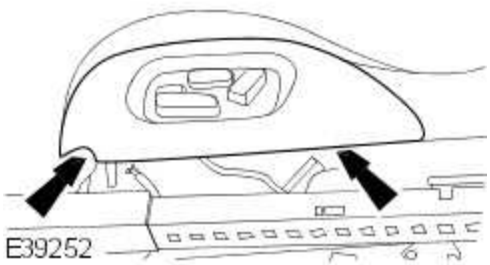
To install, reverse the removal procedure.

Front Seat Cushion Heater and Blower Assembly

Removal

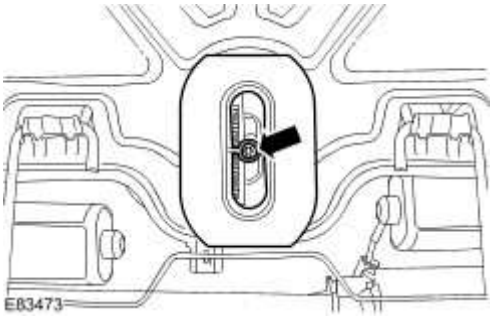
1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

2 . Detach and reposition the front seat control switch and trim panel assembly.
- Remove the retaining screws.



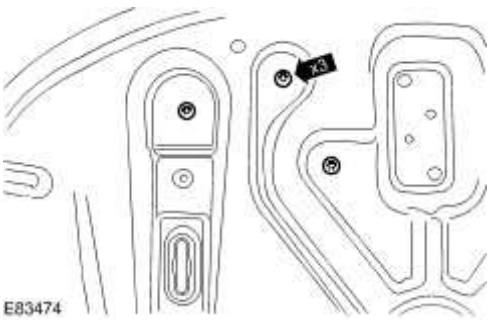
3 . Reposition the front seat cushion cover and front seat cushion.
- Detach the front seat cushion cover retaining strips.

4 . Detach the front seat base thermo-electric device duct.
- Remove the retaining screw.



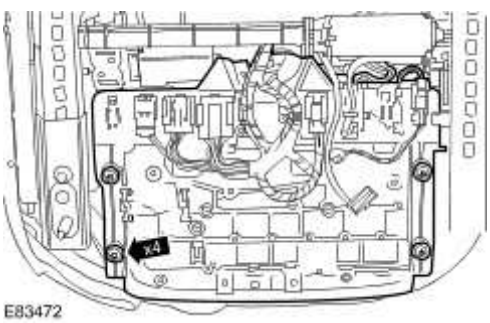
5 . Detach the front seat base thermo-electric device.

- Remove the retaining screws.

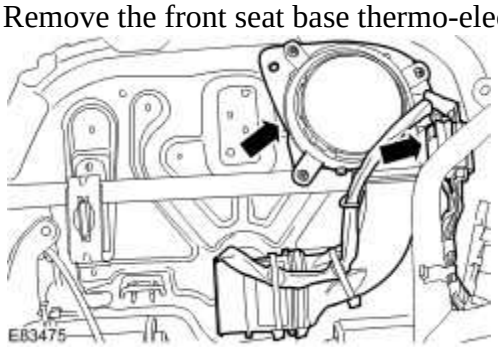


6 . Detach and reposition the front seat base wiring harness trim panel.

- Remove the retaining screws.



7 . Remove the front seat base thermo-electric device.



Installation

1 . To install, reverse the removal procedure.

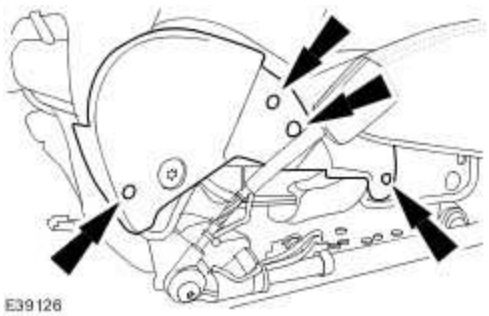
Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: G00442->H18679 (76.70.14)

Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

2 . Remove the front seat backrest hinge inner trim panel.

3 . Remove the front seat backrest inner trim panel.



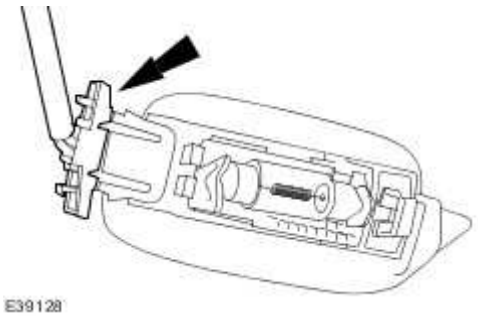
4 . Detach the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

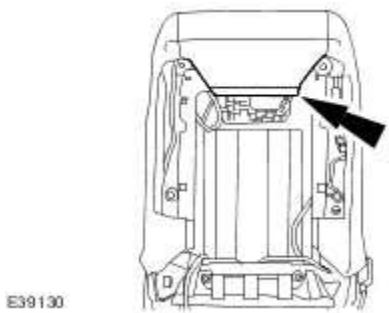
2) Detach the front seat backrest trim panel.

5 Remove the front seat backrest trim panel.

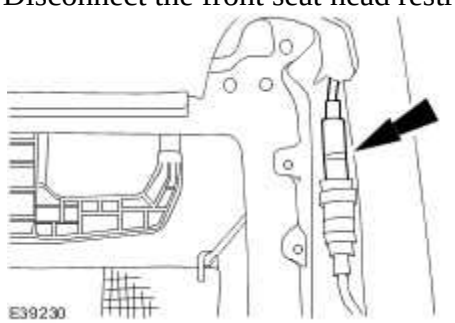
· Disconnect the rear passenger footwell courtesy lamp electrical connector.



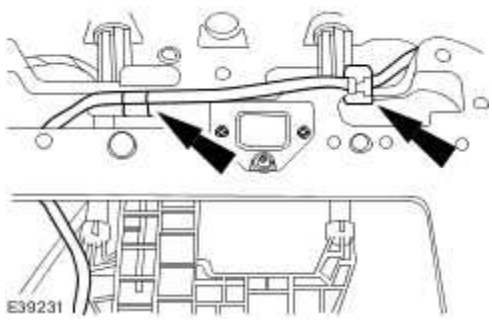
6 . Detach the front seat backrest cover.



7 . Disconnect the front seat head restraint electrical connector.

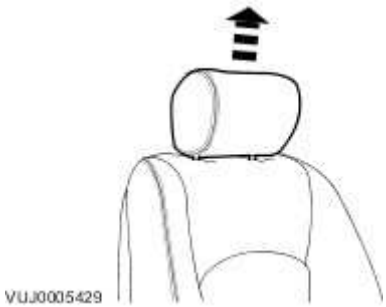


8 . Detach the front seat head restraint wiring harness.

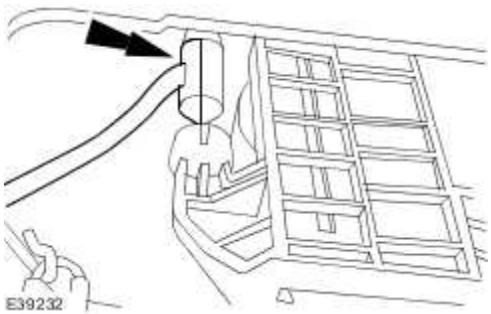


9 . **CAUTION: Make sure that the head restraint is not withdrawn further than 15 mm from the head restraint motor. Failure to follow this instruction may result in damage to the vehicle.**

Detach the front seat head restraint from the head restraint motor.



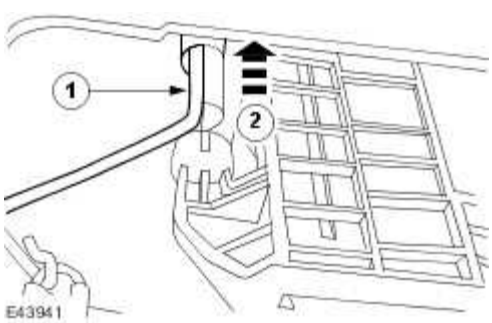
10 . Detach the front seat head restraint wiring harness retaining clip.



11 . **CAUTION: Make sure the cable is not trapped when the head restraint is detached. Failure to follow this instruction may result in damage to the vehicle.**

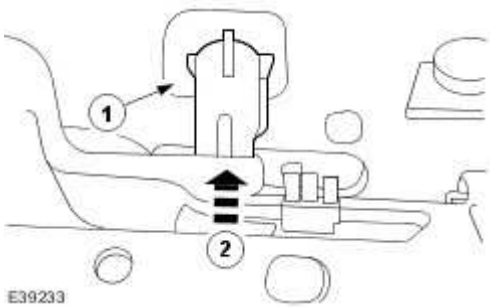
Detach the head restraint from the head restraint retaining post.

1) Align the head restraint wiring harness with the head restraint shaft.
2) Detach the head restraint from the head restraint retaining post.



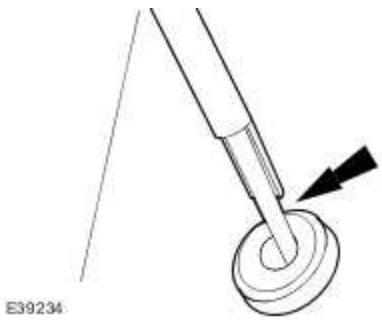
12 . Detach the front seat head restraint retaining post.

1) Release the retaining tang.
2) Detach the front seat head restraint retaining post.



13 . Remove the front seat head restraint.

- Remove the front seat head restraint retaining post.
- Feed the head restraint wiring harness through the cover.



Installation

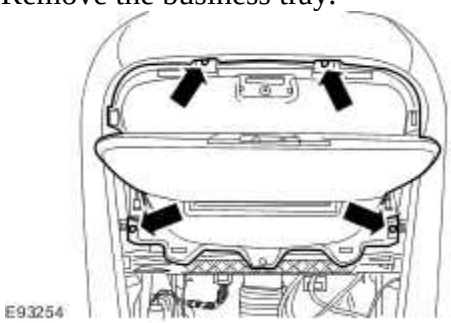
1 . To install, reverse the removal procedure.

Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: H18680->H99999 (76.70.14)

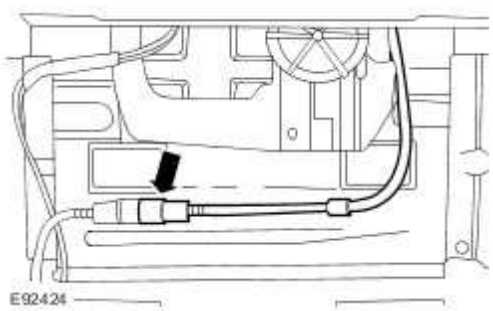
Removal

1 Remove the front seat backrest rear cover.
. For additional information, refer to Front Seat Backrest Rear Cover - VIN Range: H18680->H99999 (76.70.03)

2 . Remove the business tray.



3 . Disconnect and the front seat head restraint wiring harness.

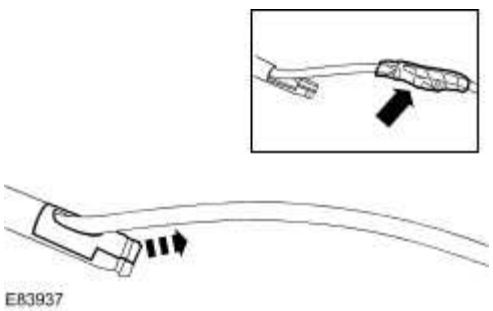


4
· **CAUTION: Make sure that the head restraint is not withdrawn further than 15 mm from the head restraint motor. Failure to follow this instruction may result in damage to the vehicle.**

Detach the front seat head restraint from the head restraint motor.

5. Using a suitable tape secure the front seat head restraint post clip to the front seat head restraint wiring harness.

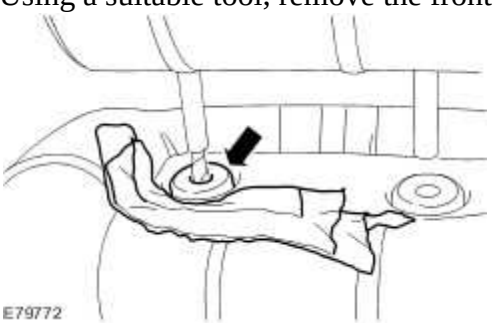
- Release the front seat head restraint post clip from the right-hand head restraint post.



6. **NOTE:**

Apply suitable protective tape around the right-hand head restraint guide tube.

Using a suitable tool, remove the front seat head restraint.



Installation

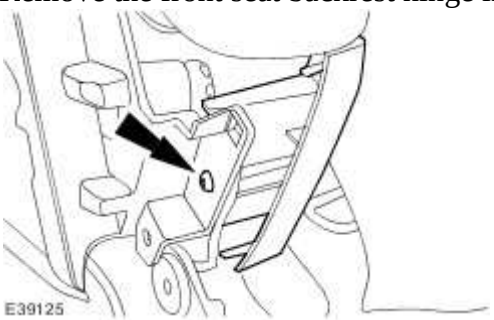
1. To install, reverse the removal procedure.

Front Seat Head Restraint Motor - VIN Range: G00442->H18679 (86.75.17)

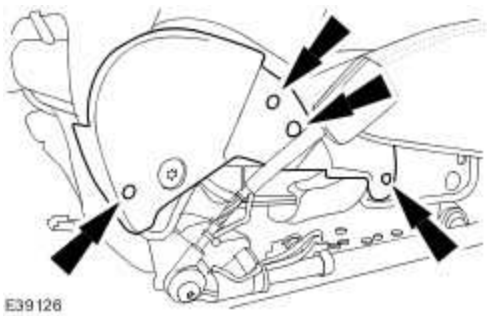
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

2 . Remove the front seat backrest hinge inner trim panel.



3 . Remove the front seat backrest inner trim panel.



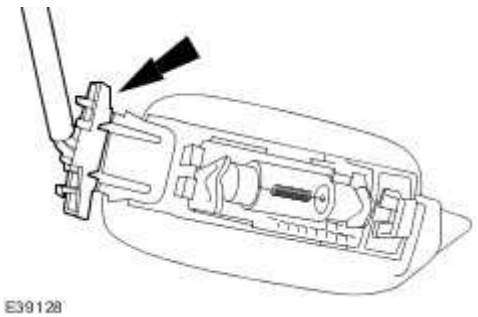
4 . Detach the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

2) Detach the front seat backrest trim panel.

5 Remove the front seat backrest trim panel.

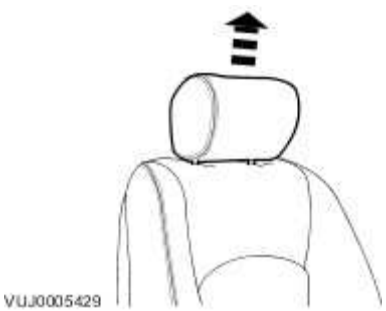
· Disconnect the rear passenger footwell courtesy lamp electrical connector.



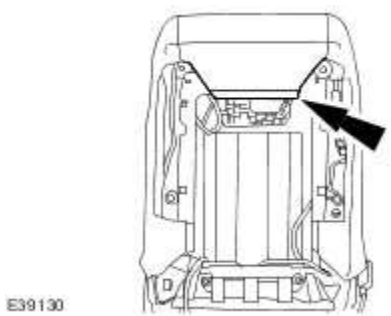
6

· **CAUTION: On vehicles with head restraint video display, make sure that the head restraint is not withdrawn further than 15 mm from the head restraint motor. Failure to follow this instruction may result in damage to the vehicle.**

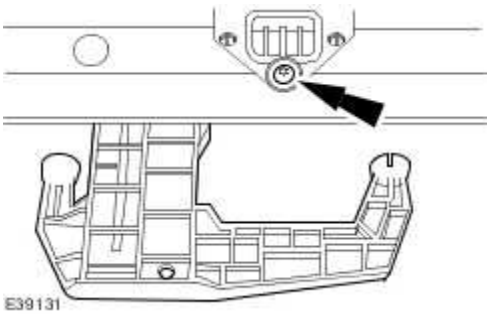
Detach the front seat head restraint.



7 . Detach the front seat backrest cover.

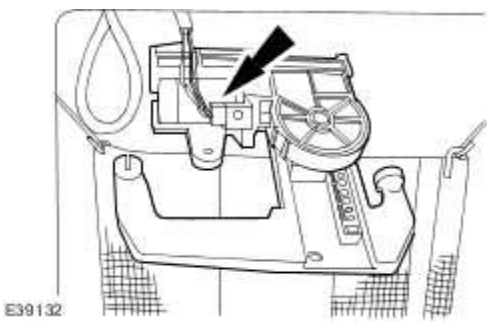


8 . Detach the front seat head restraint motor.



9 . Remove the front seat head restraint motor.

- Disconnect the front seat head restraint motor electrical connector.



Installation

1 . To install, reverse the removal procedure.

Front Seat Head Restraint Motor - VIN Range: H18680->H99999 (86.75.17)

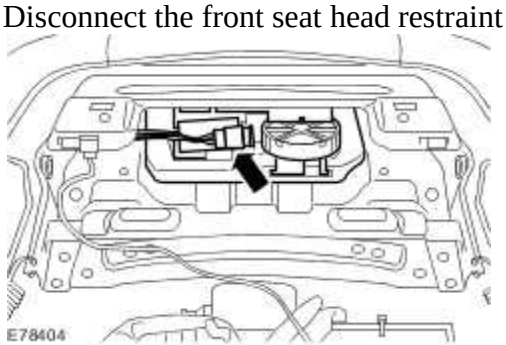
Removal

1 Remove the front seat head restraint.
. For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: H18680->H99999 (76.70.14)

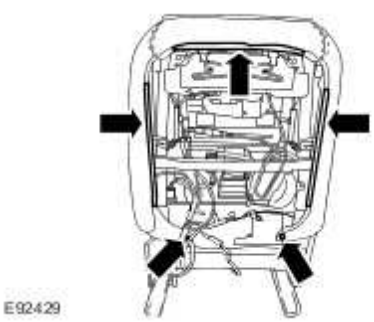
2 . **NOTE:**
Apply suitable protective tape around the right-hand head restraint guide tube.

Using a suitable tool, remove the front seat head restraint guide sleeve.

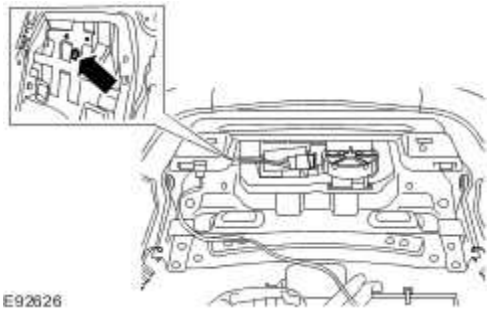
3 . Disconnect the front seat head restraint motor electrical connector.



4 . Detach and the seat backrest cover from the front seat backrest frame.



5 . Remove the front seat head restraint motor.



Installation

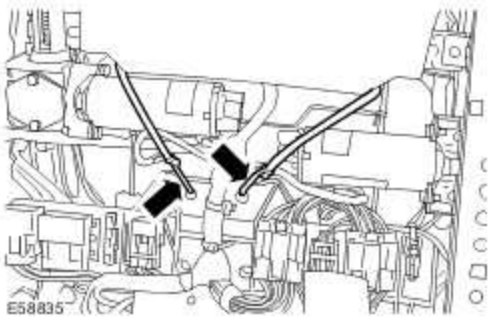
1 . To install, reverse the removal procedure.

Front Seat Height Adjustment Motor (86.75.29)

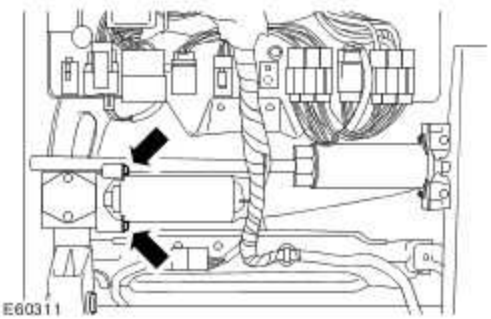
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

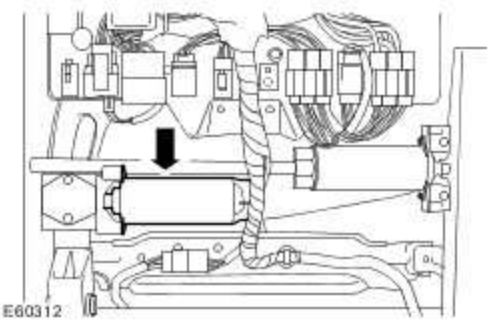
2 . Detach the front seat cushion cover retaining hooks.



3 . Remove the retaining screws.

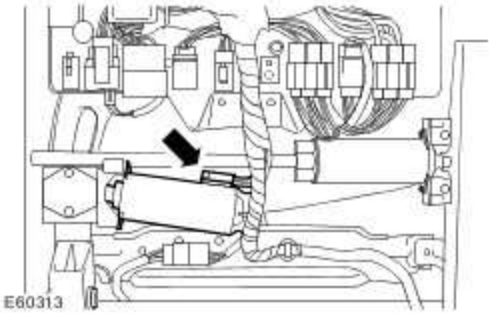


4 . Detach the front seat height adjustment motor.



5 . Remove the front seat height adjustment motor.

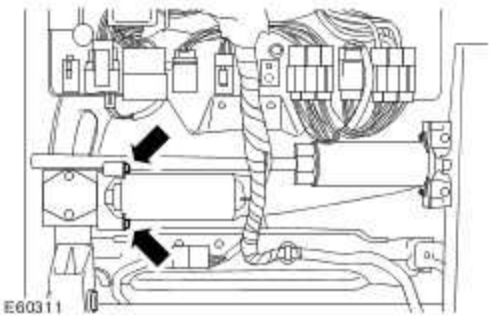
- Disconnect the electrical connector.



Installation

1 . To install, reverse the removal procedure.

Tighten to 5 Nm.



Front Seat Lumbar Motor (86.75.44)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the

battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

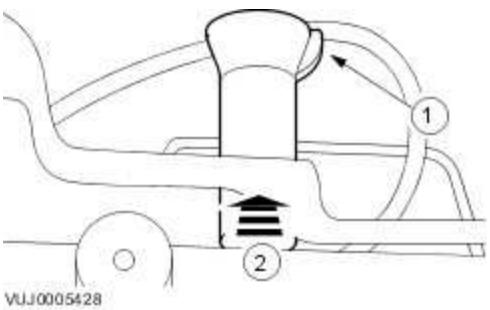
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Remove the front seat head restraint.
For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: G00442->H18679 (76.70.14)

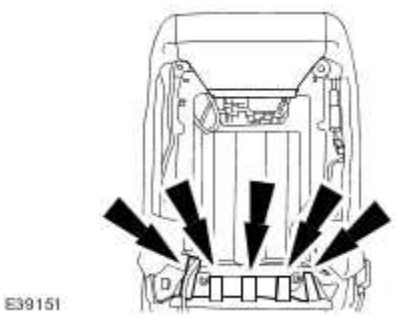
2 . Remove the front seat head restraint retaining post.

1) Release the retaining tang.

2) Remove the front seat head restraint retaining post.

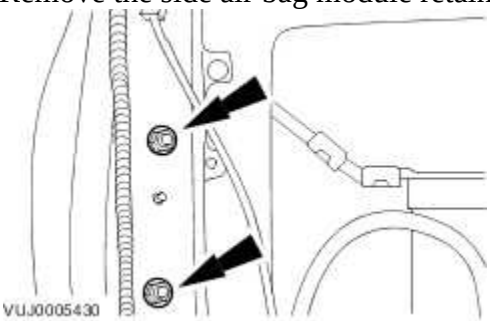


3 . Detach the front seat cushion cover.



4 . Detach the front seat backrest cover.

5 . Remove the side air bag module retaining nuts.

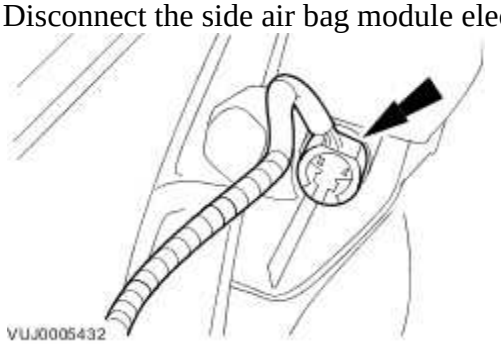


6 . Detach the front seat backrest cover and cushion.

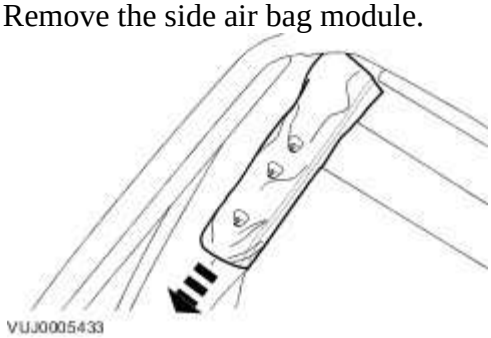
1) Reposition the seat backrest cover and cushion.

2) Detach the seat backrest cover and cushion.

7 . Disconnect the side air bag module electrical connector.

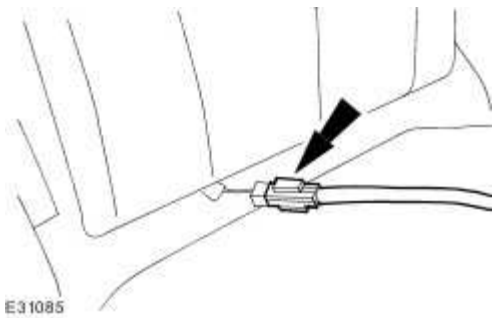


8 . Remove the side air bag module.

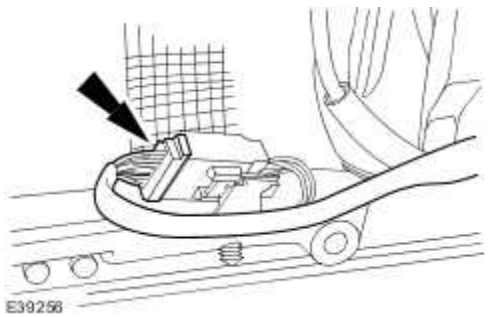


9 . Remove the front seat backrest cover and cushion.

- Disconnect the front seat cushion heater pad electrical connector.

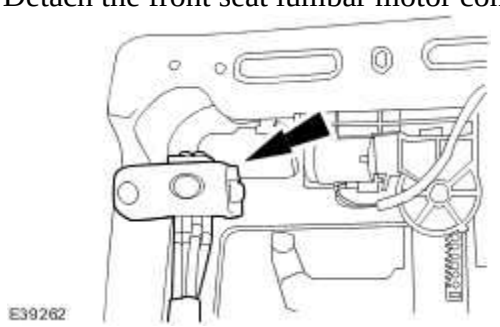


10 . Disconnect the front seat lumbar motor electrical connector.

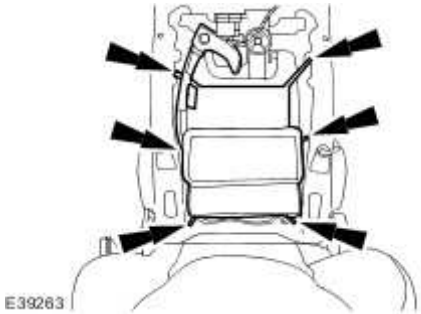


11 . Detach the front seat lumbar motor.

12 . Detach the front seat lumbar motor control valve.



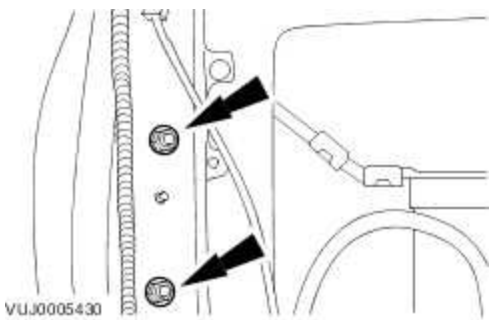
13 . Remove the front seat lumbar motor.



Installation

1 . To install, reverse the removal procedure.

Tighten to 7 Nm.



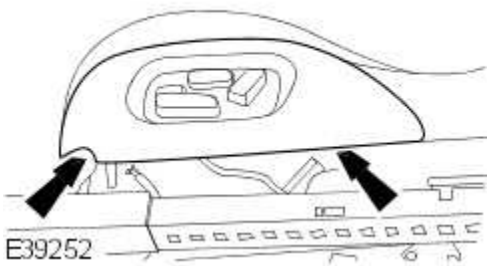
Front Seat Rear Height Adjustment Motor (86.75.32)

Removal

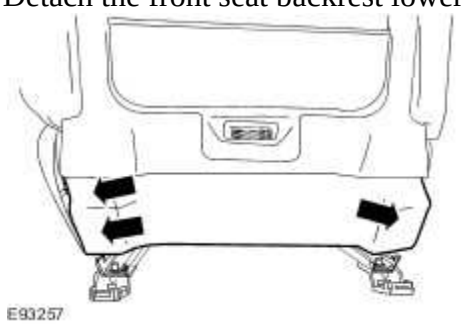
1 Remove the front seat backrest rear cover.
. For additional information, refer to Front Seat Backrest Rear Cover - VIN Range: H18680->H99999 (76.70.03)

2 . Detach and reposition the front seat control switch and trim panel assembly.

- Remove the retaining screws.

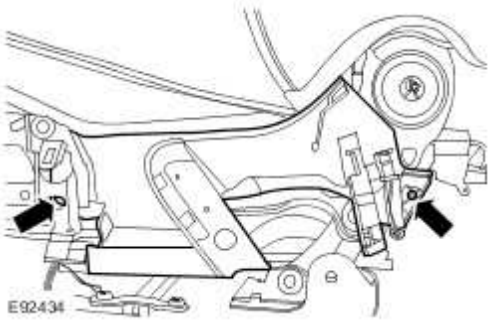


3 . Detach the front seat backrest lower rear cover.

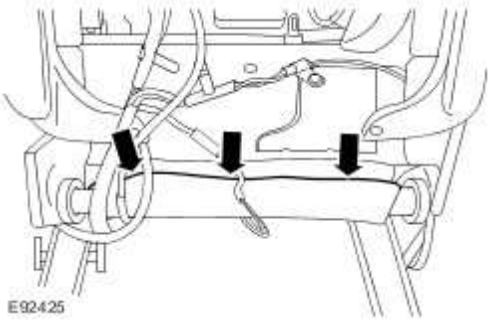


4 . Remove the front seat LH trim panel.

- Remove the retaining screws.



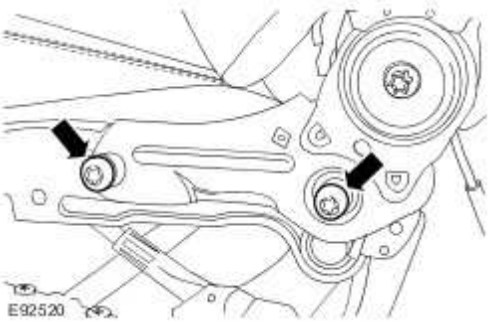
5 . Detach the front seat backrest cover velcro strap.



6 . **NOTE:**

Left-hand side shown, right-hand side similar.

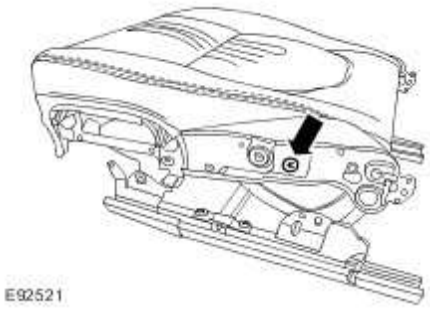
Displace and reposition the front seat backrest.



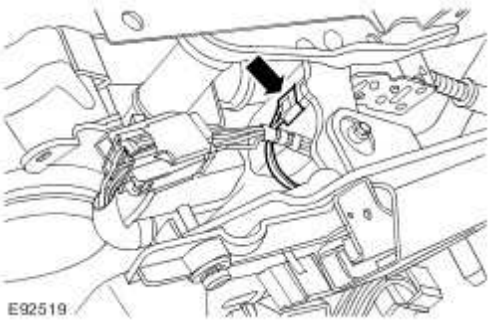
7 . **NOTE:**

Left-hand side shown, right-hand side similar.

Reposition the seat base.

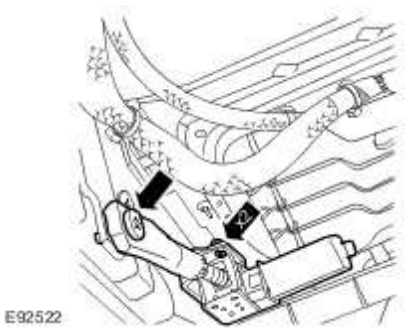


8 . Disconnect the front seat rear height adjustment motor electrical connector.



9 . Remove the front seat rear height adjustment motor.

- Remove the retaining screws.



Installation

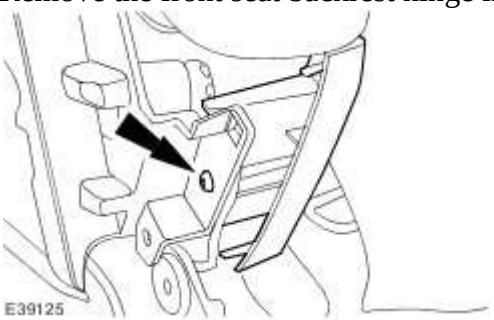
1 . To install, reverse the removal procedure.

Front Seat Recliner Motor - VIN Range: G00442->H18679 (86.75.04)

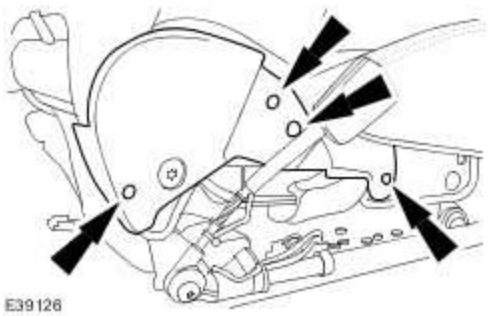
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

2 . Remove the front seat backrest hinge inner trim panel.



3 . Remove the front seat backrest inner trim panel.



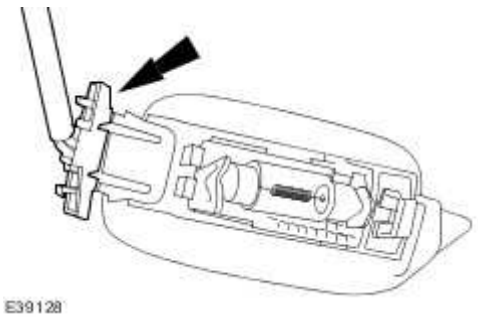
4 . Detach the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

2) Detach the front seat backrest trim panel.

5 Remove the front seat backrest trim panel.

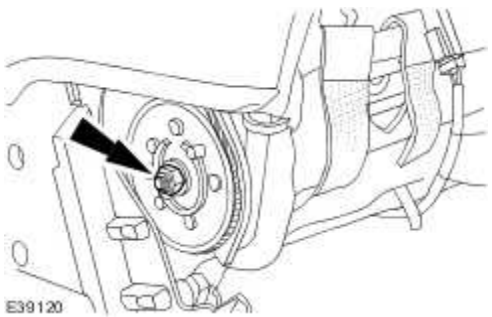
- Disconnect the rear passenger footwell courtesy lamp electrical connector.



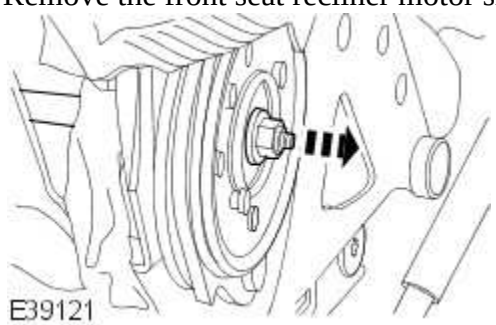
6 **NOTE:**

- Do not remove or carry out any repairs to the anti-whiplash system (AWS) on the front seat back.

Remove the front seat recliner motor shaft retaining nut.

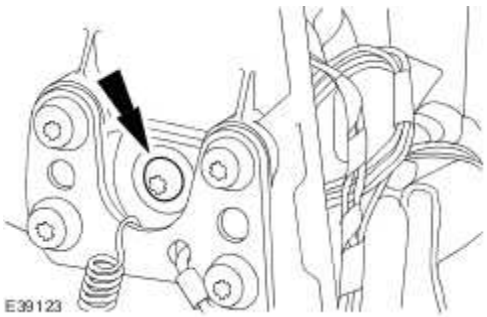


7 . Remove the front seat recliner motor shaft.



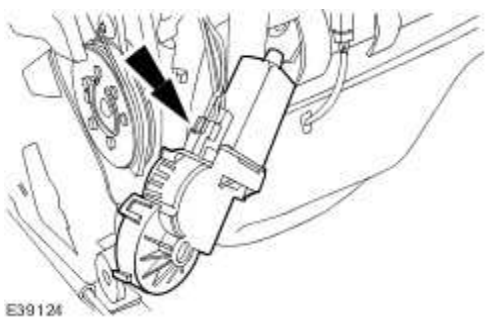
8 . Detach the front seat backrest cover.

9 . Detach the front seat recliner motor.



10 . Remove the front seat recliner motor.

- Disconnect the front seat recliner motor electrical connector.



Installation

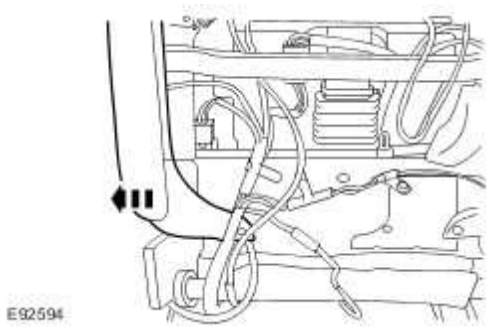
1 . To install, reverse the removal procedure.

Front Seat Recliner Motor - VIN Range: H18680->H99999 (86.75.04)

Removal

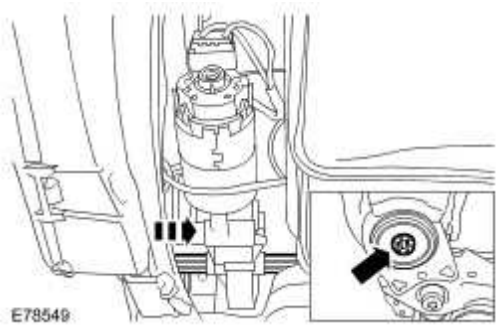
1 Remove the front seat backrest rear cover.
. For additional information, refer to Front Seat Backrest Rear Cover - VIN Range: H18680->H99999 (76.70.03)

2 . Detach the front seat backrest cover.

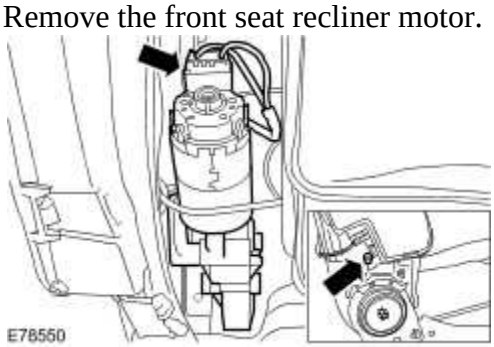


3 . Reposition the front seat backrest recliner motor shaft.

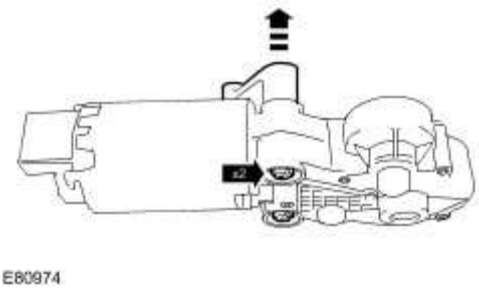
- Remove the retaining clip.



4 . Remove the front seat recliner motor.



5 . Remove the front seat recliner motor bracket.



E80974

Installation

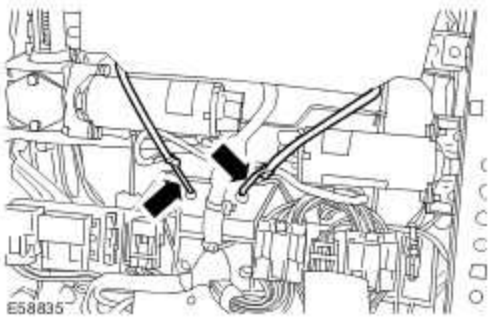
1 . To install, reverse the removal procedure.

Front Seat Track Motor (86.75.33)

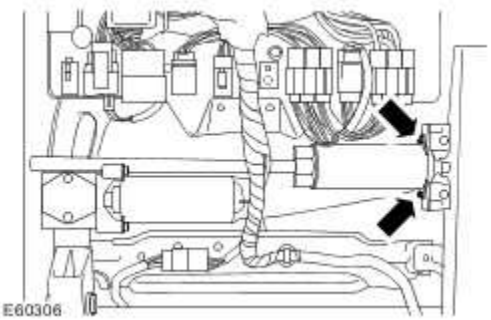
Removal

1 . Remove the front seat.
For additional information, refer to Front Seat (76.70.01)

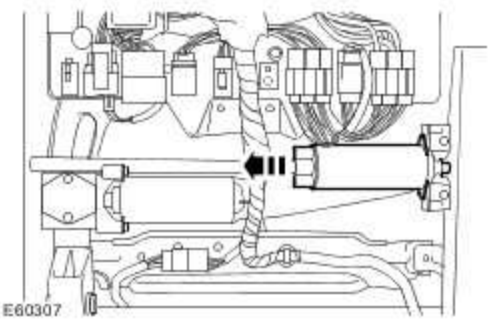
2 . Detach the front seat cusion cover retaining hooks.



3 . Remove the retaining screws.



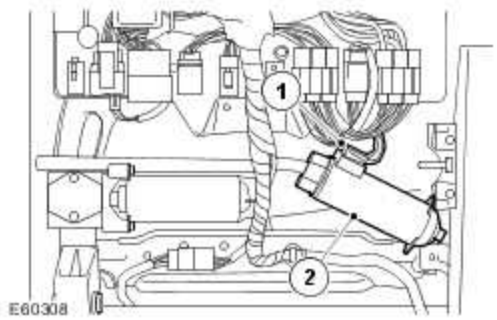
4 . Detach the front seat track motor.



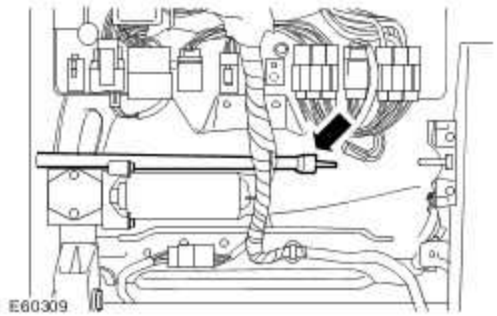
5 . Remove the front seat track motor.

1) Disconnect the electrical connector.

2) Remove the front seat track motor.

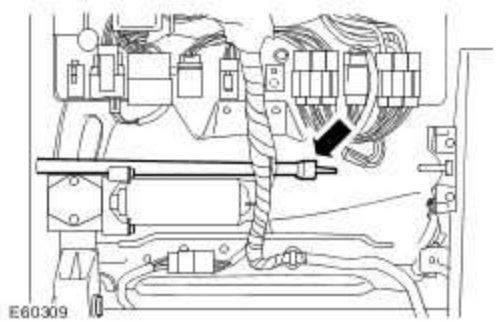


6 . Remove the front seat track motor drive bar.



Installation

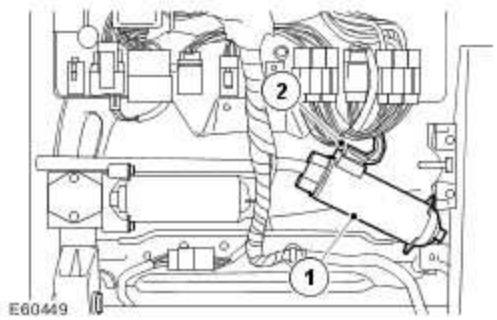
1 . Install the front seat track motor drive bar.



2 . Connect the electrical connector.

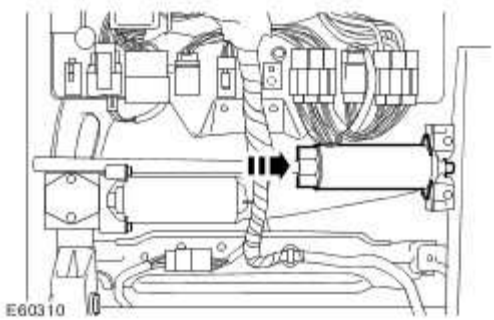
1) Install the front seat track motor.

2) Connect the electrical connector.



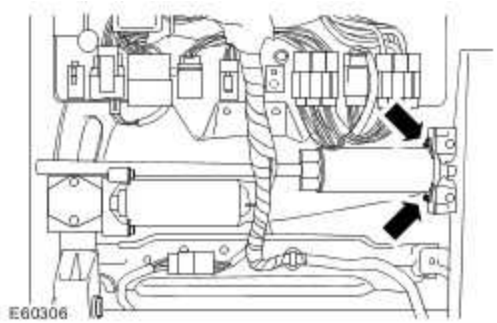
3
. **CAUTION: Make sure that the front seat track motor drive bar is correctly aligned.**

Attach the front seat track motor.

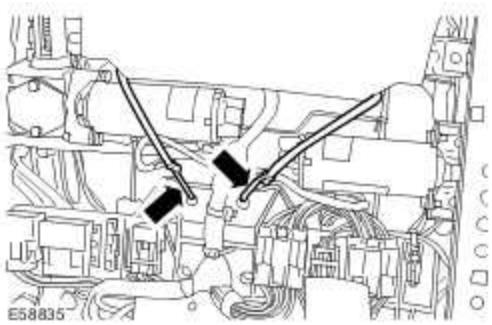


4 . Install the retaining screws.

Tighten to 5 Nm.



5 . Attach the front seat cusion cover retaining hooks.



6 . Install the front seat.
For additional information, refer to Front Seat (76.70.01)

Lumbar Assembly (86.75.12)

Removal

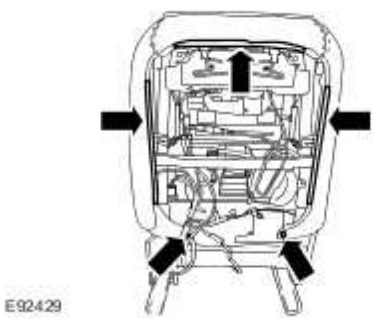
1 Remove the front seat head restraint.
. For additional information, refer to Front Seat Head Restraint - Vehicles With: Head Restraint Video Display, VIN Range: H18680->H99999 (76.70.14)

2 . **NOTE:**

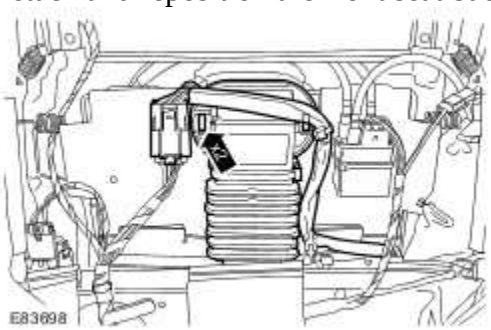
Apply suitable protective tape around the right-hand head restraint guide tube.

Using a suitable tool, remove the front seat head restraint guide sleeve.

3 . Detach and reposition the front seat backrest cover from the front seat backrest frame.



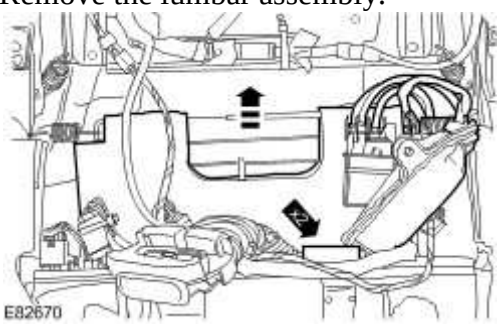
4 . Detach and reposition the front seat backrest thermo-electric device.



5 . Detach the front seat backrest thermo-electric device duct.

6 . Disconnect the 2 lumber assembly electrical connectors.

7 . Remove the lumbar assembly.



Installation

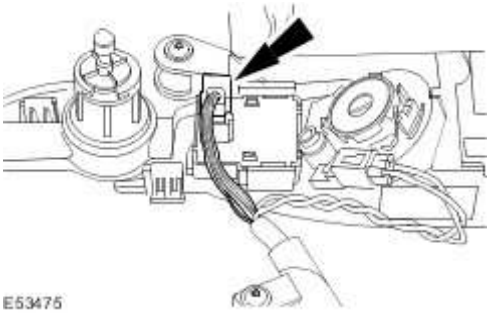
1 . To install, reverse the removal procedure.

Memory Seat Position Switch

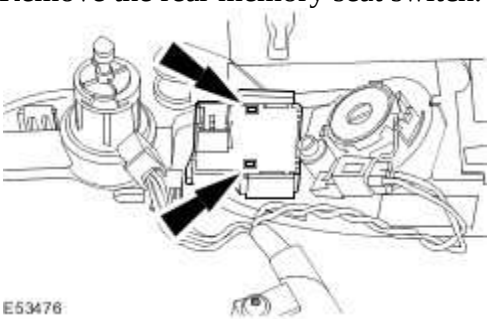
Removal

1 . Remove the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

2 . Disconnect the electrical connector.



3 . Remove the rear memory seat switch.



Installation

1 . To install, reverse the removal.

Rear Outer Seat Backrest (76.70.76)

Removal

1 **NOTE:**

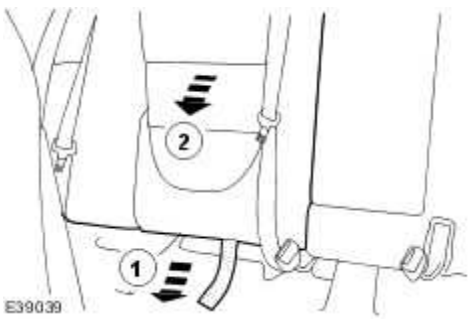
· To aid installation make sure the rear outer seat backrest is in the fully reclined position before removal..

Remove the rear seat cushion. For additional information refer to
For additional information, refer to Rear Outer Seat Cushion (76.70.44) or
For additional information, refer to Rear Seat Cushion (76.70.37) in this section.

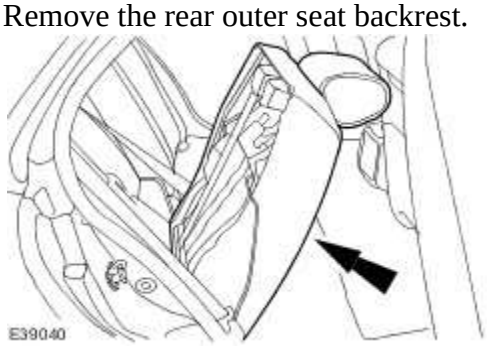
2 . Detach the rear outer seat backrest.

1) Release the rear outer seat backrest retaining clip.

2) Detach the rear outer seat backrest.



3 . Remove the rear outer seat backrest.



Installation

1 . **NOTE:**

Make sure the rear outer seat backrest pivot bracket inserts are correctly installed.

NOTE:

Install new rear outer seat backrest pivot bracket inserts if they are damaged.

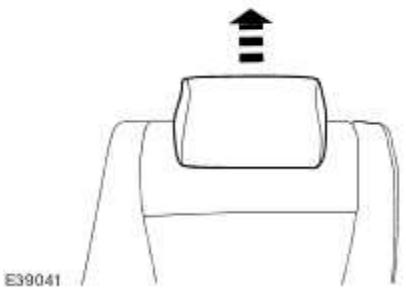
To install, reverse the removal procedure.

Rear Outer Seat Backrest Cover (76.70.51)

Removal

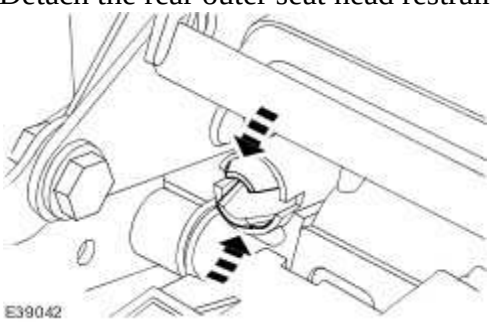
1 . Remove the rear outer seat backrest.
For additional information, refer to Rear Outer Seat Backrest (76.70.76)

2 . Remove the rear seat head restraint.



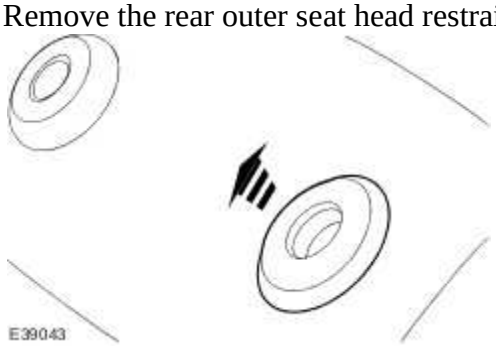
3 . **NOTE:**
Left-hand shown, right-hand similar.

Detach the rear outer seat head restraint retaining post.

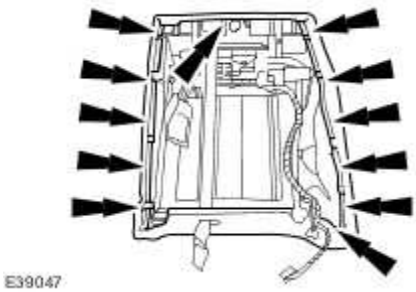


4 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the rear outer seat head restraint retaining post.



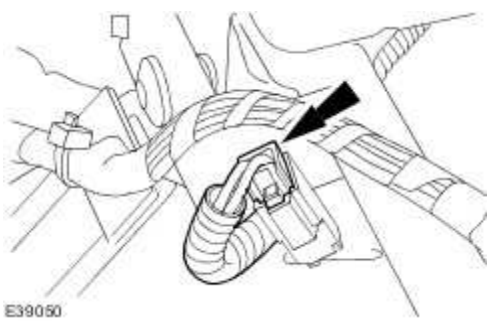
5 . Detach the rear outer seat backrest cover.



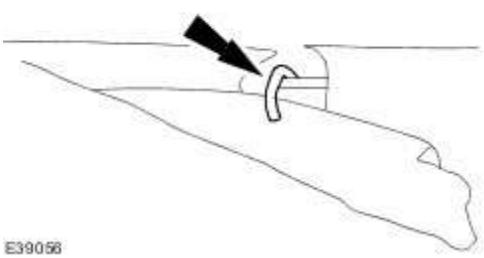
6 . Detach the rear outer seat backrest cover and cushion.

7 Remove the rear outer seat backrest cover and cushion.

. Disconnect the rear outer seat backrest heater pad electrical connector.



8 . Remove and discard the rear outer seat backrest cover retaining clips.



9 . Remove the rear outer seat backrest cover.

Installation

1 . **NOTE:**

Install new rear outer seat cover backrest retaining clips.

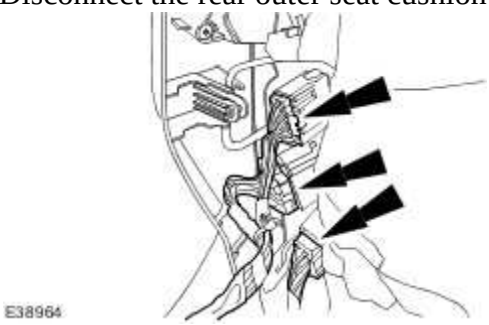
To install, reverse the removal procedure.

Rear Outer Seat Cushion (76.70.44)

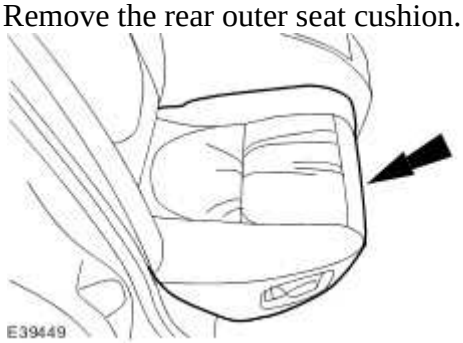
Removal

1 . Detach the rear outer seat cushion.
- Release the rear outer seat cushion retaining clips.

2 . Disconnect the rear outer seat cushion electrical connectors.



3 . Remove the rear outer seat cushion.



Installation

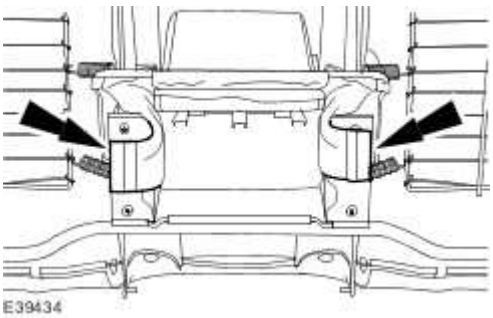
1 . To install, reverse the removal procedure.

Rear Seat Armrest (76.70.39)

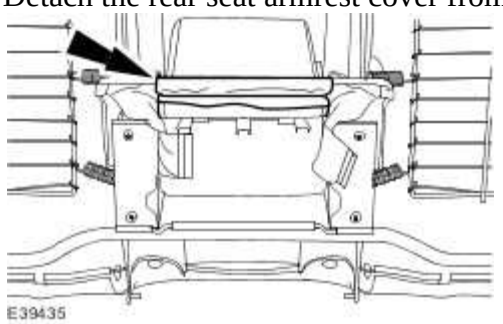
Removal

1 . Remove the rear seat backrest.
For additional information, refer to Rear Seat Backrest (76.70.38)

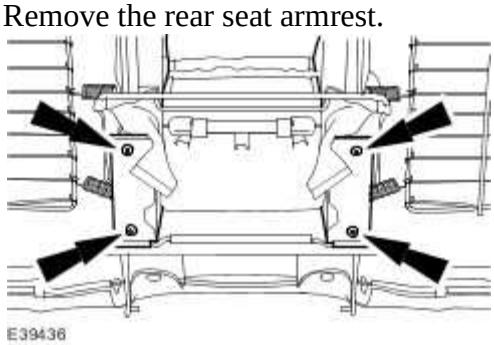
2 . Detach the rear seat backrest cover.



3 . Detach the rear seat armrest cover from the rear seat backrest.



4 . Remove the rear seat armrest.



Installation

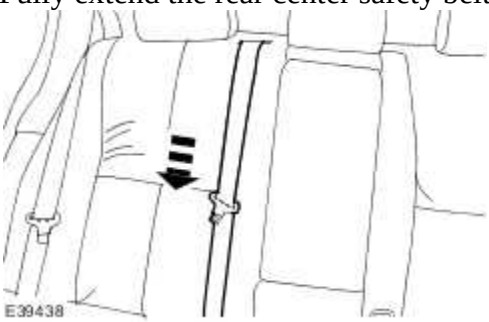
1 . To install, reverse the removal procedure.

Rear Seat Backrest (76.70.38)

Removal

1 . Remove the rear seat cushion.
For additional information, refer to Rear Seat Cushion (76.70.37)

2 . Fully extend the rear center safety belt.

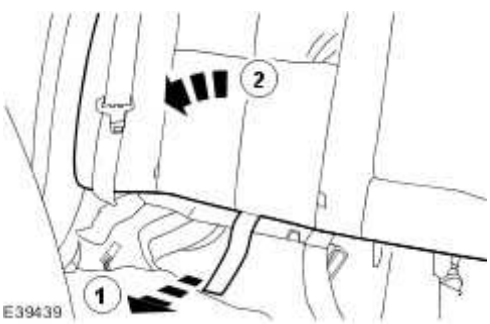


3 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the rear seat backrest.

1) Release the rear seat backrest retaining clip.

2) Detach the rear seat backrest.



4 . Remove the rear seat backrest.

Installation

1 . **NOTE:**

Make sure the rear seat backrest pivot bracket inserts are correctly installed.

NOTE:

Install new rear seat backrest pivot bracket inserts if they are damaged.

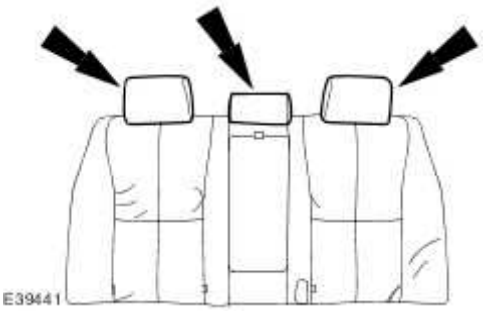
To install, reverse the removal procedure.

Rear Seat Backrest Cover (76.70.48)

Removal

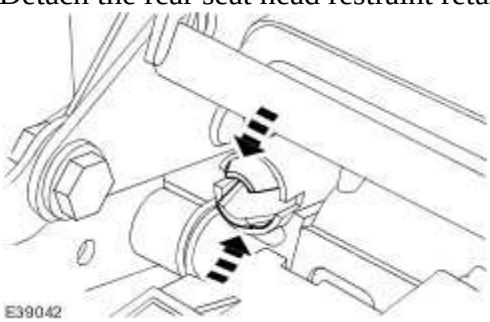
1 . Remove the rear seat armrest.
For additional information, refer to Rear Seat Armrest (76.70.39)

2 . Remove the rear seat head restraints.



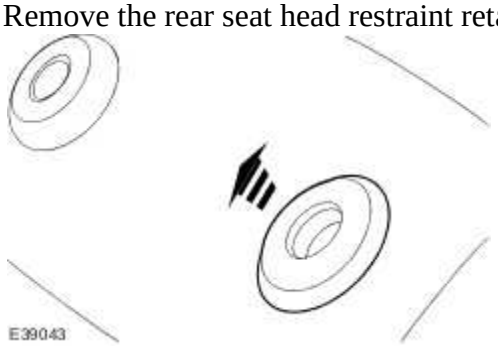
3 . **NOTE:**
Left-hand shown for clarity, others similar.

Detach the rear seat head restraint retaining post.

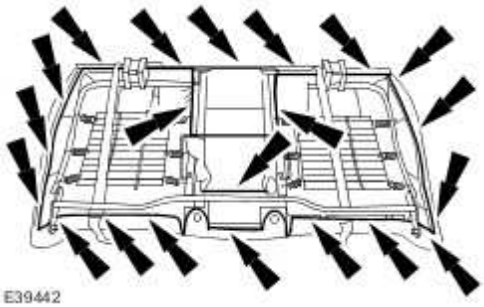


4 . **NOTE:**
Left-hand shown for clarity, others similar.

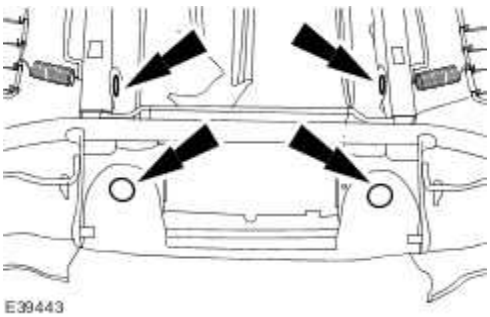
Remove the rear seat head restraint retaining post.



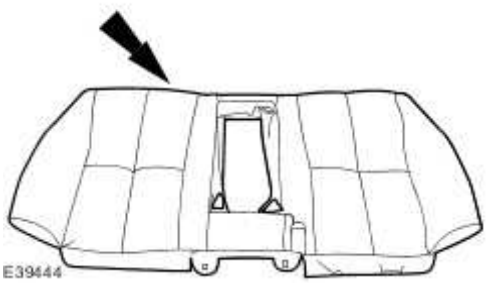
5 . Detach the rear seat backrest cover.



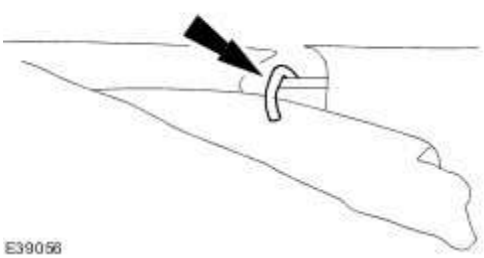
6 . Remove the rear seat backrest cover retaining clips.



7 . Remove the rear seat backrest cover and cushion.



8 . Remove and discard the rear seat backrest cover retaining clips.



9 . Remove the rear seat backrest cover.

Installation

1 . **NOTE:**

Install new rear seat backrest cover retaining clips.

To install, reverse the removal procedure.

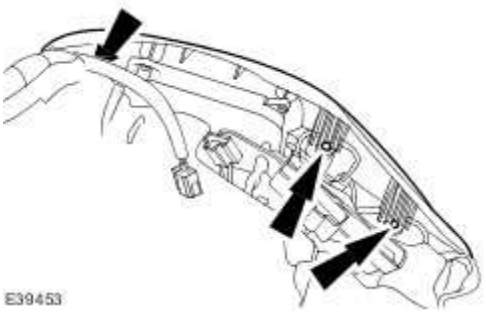
Rear Seat Control Switch (86.75.42)

Removal

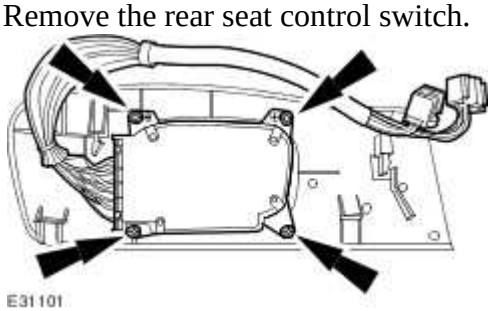
1 . Remove the rear seat cushion. For additional information refer to
For additional information, refer to Rear Outer Seat Cushion (76.70.44) or
For additional information, refer to Rear Seat Cushion (76.70.37) in this section.

2 . Disconnect the rear seat control switch electrical connector.

3 . Remove the rear seat control switch and trim panel assembly.



4 . Remove the rear seat control switch.



Installation

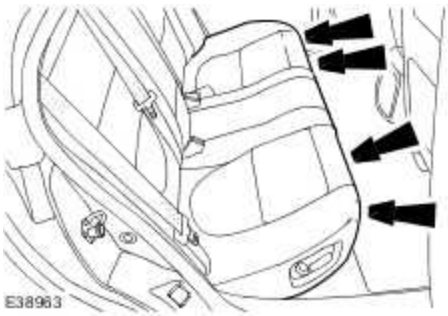
1 . To install, reverse the removal procedure.

Rear Seat Cushion (76.70.37)

Removal

1 . Detach the rear seat cushion.

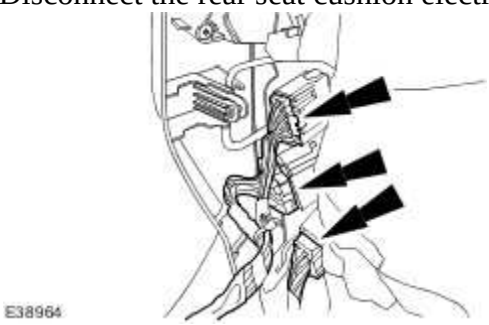
- Release the rear seat cushion retaining clips.



2 . **NOTE:**

Right-hand shown, left-hand similar.

Disconnect the rear seat cushion electrical connectors.



3 . Remove the rear seat cushion.

Installation

1 **NOTE:**

- Make sure the rear seat cushion is correctly located under the rear retaining brackets.

To install, reverse the removal procedure.

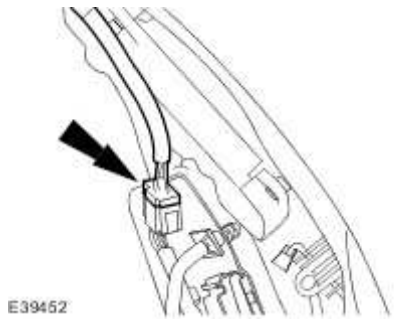
Rear Seat Cushion Cover (76.70.47)

Removal

1 . Remove the rear seat cushion.
For additional information, refer to Rear Seat Cushion (76.70.37)

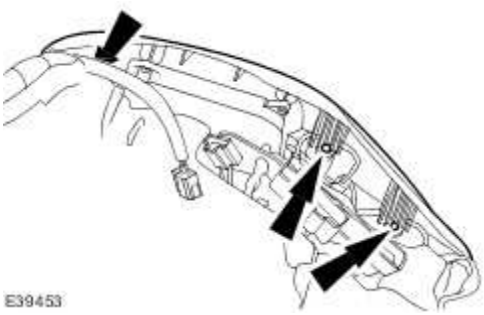
2 . **NOTE:**
Right-hand shown, left-hand similar.

Disconnect the rear seat control switch electrical connector.

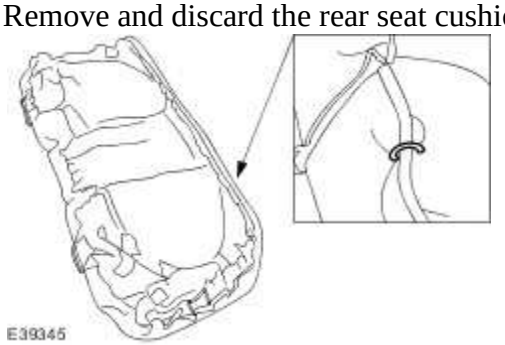


3 . **NOTE:**
Right-hand shown, left-hand similar.

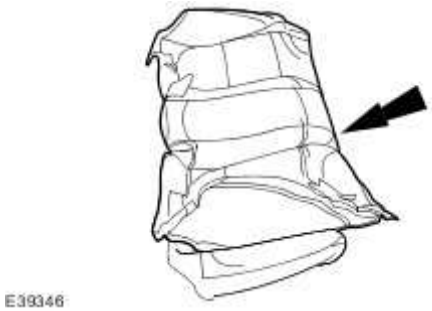
Remove the rear seat control switch and trim panel assembly.



4 . Remove and discard the rear seat cushion cover retaining clips.



5 . Remove the rear seat cushion cover.



Installation

1 . **NOTE:**

Install new rear seat cushion cover retaining clips.

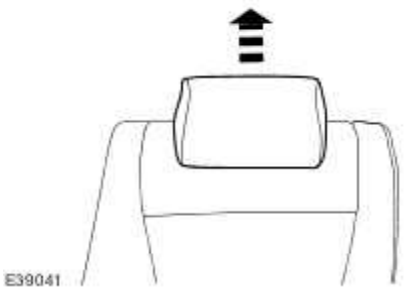
To install, reverse the removal procedure.

Rear Seat Head Restraint Motor (86.75.41)

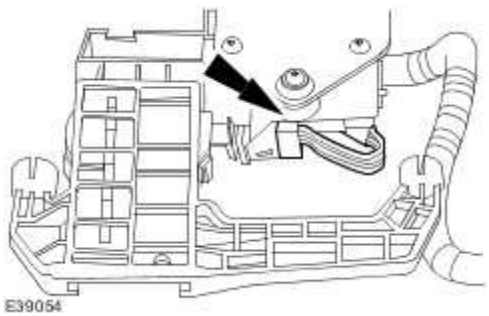
Removal

1 . Remove the rear outer seat backrest.
For additional information, refer to Rear Outer Seat Backrest (76.70.76)

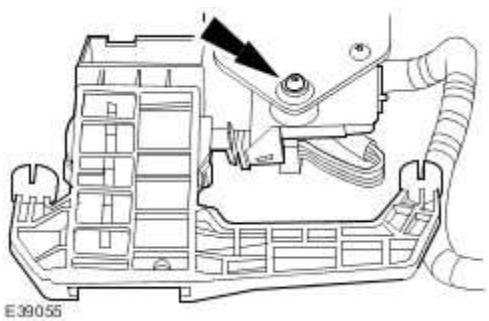
2 . Detach the rear seat head restraint.



3 . Disconnect the rear seat head restraint motor electrical connector.



4 . Remove the rear seat head restraint motor.



Installation

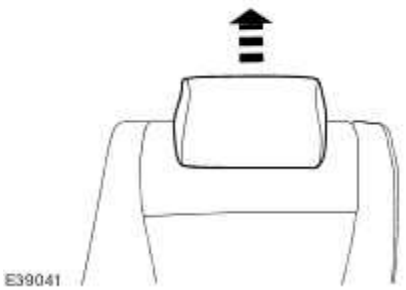
1 . To install, reverse the removal procedure.

Rear Seat Lumbar Motor (86.75.43)

Removal

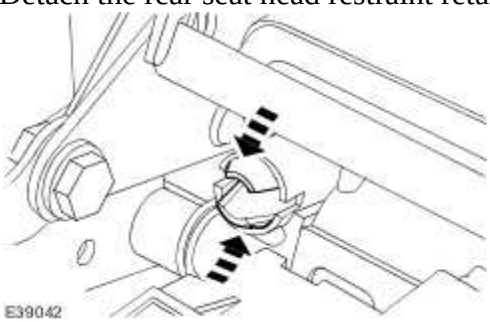
1 . Remove the rear outer seat backrest.
For additional information, refer to Rear Outer Seat Backrest (76.70.76)

2 . Remove the rear seat head restraint.



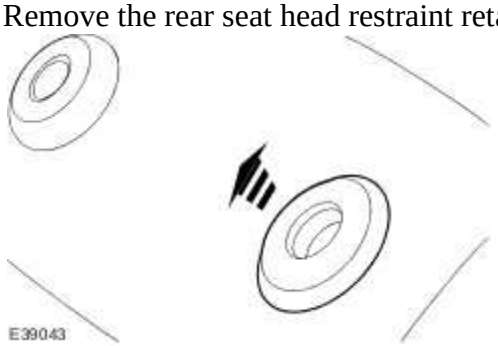
3 . **NOTE:**
Right-hand shown, left-hand similar.

Detach the rear seat head restraint retaining post.

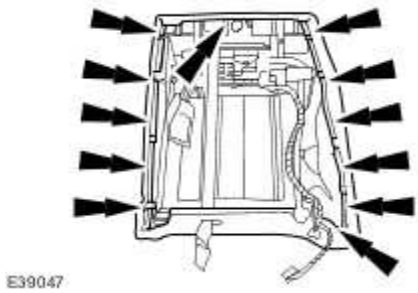


4 . **NOTE:**
Right-hand shown, left-hand similar.

Remove the rear seat head restraint retaining post.



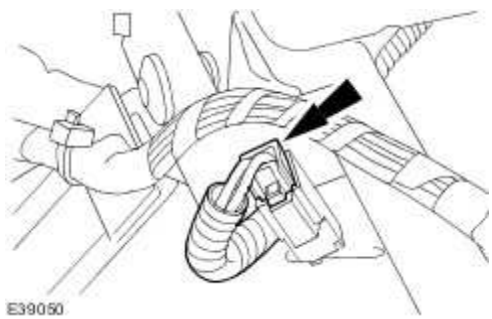
5 . Detach the rear outer seat backrest cover.



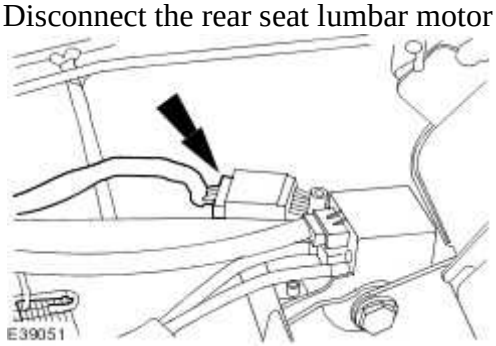
6 . Detach the rear outer seat backrest cover and cushion.

7 Remove the rear outer seat backrest cover and cushion.

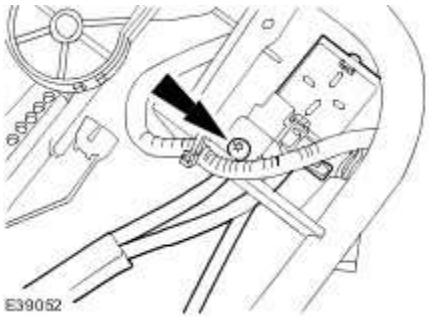
. Disconnect the rear outer seat backrest heater pad electrical connector.



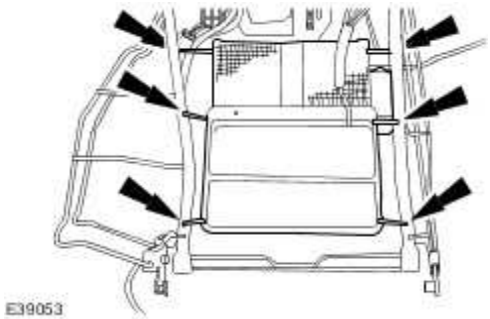
8 . Disconnect the rear seat lumbar motor electrical connector.



9 . Detach the rear seat lumbar motor.



10 . Remove the rear seat lumbar motor.



Installation

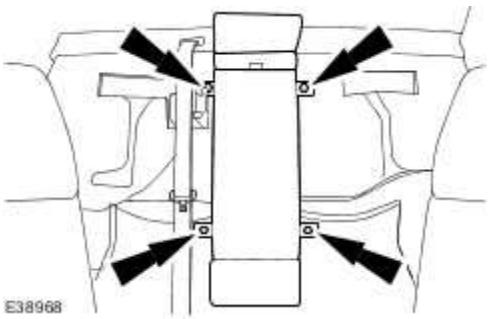
1 . To install, reverse the removal procedure.

Seat Armrest (76.70.97)

Removal

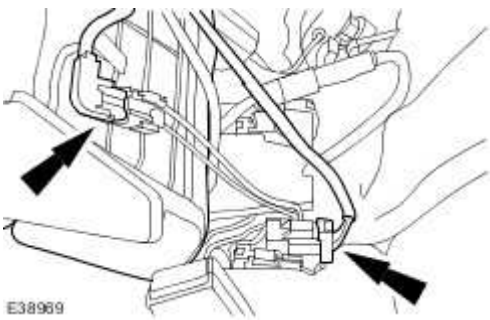
1 . Remove the rear seat outer backrests.
For additional information, refer to Rear Outer Seat Backrest (76.70.76)

2 . Detach the seat armrest.



3 . Remove the seat armrest.

- Disconnect the seat armrest electrical connectors.



Installation

1 . To install, reverse the removal procedure.

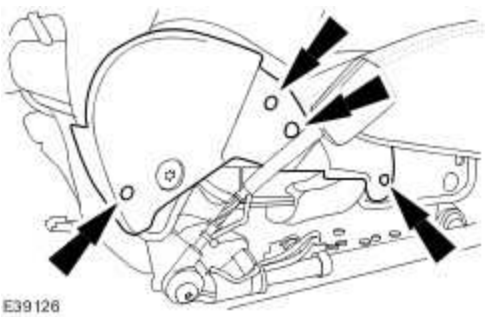
Seat Base (76.70.08)

Removal

1 . Remove the front seat control switch.
For additional information, refer to Front Seat Control Switch (86.75.46)

2 . Remove the front seat backrest hinge inner trim panel.

3 . Remove the front seat backrest inner trim panel.



4 . Detach the front seat backrest trim panel.

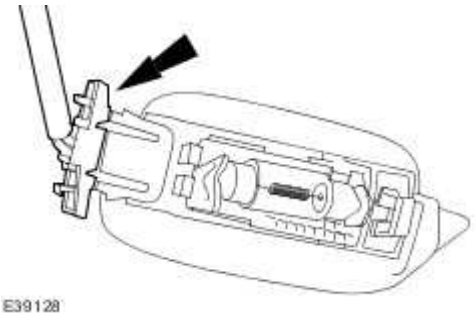
1) Detach the front seat backrest trim panel retaining clips.

2) Detach the front seat backrest trim panel.

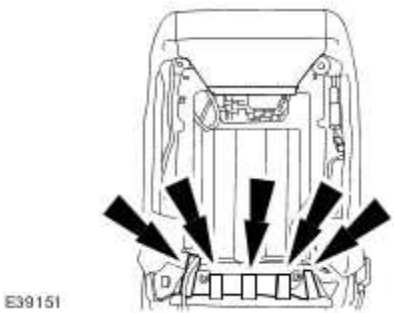
5 Remove the front seat backrest trim panel.

· Disconnect the rear passenger footwell courtesy lamp electrical

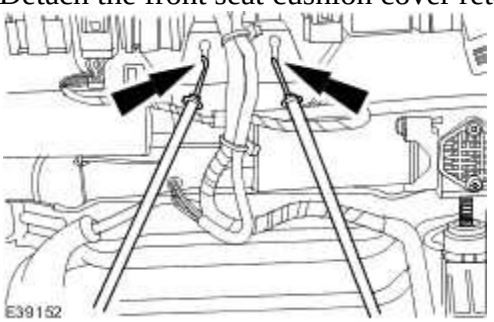
connector.



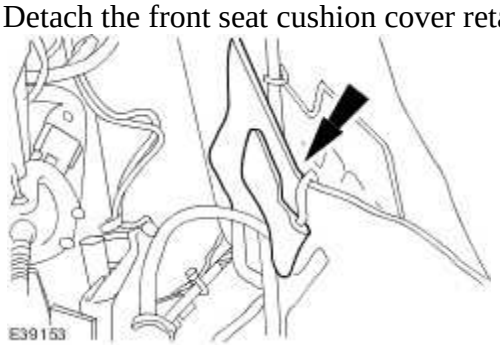
6 . Detach the front seat cushion cover.



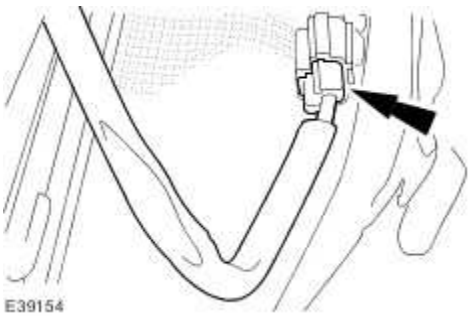
7 . Detach the front seat cushion cover retaining hooks.



8 . Detach the front seat cushion cover retaining strap.

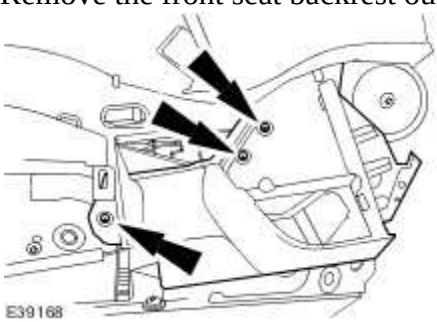


9 . Disconnect the front seat cushion heater pad electrical connector.

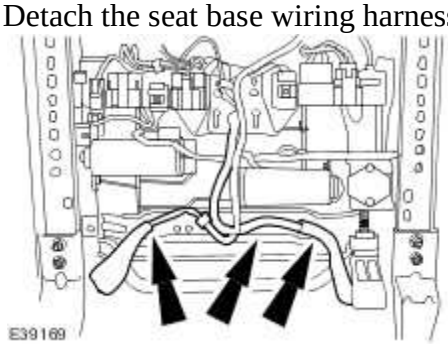


10 . Remove the front seat cushion and cushion cover assembly.

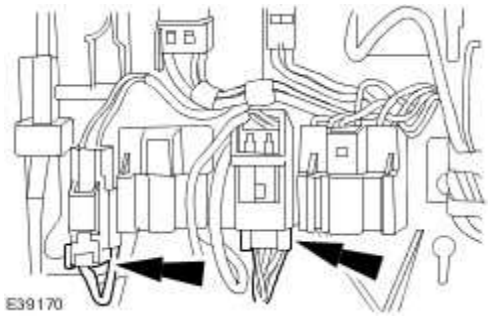
11 . Remove the front seat backrest outer trim panel.



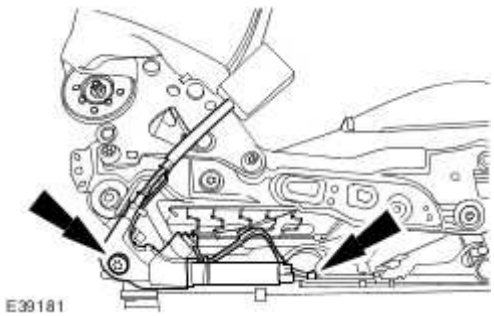
12 . Detach the seat base wiring harness.



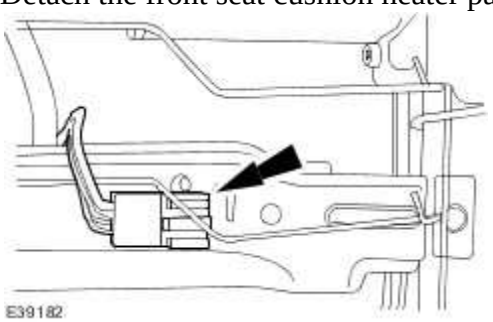
13 . Disconnect the electrical connectors.



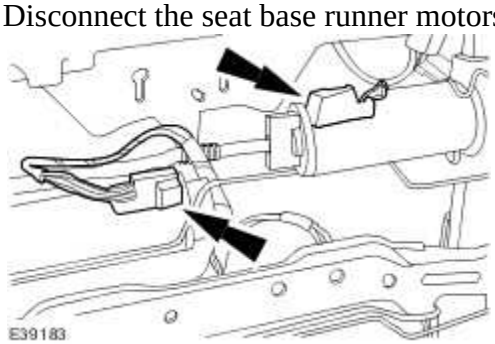
14 . Remove the front seat belt buckle.



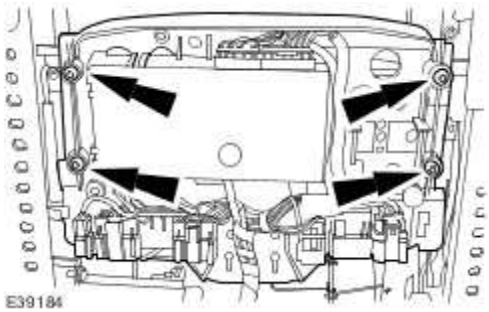
15 . Detach the front seat cushion heater pad electrical connector.



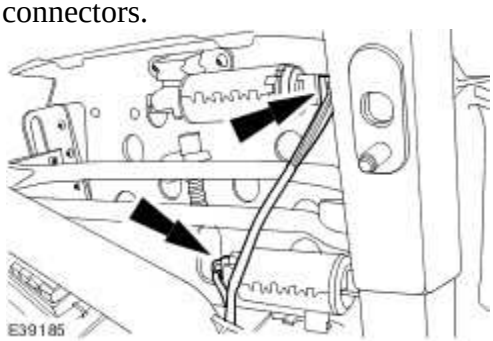
16 . Disconnect the seat base runner motors electrical connectors.



17 . Detach the driver seat module retaining bracket.



18 Disconnect the seat base height adjustment and cushion extend motors electrical connectors.



19 **NOTE:**

Do not remove or carry out any repairs to the anti-whiplash system (AWS) on the front seat back.

NOTE:

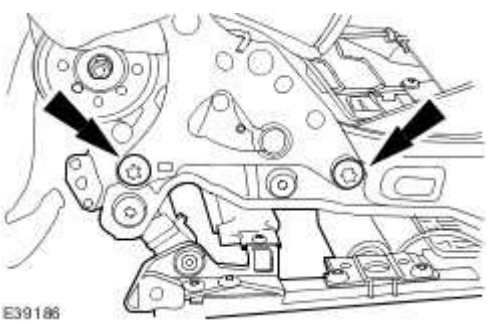
In the event of the AWS operating, there are no serviceable components.

NOTE:

Right-hand shown, left-hand similar.

Remove the seat base.

- Remove the front seat backrest retaining bolts.



Installation

1 **NOTE:**

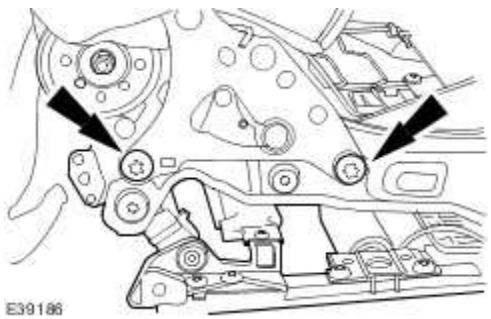
· Do not remove or carry out any repairs to the anti-whiplash system (AWS) on the front seat back.

NOTE:

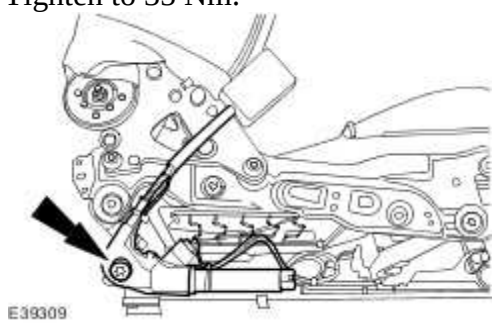
In the event of the AWS operating, there are no serviceable components.

To install, reverse the removal procedure.

➤ Tighten to 25 Nm.



2 . Tighten to 35 Nm.

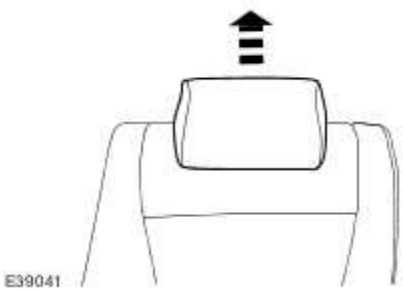


Rear Seat Backrest - Vehicles With: 40/20/40 Split Seat (76.70.48)

Disassembly

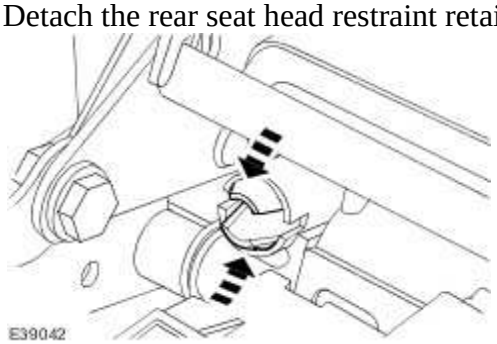
1 . Remove the rear outer seat backrest.
For additional information, refer to Rear Outer Seat Backrest (76.70.76)

2 . Remove the rear seat head restraint.



3 . **NOTE:**
Left-hand shown, right-hand similar.

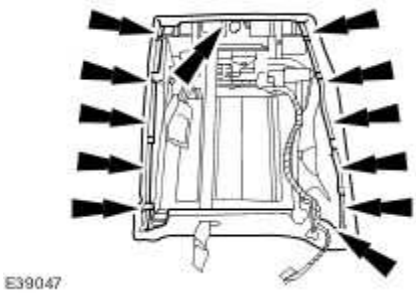
Detach the rear seat head restraint retaining post.



4 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the rear seat head restraint retaining post.

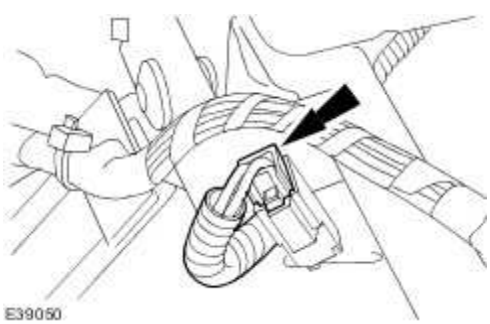
5 . Detach the rear seat outer backrest cover.



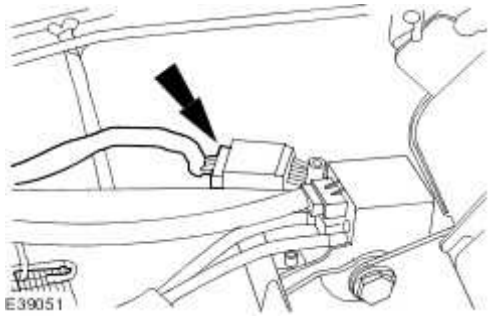
6 . Detach the rear seat backrest cover and cushion.

7 . Remove the rear seat backrest cover and cushion.

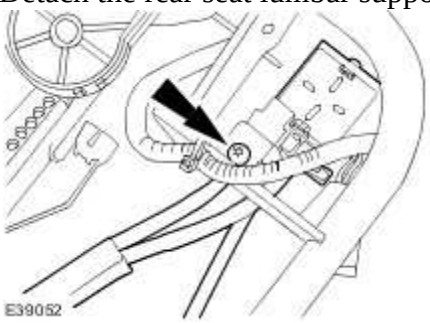
- Disconnect the rear seat backrest heater pad electrical connector.



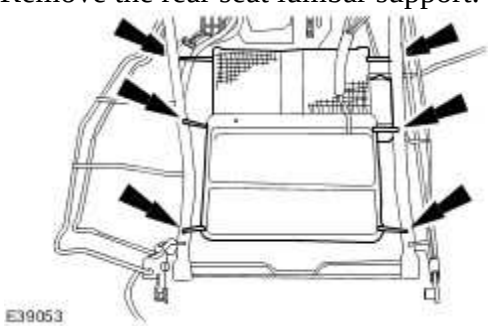
8 . Disconnect the rear seat lumbar support electrical connector.



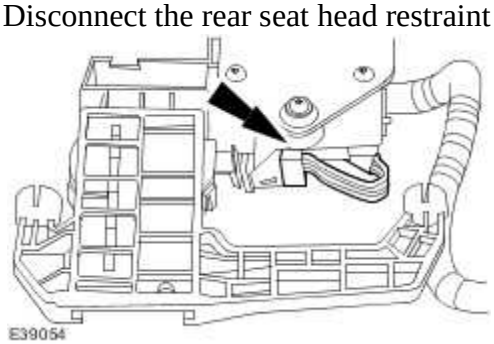
9 . Detach the rear seat lumbar support control valve.



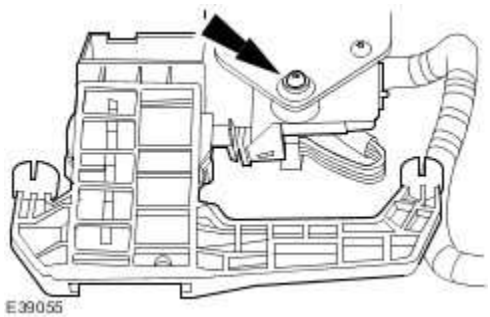
10 . Remove the rear seat lumbar support.



11 . Disconnect the rear seat head restraint motor electrical connector.



12 . Remove the rear seat head restraint motor.



Assembly

1 . To install, reverse the removal procedure.

Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front door window glass regulator and motor retaining screws	7	-	62
Rear door window glass regulator and motor retaining screws	7	-	62
Rear quarter window glass retaining screws	3	-	27
Front door window glass retaining bolt	7	-	62
Rear door window glass retaining bolt	7	-	62
Rear door window glass regulator to window glass retaining bolt	7	-	62

Door Window Motor Initialization

1. **NOTE:**
   After the battery has been disconnected it is necessary to initialize each door window motor separately to operate the ' one-touch' up function.

Operate the window control switch until the door window glass is in the fully closed position, continue to operate the window control switch for a further two seconds.

2. Release the window control switch.

3. Operate the window control switch in the closed position and continue to operate the window control switch for a further two seconds.

4. Operate the window control switch until the door window glass is in the fully open position (' one-touch' down).

5. **NOTE:**
   If the door window motor initialization has been completed correctly, when the window control switch is operated, the door window glass should move to the fully closed position (' one-touch' up) automatically.

NOTE:
If the door window glass does not fully close automatically (' one-touch' up), repeat the complete procedure.

Operate the window control switch once to the close position.

6. Repeat the door window motor initialization for each door window motor.

Glass, Frames and Mechanisms

The vehicle has a fully bonded, laminated windshield glass bonded directly to the body. The windshield glass is available in two versions with a bright or black aluminium finisher. The two windshield glass options are:

- heated wiper park.
- fully heated.

The heated windshield glass is controlled by the dual automatic temperature control module when the ignition is in the RUN position and the heated windshield glass switch has been activated. Four minutes after activation, the heated windshield glass will automatically switch off. The function is also deactivated if the switch is operated before the defrost cycle has elapsed.

The rear window glass is available in two versions with a bright or black aluminium finisher. The two rear window glass options are:

- AM/FM
- AM/FM, TV and VICS

The rear window is a fully bonded toughened glass that combines the rear defrost grid, antenna for the audio unit, TV and VICS. The heated rear window is controlled by the dual automatic temperature control when the rear window defrost button is depressed. When the switch is depressed an indicator in the switch will illuminate indicating that the system is operative. Ten minutes after activation, the heated rear window will automatically deactivate. The function is also deactivated if the customer operates the switch again, before the defrost cycle has elapsed.

The front and rear door windows are electrically operated. All door windows can be operated individually, or by the driver window control switch. The operation of the windows is proportional to the switch activation. The windows can be controlled by "one touch" operation of the switch in the downwards direction. An anti-trap system is fitted to the front and rear door window mechanisms as standard. If a door window is activated in the upwards direction an anti-trap sensor is automatically checked prior to the window closing. If the anti-trap sensor is inoperative the window will not close. When the anti-trap sensor detects an obstacle in the door window path the upward travel of the door window will automatically cease and downward travel of the door window will begin.

Note: If the battery has been disconnected the "one touch" function will not operate until the system has been initialized. For additional information, refer to ()

Diagnosis and testing

Glass, Frames and Mechanisms

Inspection and Verification

1 . Verify the customer concern by operating the system.

2 . Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Window glass. • Window regulator.	• Fuse(s). • Window motor. • Loose or corroded electrical connector(s). • Switch. • Circuit(s).

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

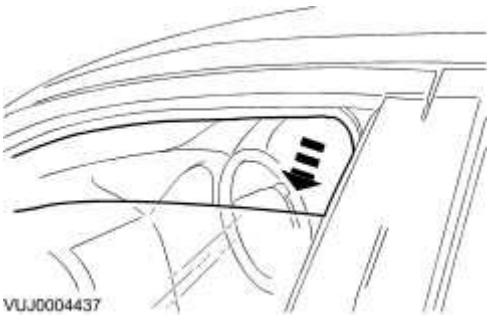
2 . If the concern is not visually evident, verify the symptom and refer to the Jaguar Approved Diagnostic System.

Removal and installation

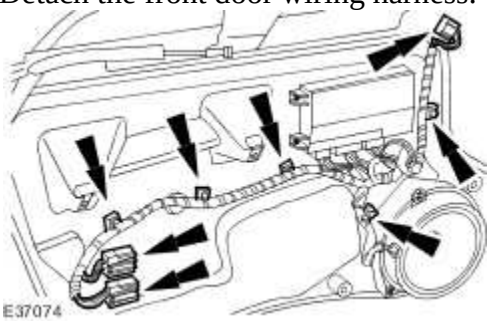
Front Door Window Glass (76.31.01)

Removal

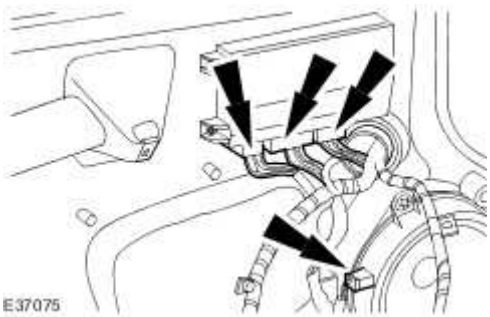
1 . Lower the front door window glass approximately 290 mm (11.4 in).



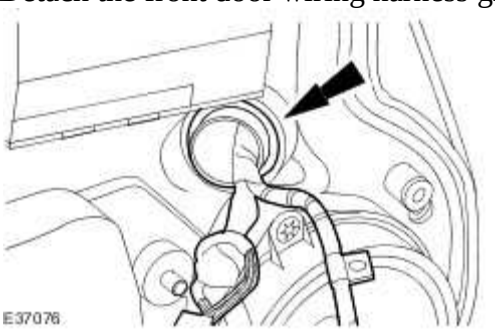
2 . Detach the front door wiring harness.



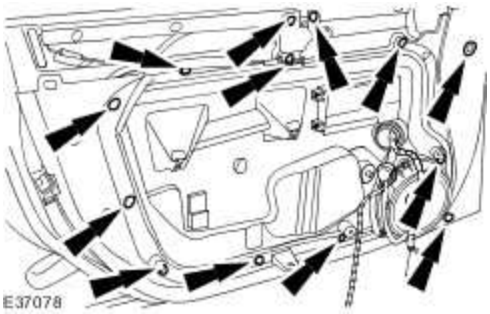
3 . Disconnect the electrical connectors.



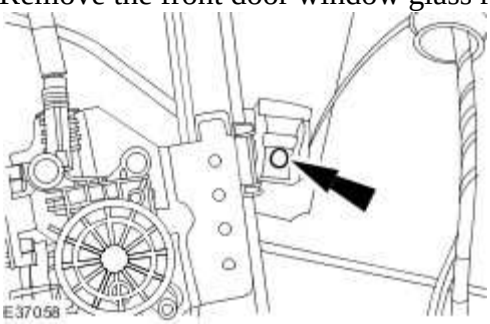
4 . Detach the front door wiring harness grommet.



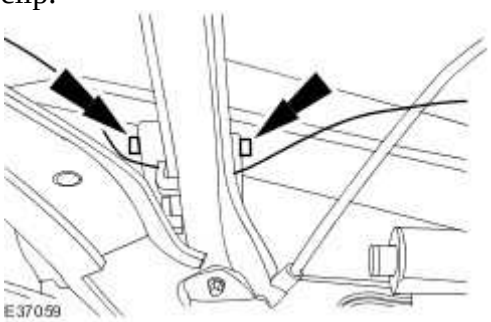
5 . Remove the front door inner weathershield.



6 . Remove the front door window glass retaining bolt.



7 . Detach the front door window glass from the front door window regulator retaining clip.



8 . Remove the front door window glass.

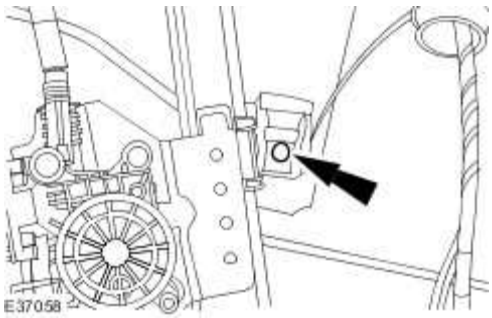
Installation

1 . **NOTE:**

- Make sure the front door window glass is correctly located to the front door window regulator.

To install reverse the removal procedure.

- Tighten to 7 Nm.

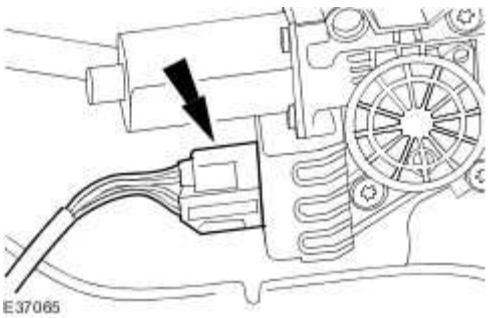

E37058

Front Door Window Regulator and Motor (86.25.04)

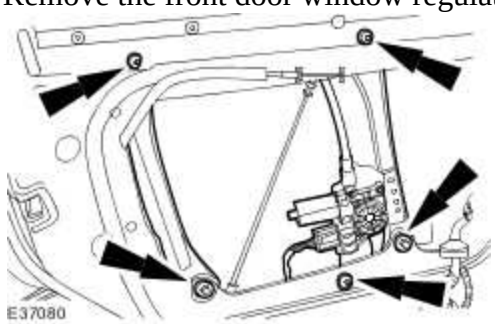
Removal

1 . Remove the front door window glass.
For additional information, refer to Front Door Window Glass (76.31.01)

2 . Disconnect the electrical connector.

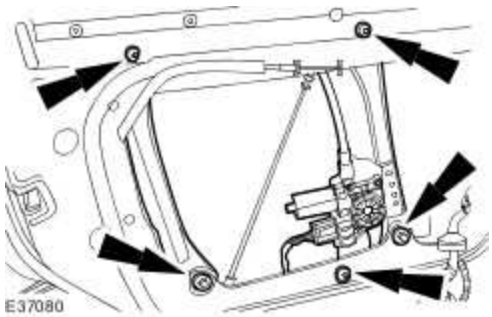


3 . Remove the front door window regulator and motor.



Installation

1 . To install, reverse the removal procedure.
- Tighten to 7 Nm.


E37080

Rear Door Fixed Window Glass

Removal

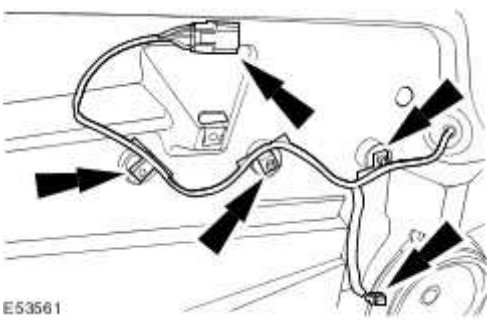
1 . Power the rear door window glass to its fully open position.

2 . Remove the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

3 . Remove the rear door quarter window blind.
For additional information, refer to Rear Door Quarter Window Blind

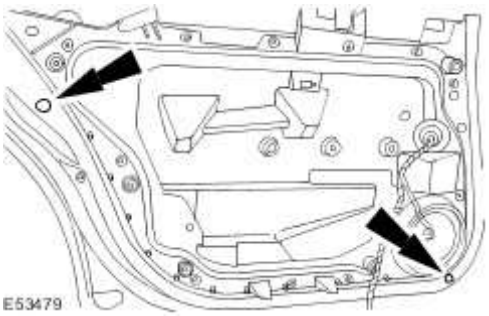
4 . Detach the rear door wiring harness.

- Disconnect the rear door speaker electrical connector.



5 . Detach the rear door wiring harness grommet.

6 . Remove the rear door inner weather-shield retaining screw covers.



7 . Remove the rear door inner weather-shield.

8 . Detach the rear door window glass interior weather-strip.

9 . Detach the rear door margin seal.

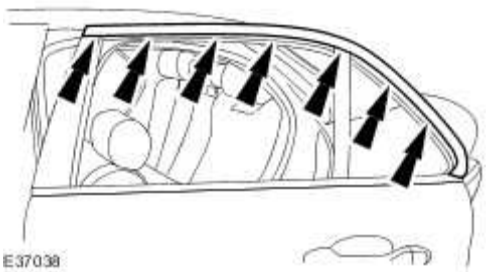
10 **NOTE:**

· Remove and discard the rear door window moulding and retaining clips.

NOTE:

Starting at the upper outer corner and using a suitable trim tool remove the door window moulding.

Remove the rear door window moulding.



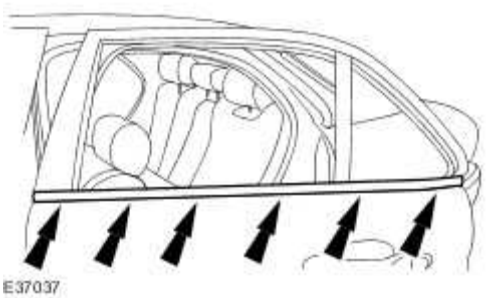
11 **NOTE:**

· Lubricate the underside of the rear door window glass exterior weather-strip to aid removal.

NOTE:

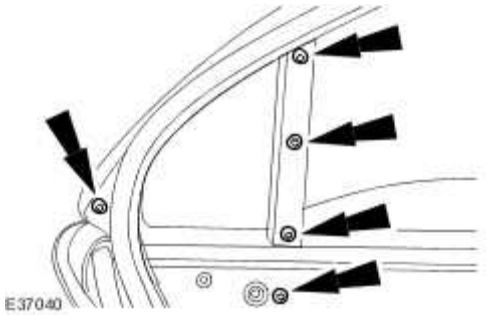
Remove and discard the rear door window glass exterior weather-strip by detaching the rear edge and working forwards.

Remove the rear door window glass exterior weather-strip.

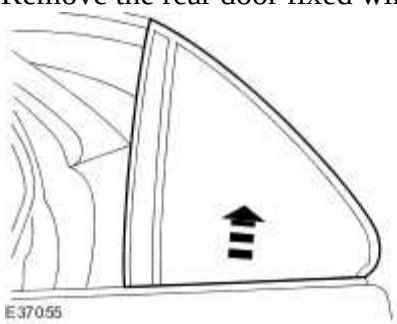


12 . Detach the rear door window glass run weather-strip.

13 . Remove the rear door fixed window glass retaining bolts.

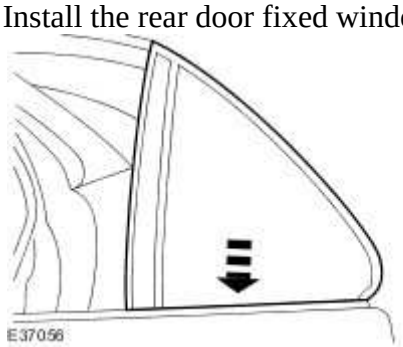


14 . Remove the rear door fixed window glass.



Installation

1 . Install the rear door fixed window glass.

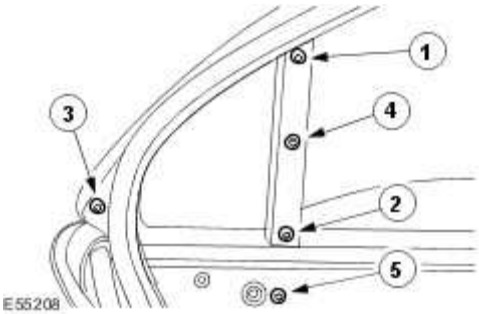


2 . **NOTE:**

Tighten the retaining bolts in the sequence shown.

Install the rear door fixed window glass retaining bolts.

- Tighten to 3 Nm.

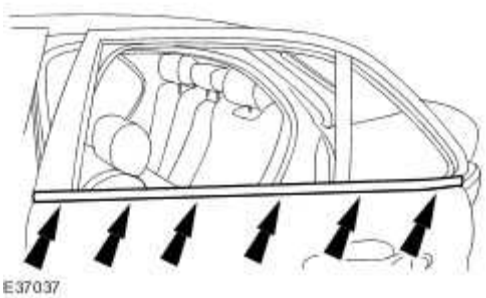


3 . Fully seat the rear door window glass run weather-strip.

4 . **NOTE:**

Install a new rear door window glass exterior weather-strip.

Install the rear door window glass exterior weather-strip.



5 . **NOTE:**

Install a new rear door window moulding and retaining clips.

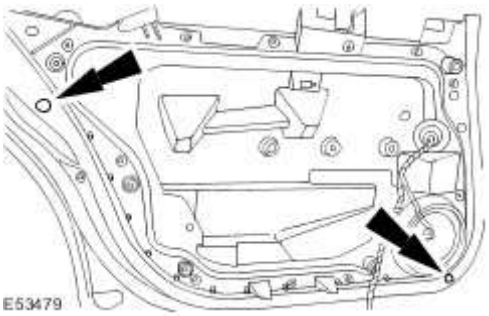
Install the rear door window moulding.

6 . Fully seat the rear door margin seal.

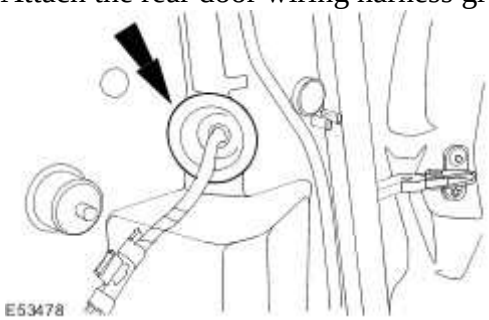
7 . Fully seat the rear door window glass interior weather-strip.

8 . Install the rear door inner weather-shield.

9 . Install the rear door inner weather-shield retaining screw covers.

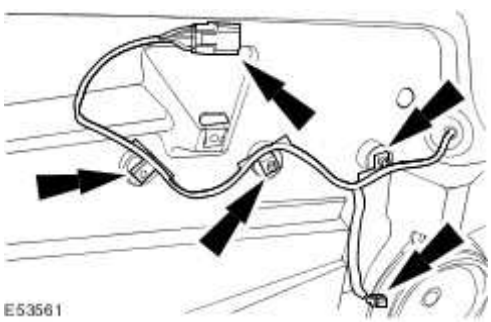


10 . Attach the rear door wiring harness grommet.



11 . Attach the rear door wiring harness.

- Connect the rear door speaker electrical connector.



12 . Install the rear door quarter window blind.
For additional information, refer to Rear Door Quarter Window Blind

13 . Install the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

14 **NOTE:**

· When the battery has been disconnected and connected the settings for the windows one touch facility and the anti-trap facility will have been erased.

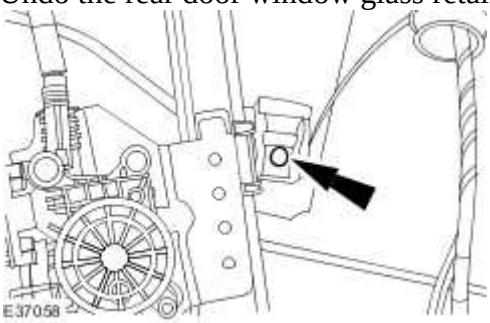
Initialize the door window motors.
For additional information, refer to Door Window Motor Initialization

Rear Door Window Glass (76.31.02)

Removal

1 . Remove the rear door fixed window glass.
For additional information, refer to Rear Door Fixed Window Glass

2 . Undo the rear door window glass retaining bolt.

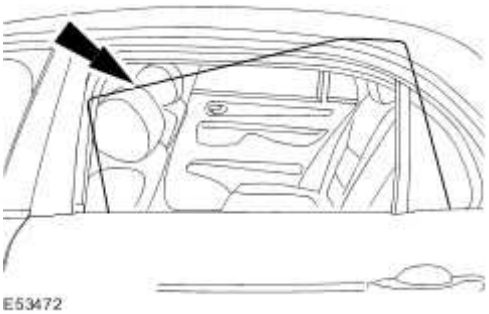


3 . Detach the rear door window glass from the window regulator.

4 . Remove the rear door window glass.

Installation

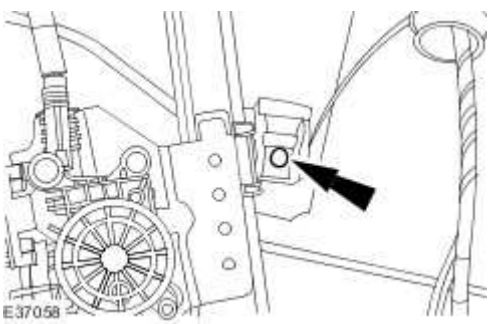
1 . Install the rear door window glass.



2 . Fully seat the rear door window glass into the window regulator.

3 . Fully tighten the rear door window glass retaining bolt.

Tighten to 7 Nm.



4 . Install the rear door fixed window glass.
For additional information, refer to Rear Door Fixed Window Glass

5 **NOTE:**

· When the battery has been disconnected and connected the settings for the windows one touch facility and the anti-trap facility will have been erased.

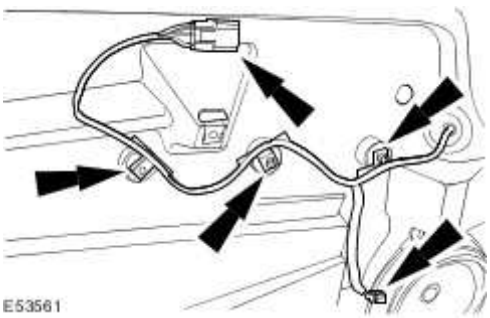
Initialize the door window motors.
For additional information, refer to Door Window Motor Initialization

Rear Door Window Regulator and Motor (86.25.09)

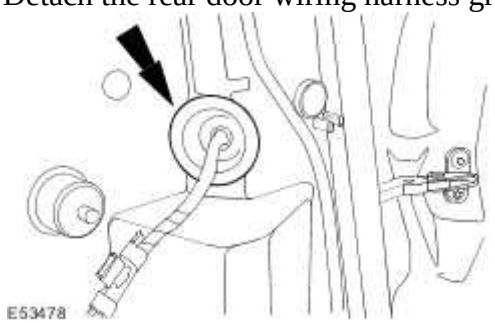
Removal

1 . Remove the rear door trim panel.
For additional information, refer to Rear Door Trim Panel (76.34.04)

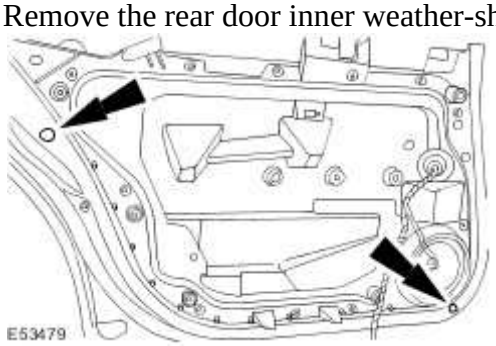
2 . Detach the rear door wiring harness.
- Disconnect the rear door speaker electrical connector.



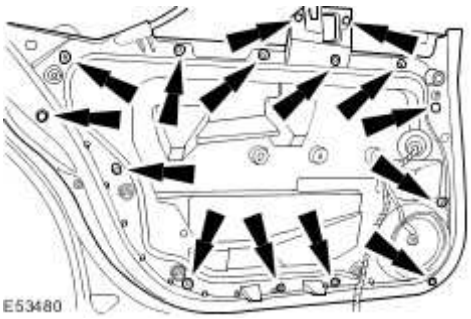
3 . Detach the rear door wiring harness grommet.



4 . Remove the rear door inner weather-shield retaining screw covers.

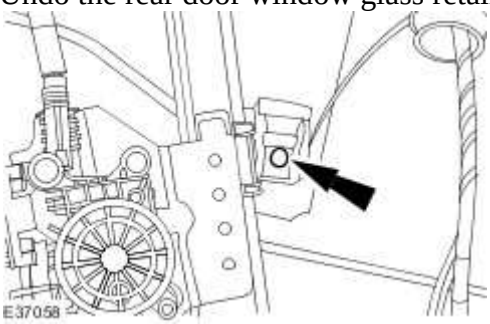


5 . Remove the rear door inner weather-shield.



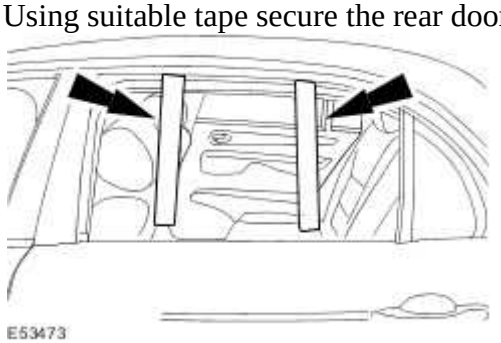
6 . Power the rear door window glass to its fully open position.

7 . Undo the rear door window glass retaining bolt.

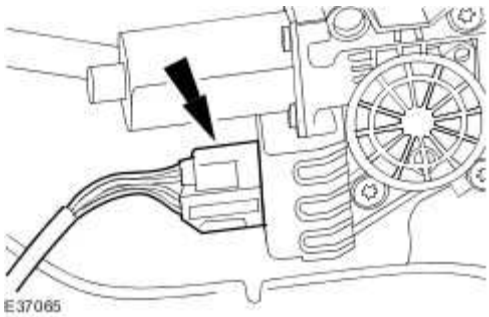


8 . Detach the rear door window glass from the window regulator.

9 . Using suitable tape secure the rear door window glass in the fully closed position.

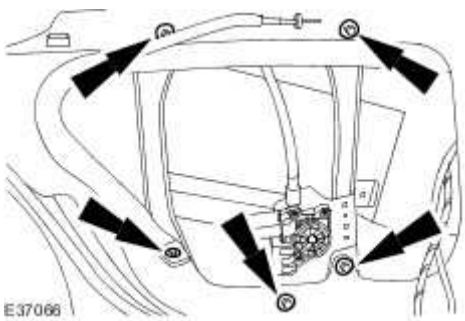


10 . Disconnect the rear door window regulator and motor electrical connector.



11 . Remove the rear door window regulator and motor.

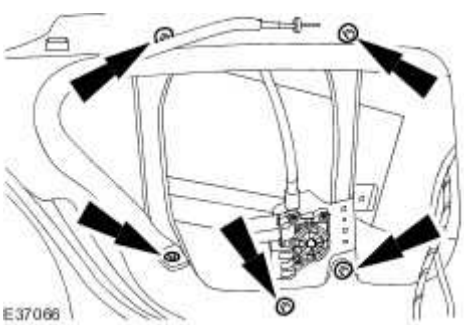
- Remove the rear door window regulator and motor retaining bolts.



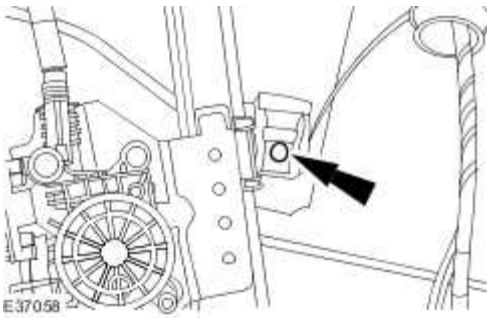
Installation

1 . To install, reverse the removal procedure.

- Tighten to 7 Nm.



2 . Tighten to 7 Nm.



3 **NOTE:**

- When the battery has been disconnected and connected the settings for the windows one touch facility and the anti-trap facility will have been erased.

Initialize the door window motors.
For additional information, refer to Door Window Motor Initialization

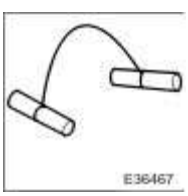
Rear Window Glass (76.81.11)

Special Service Tools

Spray Bottle
WK9

Lubricant Concentrate
WK9L

Adhesive Removal Blade - Body
WK6



Cheese Wire Handles and Cheese Wire
42-001A and 42-001A-01

Removal

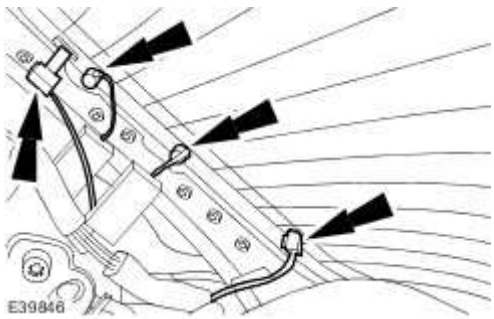
1 . Remove the parcel shelf. <<501-05>>

2 . Remove high mounted stoplamp. <<417-01>>

3 . **NOTE:**

Right-hand shown, left-hand similar.

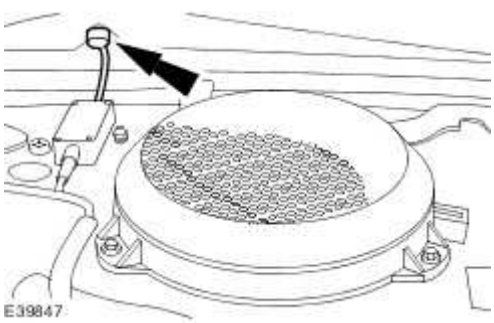
Disconnect the electrical connectors.



4 . **NOTE:**

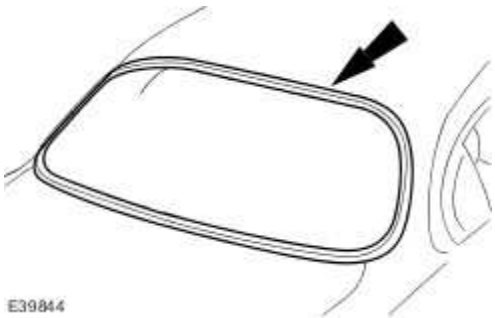
Right-hand shown, left-hand similar.

Disconnect the electrical connector.



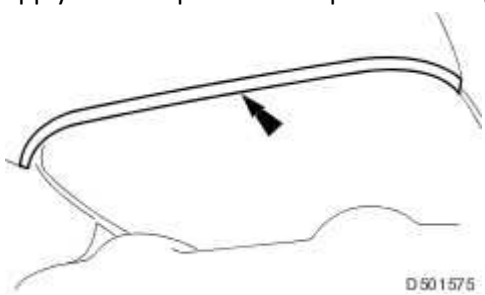
5 . **CAUTION: Make sure the rear window finisher insert is not bent on removal. Failure to follow this instruction may result in damage to the component.**

Remove the rear window finisher

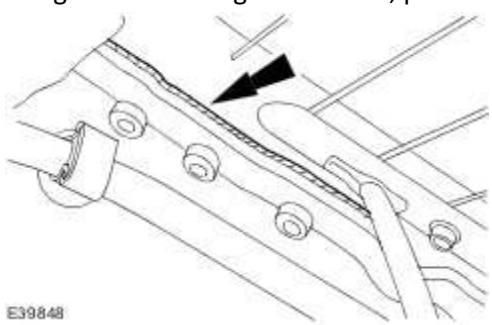


6 . Apply protective tape around the rear rear window glass aperture.

7 . Apply suitable protective tape to rear edge of the headliner.



8 . Using a suitable long bladed tool, penetrate the windshield glass adhesive.



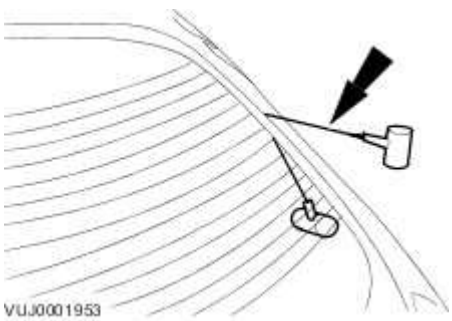
9. Dispense 20 ml of WK9L lubricant into the WK9 spray bottle, fill the spray bottle with water and mix.

10. Apply cutting lubricant to the windshield glass adhesive.

11. Prepare the cheese wire and cutting handle.

- Cut a suitable length of cheese wire.
- Install one of the cutting handles to the cheese wire.

12. Pass the free end of the cheese wire through the penetration and install the second cutting handle.



13. **WARNING: When removing the rear window glass, personal protection must be worn. Failure to follow this instruction may result in personal injury.**

CAUTION: Make sure the cheese wire cannot contacted the paintwork while the the rear window glass adhesive is being cut. Failure to follow this instruction may result in damage to the vehicle.

NOTE:

Apply cutting lubricant to the cheese wire frequently through out the cutting process.

With assistance and exercising care to avoid damaging the paintwork, cut around the rear window glass commencing upwards and along the top.

14. Install the lifting handles to the window glass, with assistance carefully remove the rear window glass from the vehicle.

15 . Remove the lifting handles from the rear windshield glass.

Installation

1. **WARNING: If the rear window glass is being installed at a temperature of 23°C (73°F) or above make sure the vehicle is not driven for at least 1 hour after installation. Failure to follow this instruction may result in personal injury.**

WARNING: If the rear window glass is being installed at a temperature of 11°C (52°F) to 23°C (73°F), make sure the vehicle is not driven for at least 1.5 hours after installation. Failure to follow this instruction may result in personal injury.

WARNING: If the rear window glass is being installed at a temperature of 5°C (41°F) to 11°C (52°F), make sure the vehicle is not driven for at least 2 hours after installation. Failure to follow this instruction may result in personal injury.

WARNING: If the rear window glass is being installed at a temperature below 5°C (41°F), use heat and make sure the windshield glass adhesive has set before the vehicle is driven. Failure to follow this instruction may result in personal injury.

CAUTION: When installing the rear window glass, do not strike it in any way as this will crack the glass. Failure to follow this instruction may result in damage to the vehicle.

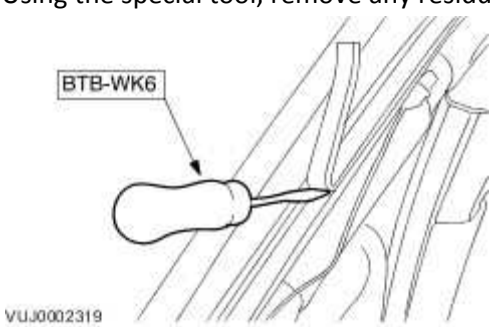
NOTE:

Make sure the rear window glass does not move out of position in the windshield glass aperture.

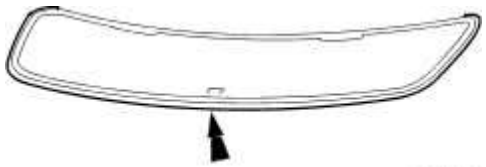
NOTE:

If the original rear window glass is to be installed remove the residual adhesive from windshield glass mating surface.

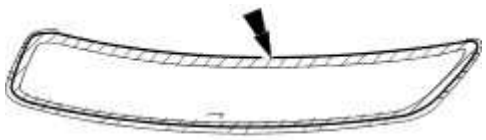
Using the special tool, remove any residual adhesive from the body.



2 . Make sure the new rear window glass surface is clean using Betawipe spirit.

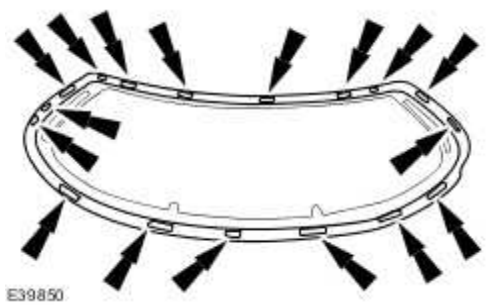


3 . Apply glass primer to the mating surface of the rear window glass.

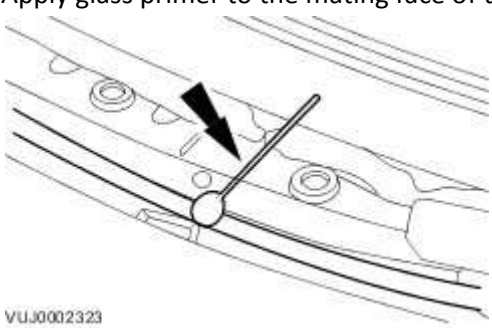


4 . Install the rear window finisher to the rear window glass.

- Install new rear window finisher retaining clips.

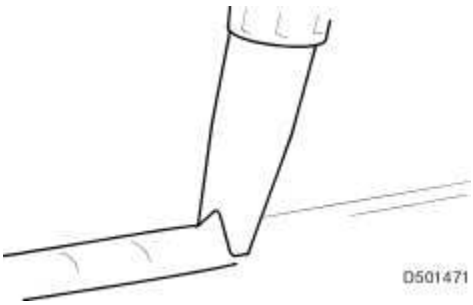


5 . Apply glass primer to the mating face of the body flange.

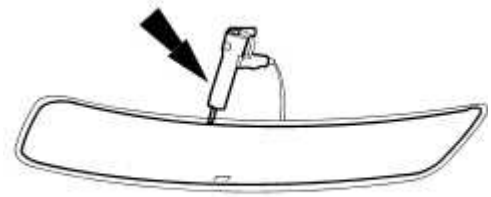


6 Cut adhesive nozzle to achieve a triangular section bead 7 mm (0.28 in) wide by 10 mm (0.39 in) high.

.

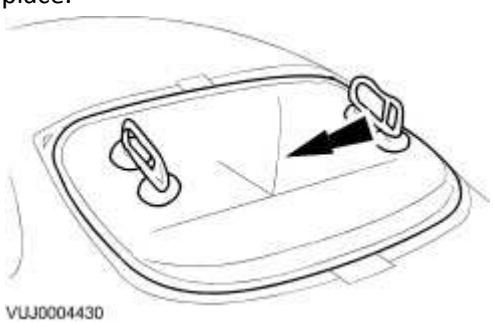


7 Using a suitable pneumatic application gun, apply a uniform bead of adhesive to the
. windshield glass edge commencing at the bottom center and overlapping the ends approximately 20 mm (0.79 in).



8
. **CAUTION: When installing the rear window glass, do not strike it in any way as this will crack the rear window glass. Failure to follow this instruction may result in damage to the component.**

With assistance carefully install the rear window glass into the aperture and press firmly into place.



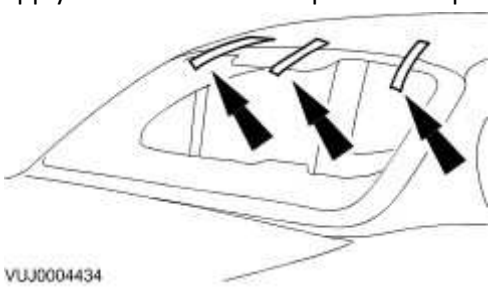
9 . Remove the lifting handles.

10 **NOTE:**

.

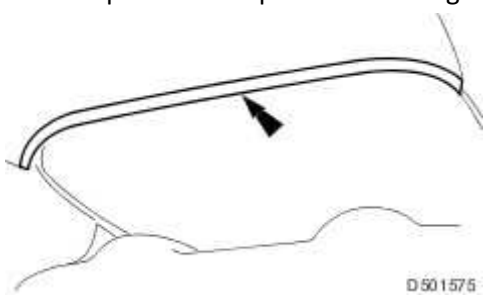
Make sure the windshield glass does not move out of position in the windshield glass aperture.

Apply suitable adhesive tape to the top of the rear window glass.



11 . Remove the protective tape around the rear rear window glass aperture.

12 . Remove protective tape from rear edge of headliner.



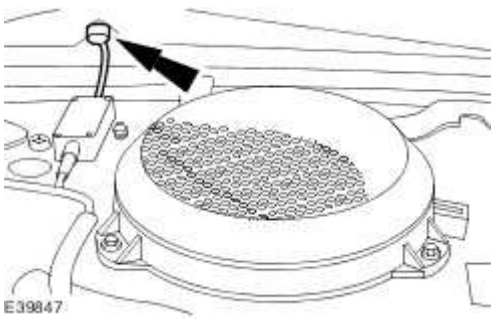
13

. **CAUTION: Do not connect the electrical connectors for at least 1 hour after installation of the windshield glass. Failure to follow these instructions may result in damage to the rear window glass adhesive.**

NOTE:

Right-hand shown, left-hand similar.

Connect the electrical connector.

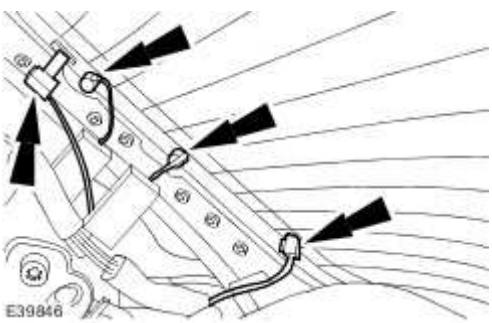


14 . **CAUTION: Do not connect the electrical connectors for at least 1 hour after installation of the windshield glass. Failure to follow these instructions may result in damage to the rear window glass adhesive.**

NOTE:

Right-hand shown, left-hand similar.

Connect the electrical connectors.



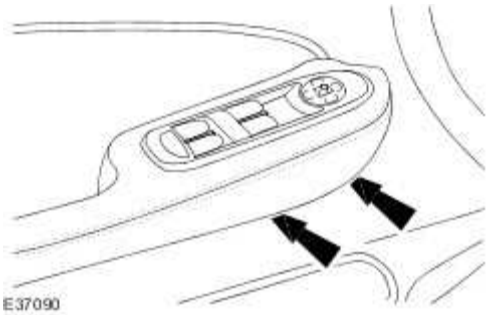
15 . Install the high mounted stoplamp. <<417-01>>

16 . Install the parcel shelf. <<501-05>>

Window Control Switch (86.25.08)

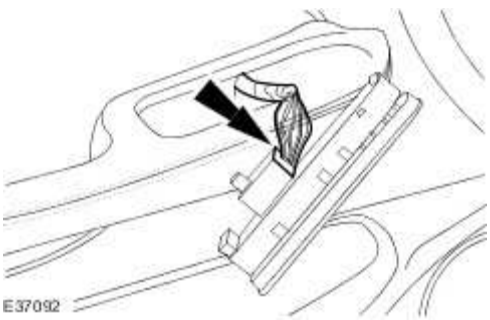
Removal

1 . Detach the window control switch.



2 . Remove the window control switch.

- Disconnect the electrical connector.



Installation

1 . To install, reverse the removal procedure.

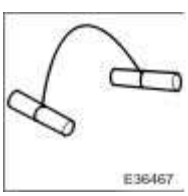
Windshield Glass (76.81.40)

Special Service Tools

Spray Bottle
WK9

Lubricant Concentrate
WK9L

Adhesive Removal Blade - Body
WK6



Cheese Wire Handles and Cheese Wire
42-001A and 42-001A-01

Removal

1 . Remove the interior mirror. <<501-09>>

2 . Remove both A-pillar trim panels. <<501-05>>

3 . Remove both sun visors. <<501-05>>

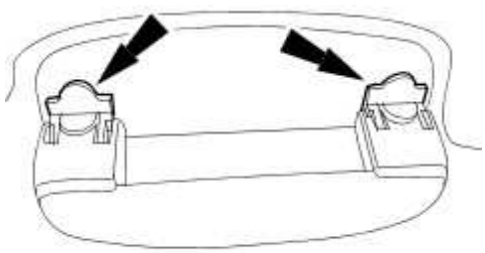
4 . Remove the overhead console. <<501-12>>

5 . Remove both sun visor retaining clips.

6 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the front occupant assist handle screw covers.

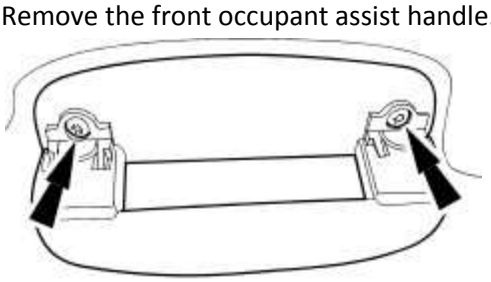


E38998

7 . **NOTE:**

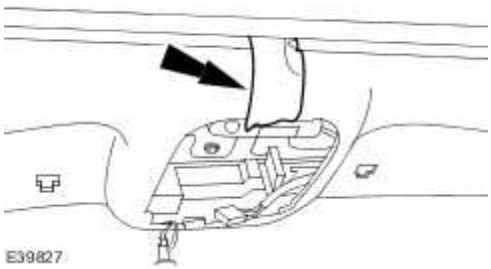
Right-hand shown, left-hand similar.

Remove the front occupant assist handle.



E38776

8 . Using a suitable adhesive tape, support the headliner.

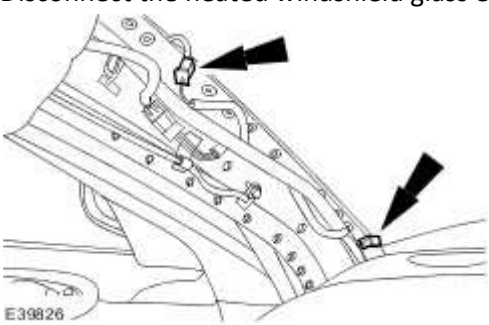


9 . Apply a suitable protective tape to the front edge of the headliner.

10 . **NOTE:**

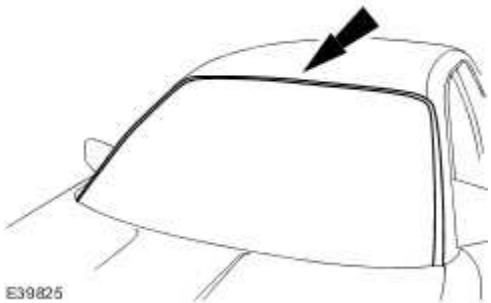
Left-hand shown, right-hand similar.

Disconnect the heated windshield glass electrical connectors.



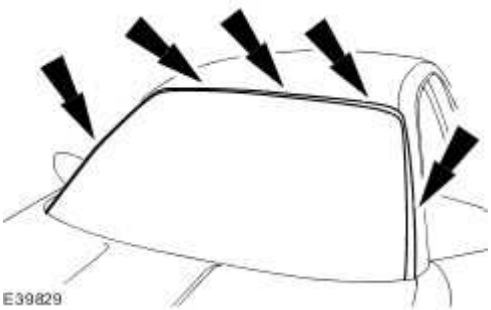
11 . **CAUTION: Make sure the windshield finisher insert is not bent on removal. Failure to follow this instruction may result in damage to the component.**

Remove the windshield finisher.

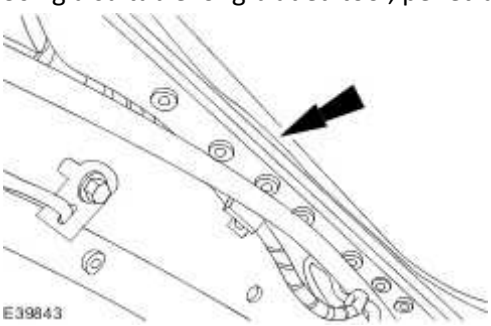


12 . Remove the cowl vent screen. <<501-02>>

13 . Apply a suitable protective tape around windshield glass aperture to protect the paintwork.



14 . Using a suitable long bladed tool, penetrate the windshield glass adhesive.



15 . Place a suitable protective sheet over fascia and place a protecting board over sheet.

16 . Dispense 20 ml of WK9L lubricant into the WK9 spray bottle, fill the spray bottle with water and mix.

17 . Apply cutting lubricant to the windshield glass adhesive.

18 . Prepare the cheese wire and cutting handle.

- Cut a suitable length of cheese wire.
- Install one of the cutting handles to the cheese wire.

19 . Pass the free end of the cheese wire through the penetration and install the second cutting handle.

20 . **WARNING: When removing the windshield glass, personal protection must be worn. Failure to follow this instruction may result in personal injury.**

CAUTION: Make sure the cheese wire cannot contacted the paintwork while the the windshield adhesive is being cut. Failure to follow this instruction may result in damage to the vehicle.

CAUTION: Make sure the cheese wire cannot contacted the instrument panel while the the windshield adhesive is being cut. Failure to follow this instruction may result in damage to the vehicle.

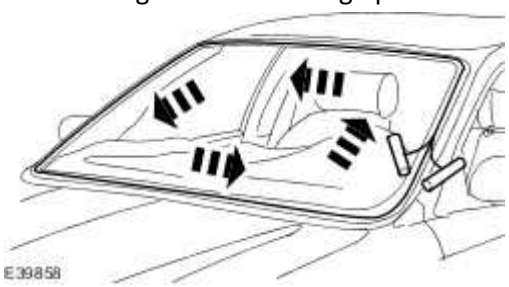
CAUTION: Make sure the cheese wire passes the Vehicle Identification Number

(VIN) plate on the correct side. Failure to follow this instruction may result in damage to the component.

NOTE:

Apply cutting lubricant to the cheese wire frequently through out the cutting process.

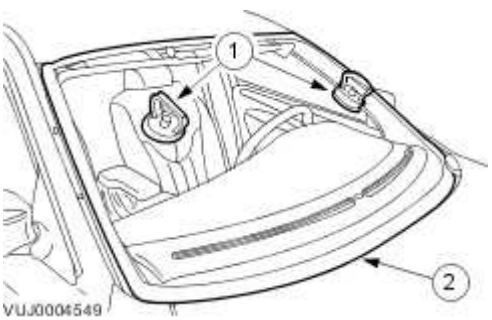
With assistance and exercising care to avoid damaging the paintwork, cut around the windshield glass commencing upwards and along the top.



21 . With assistance and exercising care, remove the windshield glass.

1) Attach lifting handles to the windshield glass.

2) Remove the windshield glass.



22 . Remove lifting handles from the windshield glass.

Installation

1. **WARNING: If the windshield glass is being installed at a temperature of 23°C (73°F) or above make sure the vehicle is not driven for at least 1 hour after installation. Failure to follow this instruction, may result in personal injury.**

WARNING: If the windshield glass is being installed at a temperature of 11°C (52°F) to 23°C (73°F), make sure the vehicle is not driven for at least 1.5 hours after installation. Failure to follow this instruction, may result in personal injury.

WARNING: If the windshield glass is being installed at a temperature of 5°C (41°F) to 11°C (52°F), make sure the vehicle is not driven for at least 2 hours after installation. Failure to follow this instruction, may result in personal injury.

WARNING: If the windshield glass is being installed at a temperature below 5°C (41°F), use heat and make sure the windshield glass adhesive has set before the vehicle is driven. Failure to follow this instruction, may result in personal injury.

CAUTION: When installing the windshield glass, do not strike it in any way as this will crack the glass. Failure to follow this instruction may result in damage to the component.

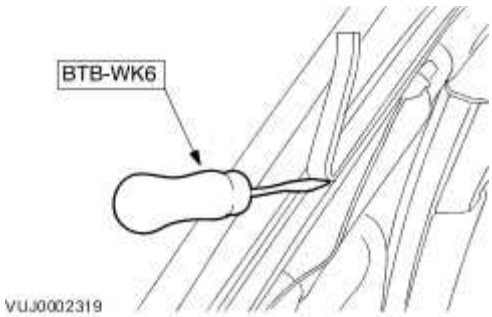
NOTE:

Make sure the windshield glass does not move out of position in the windshield glass aperture.

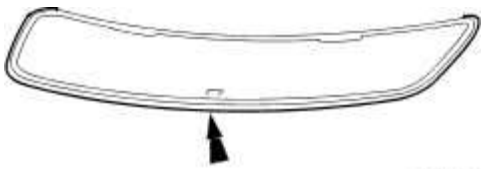
NOTE:

If the original windshield glass is to be installed remove the residual adhesive from windshield glass mating surface.

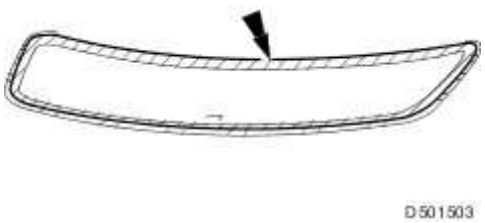
Using the special tool, remove any residual adhesive from the body.



2 . Make sure the new windshield glass surface is clean using Betawipe spirit.

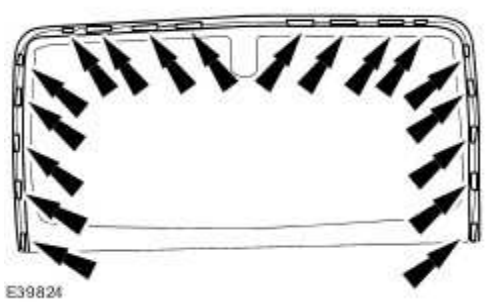


3 . Apply glass primer to the mating surface of the windshield glass.

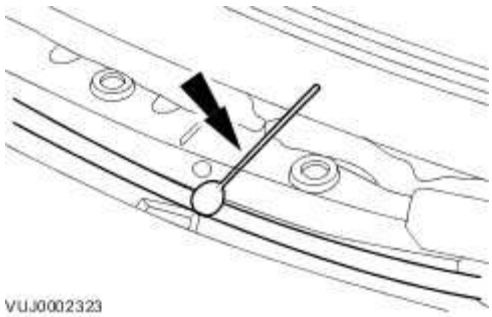


4 . Install the windshield finisher to the windshield glass.

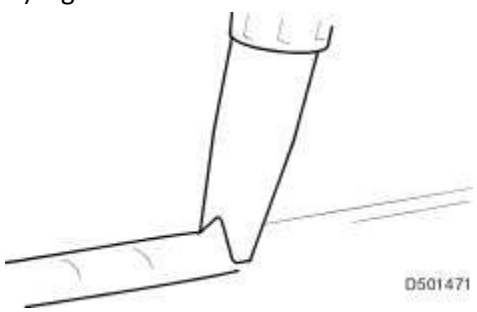
- Install new windshield finisher retaining clips.



5 . Apply glass primer to the mating face of the body flange.



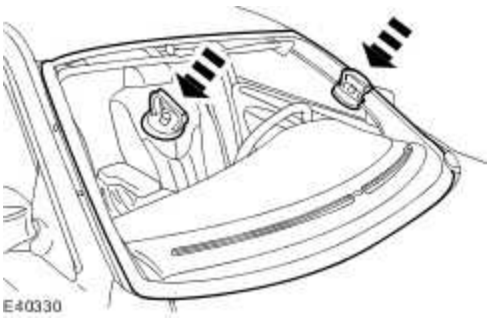
6. Cut adhesive nozzle to achieve a triangular section bead 7 mm (0.28 in) wide by 10 mm (0.39 in) high.



7. Using a suitable pneumatic application gun, apply a uniform bead of adhesive to the windshield glass edge commencing at the bottom center and overlapping the ends approximately 20 mm (0.79 in).

8. **CAUTION: When installing the windshield glass, do not strike it in any way as this will crack the windshield glass.**

With assistance carefully install the windshield glass into the aperture.



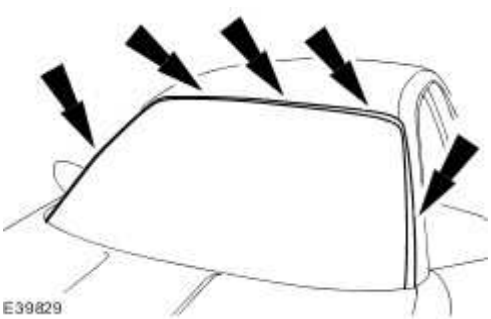
9 . Remove the lifting handles.

10 . **CAUTION: Make sure the windshield glass does not move out of position in the windshield glass aperture.**

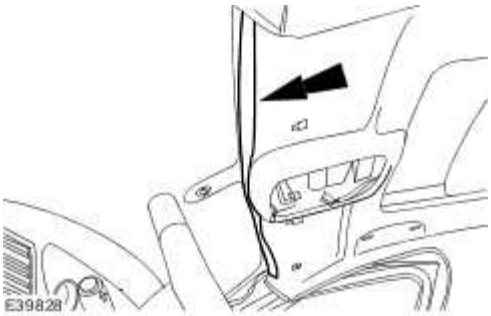
Apply suitable adhesive tape to the top of the windshield glass.

11 . Install the cowl vent screen. <<501-02>>

12 . Remove the protective tape around windshield glass aperture.



13 . Remove protective tape from the leading edge of the headliner.

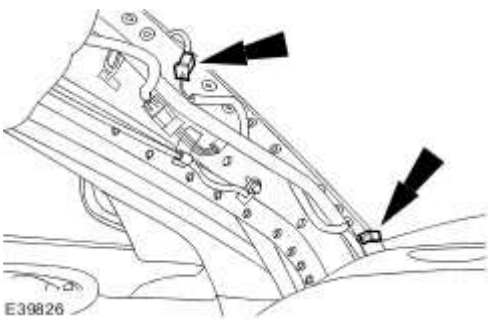


14 . Remove the protective sheet and the protective board from the fascia.

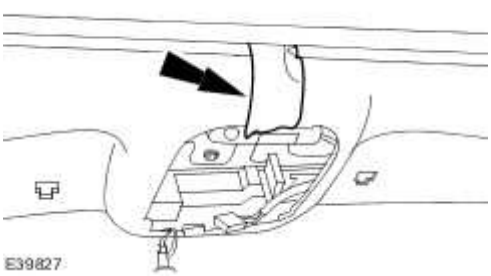
15 . **NOTE:**

Left-hand shown, right-hand similar.

Connect the heated windshield electrical connectors.



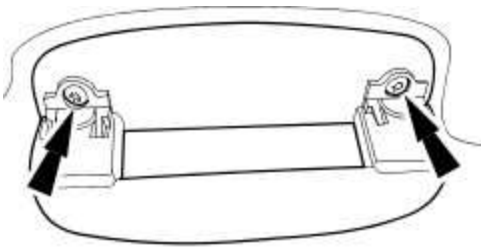
16 . Remove the adhesive tape supporting the headliner.



17 . **NOTE:**

Right-hand shown, left-hand similar.

Install the front occupant assist handle.

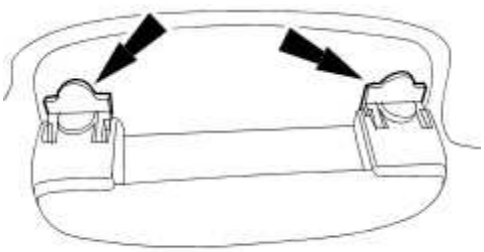


E38776

18 . **NOTE:**

Right-hand shown, left-hand similar.

Attach the front occupant assist handle screw covers.



E38998

19 . Install the sun visor retaining clips.

20 . Install the overhead console. <<501-12>>

21 . Install both sun visors. <<501-05>>

22 . Install both A-pillar trim panels. <<501-12>>

23 . Install the interior mirror. <<501-09>>

Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Instrument panel retaining bolts	20	15	-
Floor console retaining bolts	9	-	80
Instrument panel support brackets retaining bolts	9	-	80
Instrument panel support brackets retaining nuts	9	-	80
Instrument panel center retaining screw	3	-	27

Instrument Panel

The instrument panel assembly houses the instrument cluster, passenger air bag module, glove compartment, message center/headlamp leveling switch, luggage compartment lid/fuel flap release switch, in-vehicle temperature sensor, ignition switch, driver stowage box, remote climate control module (vehicles fitted with telematics), instrument panel lower trim panel, instrument panel finish panel and air distribution registers, all of which can be removed without removing the instrument panel. The instrument panel wiring harness is attached to the instrument panel to assist in easy removal and installation of the instrument panel. The instrument panel must be removed from the vehicle to gain access to the heater and evaporator unit and the wiring harness.

Floor Console

The floor console is located between the front seats and consists of the ashtray, cigar lighter and armrest. The optional telephone is incorporated within the floor console if the vehicle is equipped with satellite navigation. Alternatively the center section of the floor console forms a deep stowage box with a secondary cupholder. In both cases the floor console utilizes a rear hinged lid which is padded to form a central arm rest. Situated in the rear of the floor console are further air distribution registers, cigar lighter, 12 volt power point and rear heated seat switch.

Roof Console

The roof console is located between the sun visors and, depending upon the vehicle options, consists of the front overhead courtesy light, two reading/map lights, remote convenience buttons, sun glasses holder, intrusion sensors, front parking aid disable switch and rear sunblind switch.

Instrument Panel console

The instrument panel console is located in the center of the instrument panel. The instrument panel console consists of:

- the climate control assembly (vehicles without telematics). <<412-04>>
- the touch-screen telematics control module (vehicles fitted with telematics). This takes place of the climate control assembly. <<419-05>>
- the occupancy sensor. <<501-20B>>
- the audio system. <<415-01>>
- the multi-switch pack consisting of, depending upon the vehicle options, heated seat switches, single point door locking switch, hazard warning switch and valet switch.

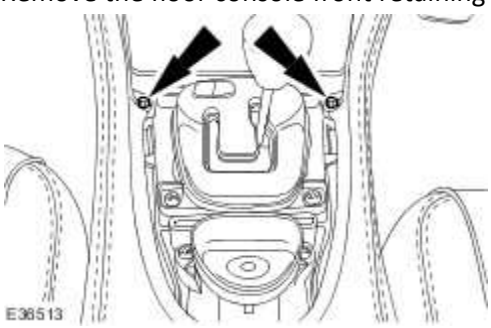
Floor Console - Vehicles With: Auxiliary Climate Control (76.25.01)

Removal

All vehicles

1 . Remove the transmission selector lever surround.

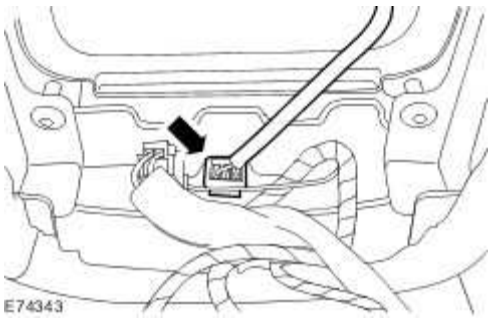
2 . Remove the floor console front retaining bolts.



3 . Remove the floor console register.
For additional information, refer to Register

Vehicles with cordless cellular phone

4 . Disconnect the Bluetooth module electrical connector.

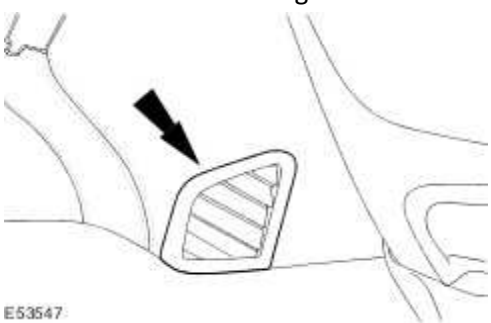


All vehicles

5 . **NOTE:**

Right-hand shown, left-hand similar.

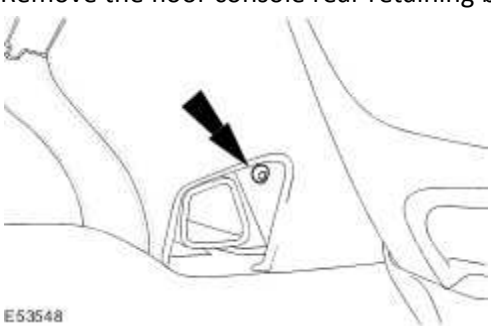
Remove the rear floor register.



6 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the floor console rear retaining bolts.



7 . Raise the rear of the floor console.

8 . Remove the floor console.

Installation

All vehicles

1 . **CAUTION: Make sure the seat belt buckles are not trapped when installing the floor console.**

CAUTION: Make sure the floor console locating tangs are correctly located into the instrument panel clips. Failure to follow this instruction my result in damage to the vehicle.

Install the floor console.

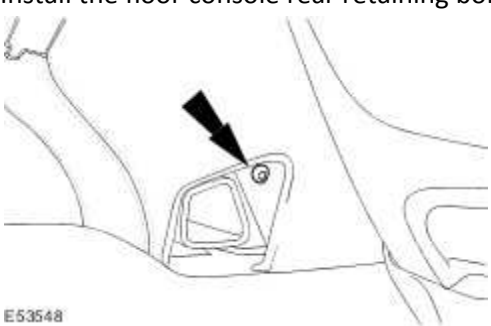
2. **CAUTION: Make sure the seat belt buckles are not trapped when installing the floor console.**

Lower the rear of the floor console.

3. **NOTE:**

Right-hand shown, left-hand similar.

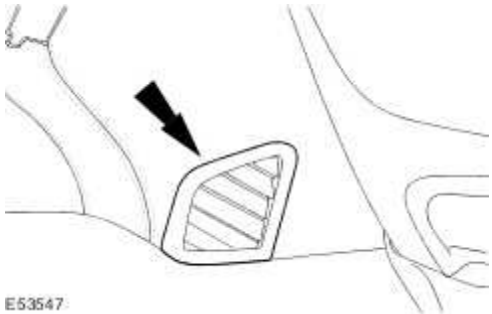
Install the floor console rear retaining bolts.



4. **NOTE:**

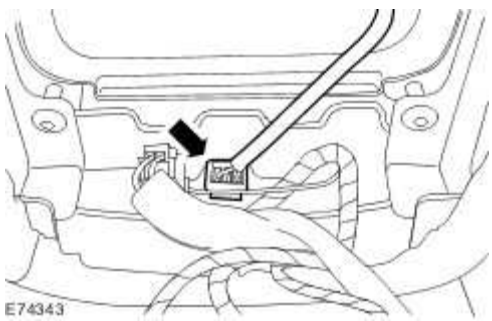
Right-hand shown, left-hand similar.

Install the rear floor register.



Vehicles with cordless cellular phone

5 . Connect the Bluetooth module electrical connector.

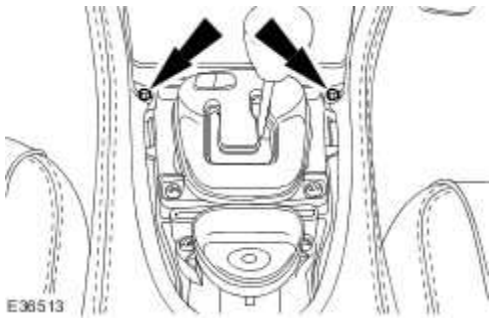


All vehicles

6 . Install the floor console register.
For additional information, refer to Register

7 . Install the floor console front retaining bolts.

Tighten to 7 Nm.



8 . Install the transmission selector lever surround.

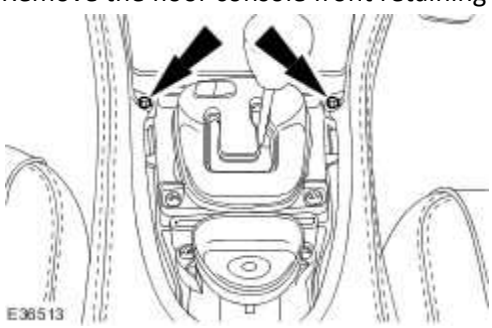
Floor Console - Vehicles Without: Auxiliary Climate Control (76.25.01)

Removal

All vehicles

1 . Remove the transmission selector lever surround.

2 . Remove the floor console front retaining bolts.

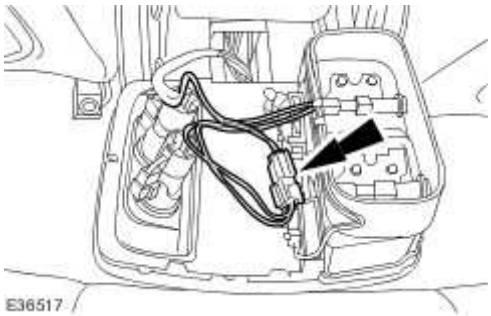


Vehicles fitted without heated rear seat

3 . Detach the floor console register.

4 . Disconnect the electrical connector.

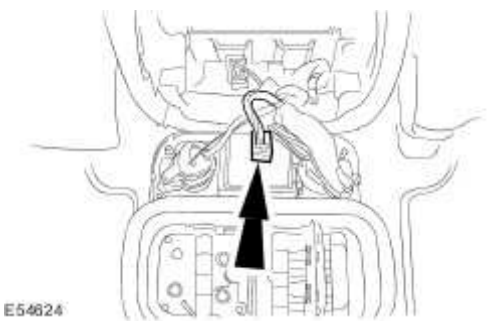
- Detach the wiring harness retaining clip.



Vehicles fitted with heated rear seat

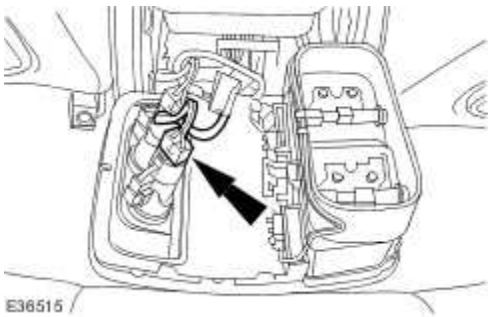
5 . Detach the floor console register.

6 . Disconnect the electrical connector.



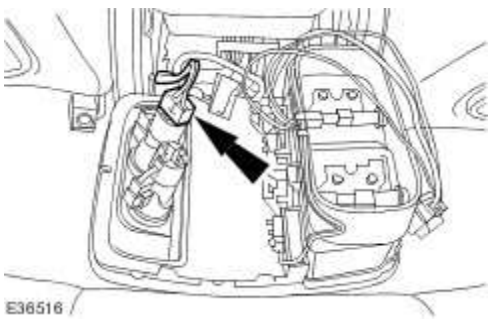
All vehicles

7 . Disconnect the electrical connector.



8 . Remove the floor console register.

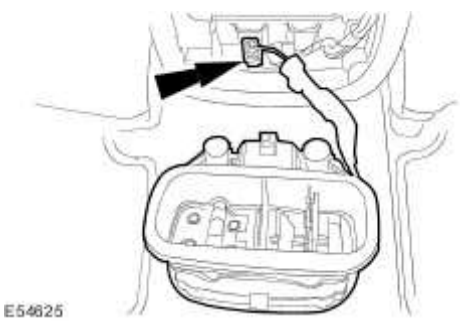
- Disconnect the electrical connector.



Vehicles fitted with heated rear seat

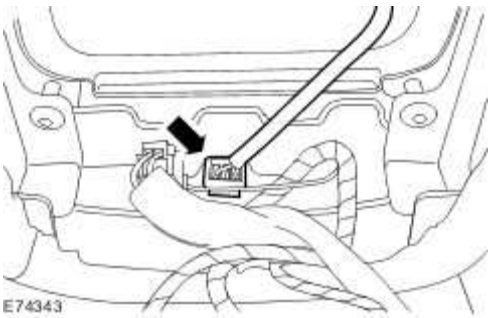
9 . Remove the floor console register.

- Disconnect the electrical connector.



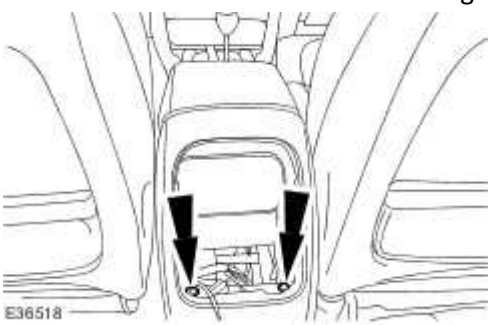
Vehicles with cordless cellular phone

10 . Disconnect the Bluetooth module electrical connector.



All vehicles

11 . Remove the floor console rear retaining bolts.



12 . Raise the rear of the floor console.

13 . Remove the floor console.

Installation

All vehicles

1. **CAUTION: Make sure the seat belt buckles are not trapped when installing the floor console.**

CAUTION: Make sure the floor console locating tangs are correctly located into the instrument panel clips. Failure to follow this instruction my result in damage to the vehicle.

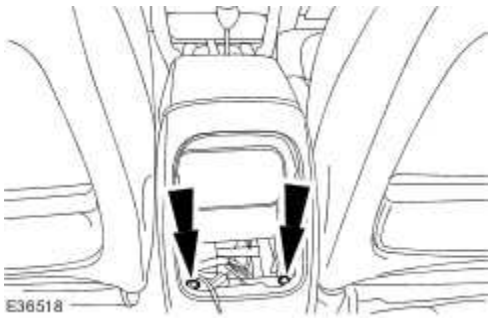
Install the floor console.

2. **CAUTION: Make sure the seat belt buckles are not trapped when installing the floor console.**

Lower the rear of the floor console.

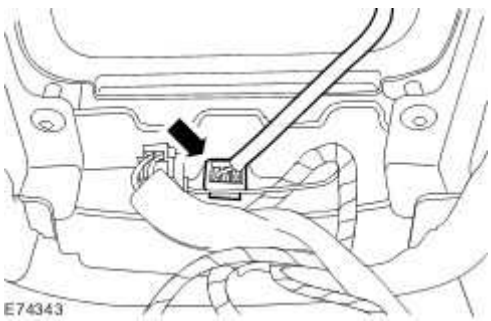
3 . Install the floor console retaining bolts.

- Tighten to 7 Nm.



Vehicles with cordless cellular phone

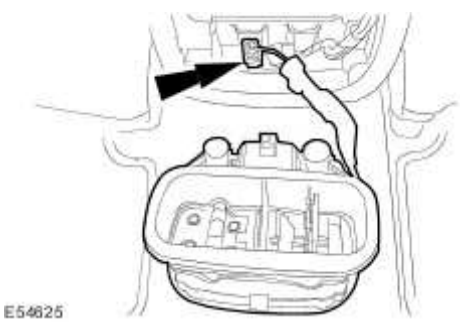
4 . Connect the Bluetooth module electrical connector.



Vehicles fitted with heated rear seat

5 . Install the floor console register.

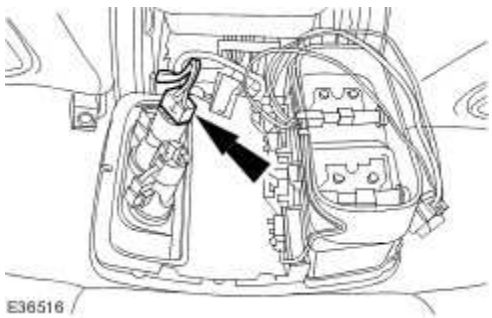
- Connect the electrical connector.



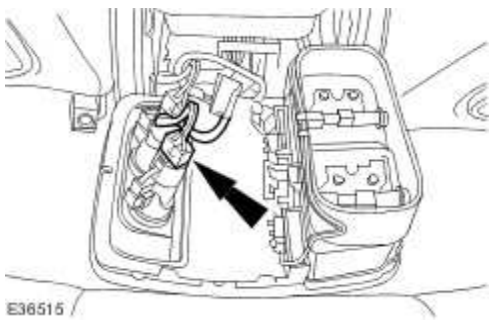
All vehicles

6 . Install the floor console register.

- Connect the electrical connector.

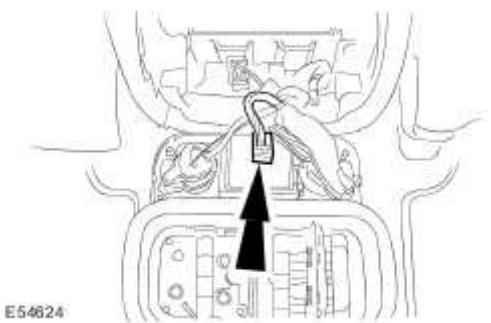


7 . Connect the electrical connector.



Vehicles fitted with heated rear seat

8 . Connect the electrical connector.



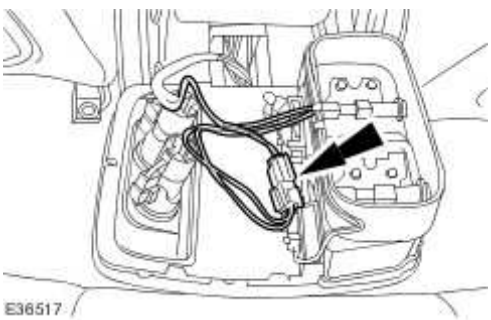
9 . Install the floor console register.

E54626

Vehicles fitted without heated rear seat

10 . Connect the electrical connector.

- Attach the wiring harness retaining clip.



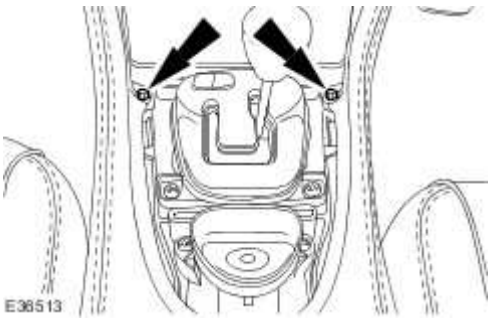
E36517

11 . Install the floor console register.

E36514

All vehicles

12 . Install the floor console front retaining bolts.



13 . Install the transmission selector lever surround.

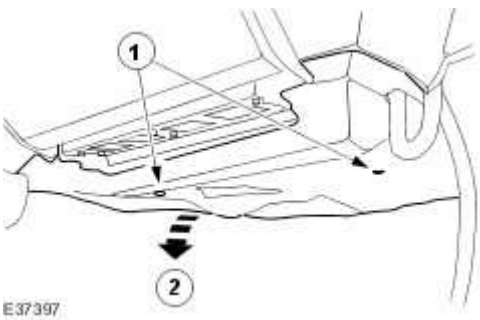
Glove Compartment (76.52.03)

Removal

1 . Remove the instrument panel lower trim panel.

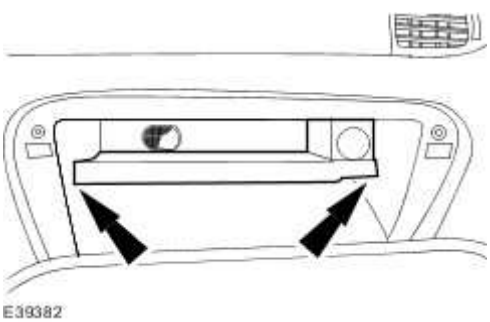
1) Remove the retaining scrivets.

2) Remove the instrument panel lower trim panel.



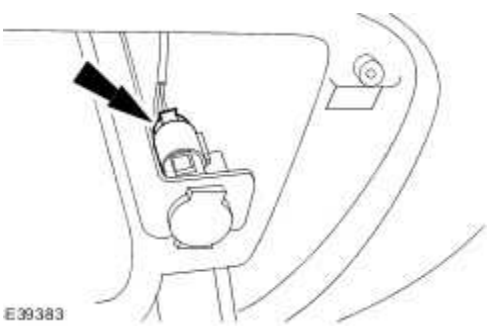
2 . Reposition the glove compartment shelf.

- Remove the securing screws.



3 . Remove the glove compartment shelf.

- Disconnect the glove compartment power socket electrical connector.

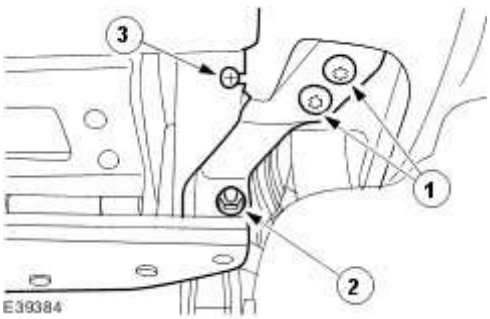


4 . **NOTE:**

Right-hand shown, left-hand similar.

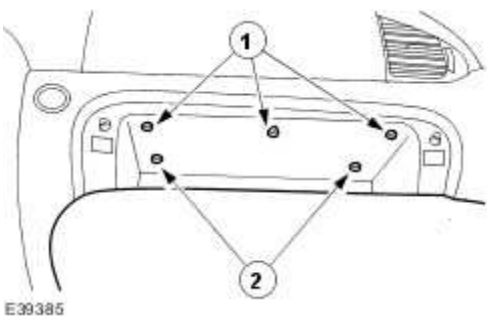
Remove the glove compartment lower securing screws.

1) Remove the glove compartment lower securing bolts.
2) Remove the glove compartment lower securing nuts.
3) Remove the glove compartment lower securing screws.

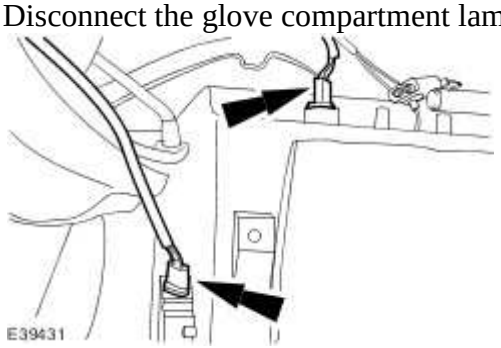


5 . Remove the glove compartment upper securing screws.

1) Remove the screws.
2) Remove the bolts.

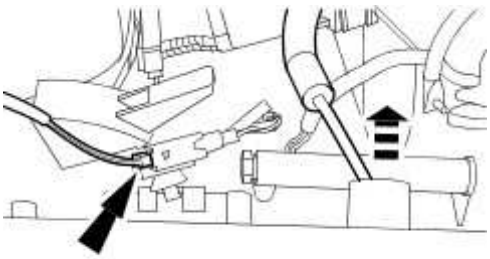


6 . Disconnect the glove compartment lamps.



7 . Remove the glove compartment.

1) Disconnect the glove compartment electrical connector.
2) Remove the glove compartment power socket harness.



E39432

Installation

1 . To install, reverse the removal procedure.

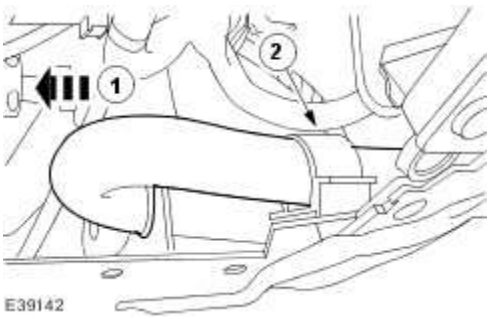
Instrument Panel (76.46.01)

Removal

1 . Disconnect the battery ground cable. <<414-01>>

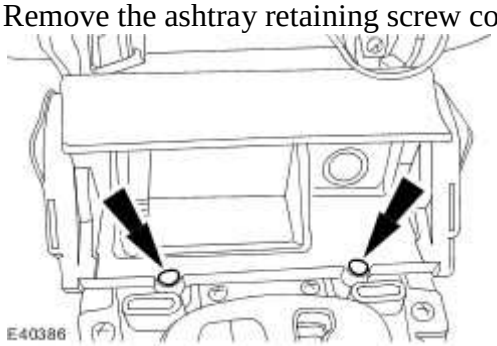
2 . Remove the steering column. <<211-04>>

3 . Disconnect the in-vehicle temperature sensor hose.
- 1) Remove the hose.
- 2) Remove the securing clip.

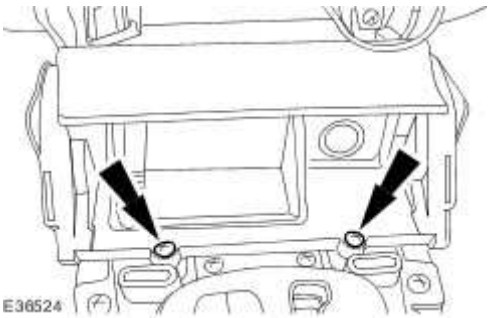


4 . Remove the instrument panel console.
For additional information, refer to Instrument Panel Console (88.20.34)

5 . Remove the ashtray retaining screw covers.

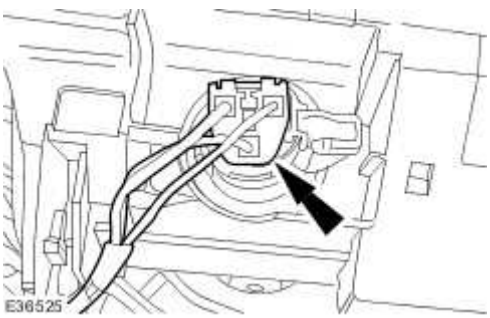


6 . Detach the ashtray.
- Remove the ashtray retaining screws.



7 . Remove the ashtray.

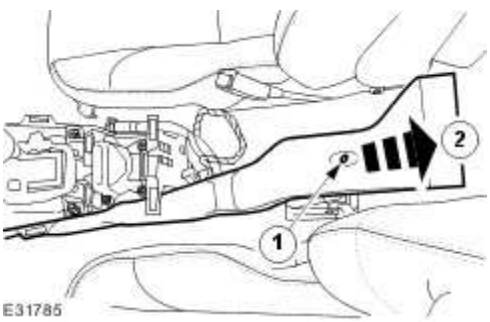
- Disconnect the electrical connector.



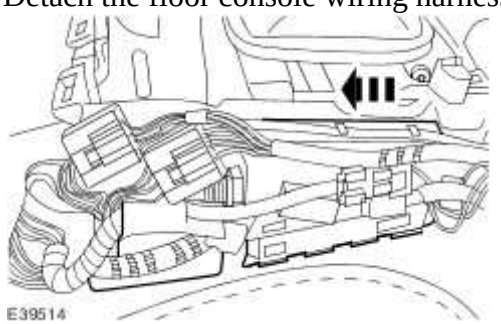
8 . Remove the floor console register duct.

1) Remove the retaining nut.

2) Remove the floor console register duct.

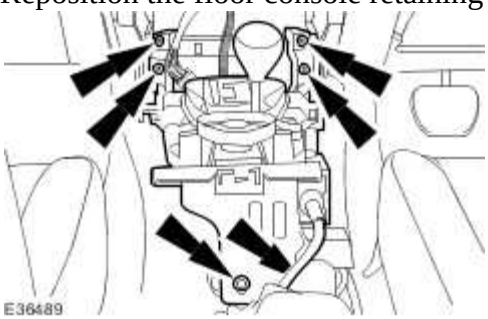


9 . Detach the floor console wiring harness retaining bracket.



10 . **CAUTION: Make sure damage does not occur to the interior trim.**

Reposition the floor console retaining bracket.

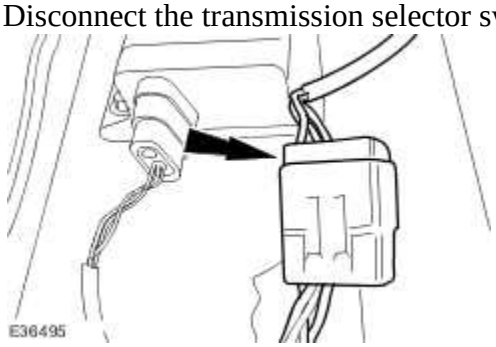


11 . **CAUTION: Make sure damage does not occur to the interior trim.**

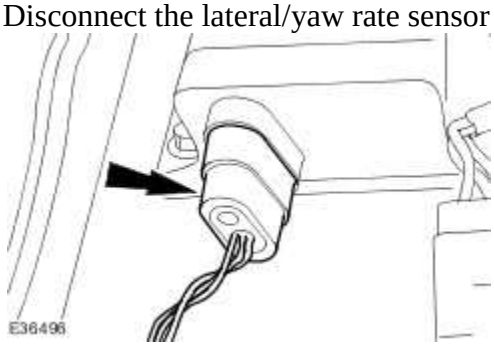
NOTE:

Reposition the floor console bracket.

Disconnect the transmission selector switch electrical connector.



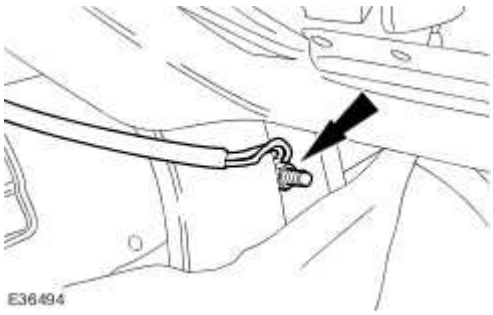
12 . Disconnect the lateral/yaw rate sensor electrical connector.



13 . **NOTE:**

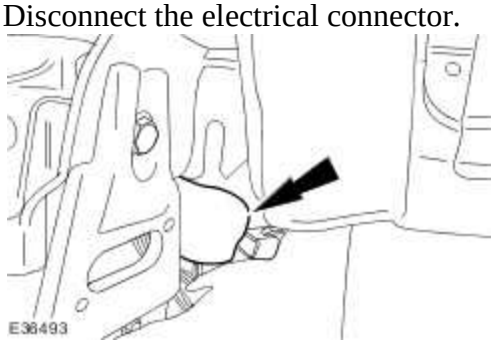
Reposition the floor carpet.

Detach the wiring harness ground connector.

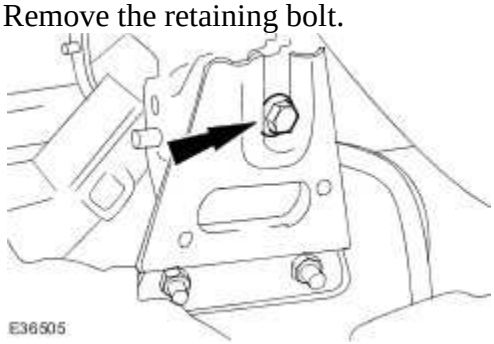


14 . Detach the wiring harness from the instrument panel retaining bracket.

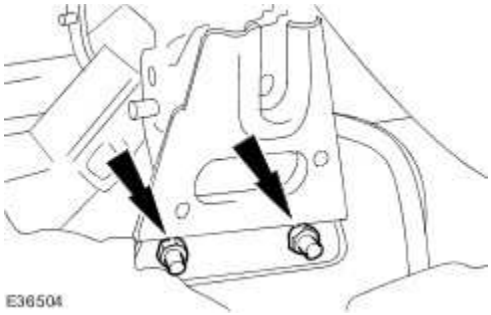
15 . Disconnect the electrical connector.



16 . Remove the retaining bolt.

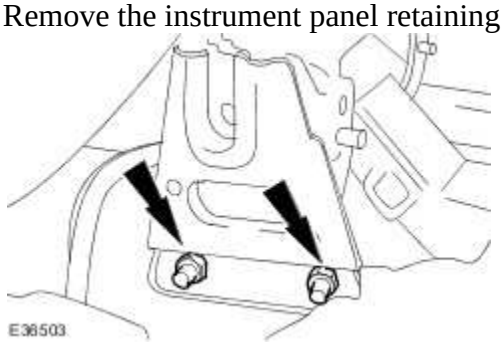


17 . Remove the instrument panel retaining bracket.

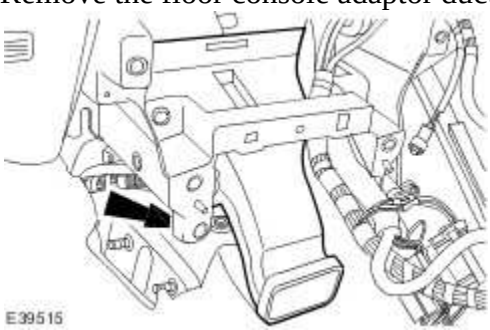


18 . Remove the retaining bolt.

19 . Remove the instrument panel retaining bracket.



20 . Remove the floor console adaptor duct retaining clip.

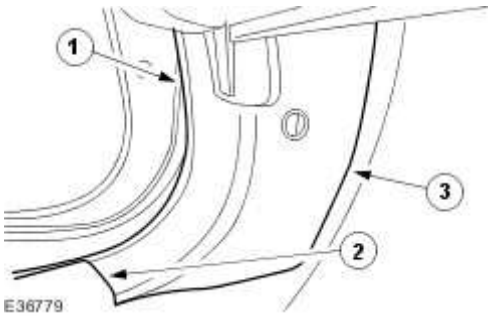


21 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the cowl side trim panels.

1) Detach the front door opening weather strip.
2) Detach the scuff plate trim panel.
3) Remove the cowl side trim panel.

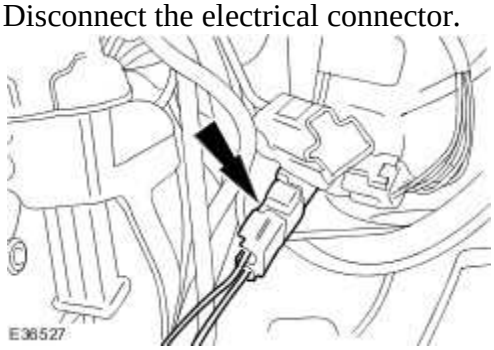


22 . **NOTE:**
From the left-hand footwell.

Disconnect the electrical connector.

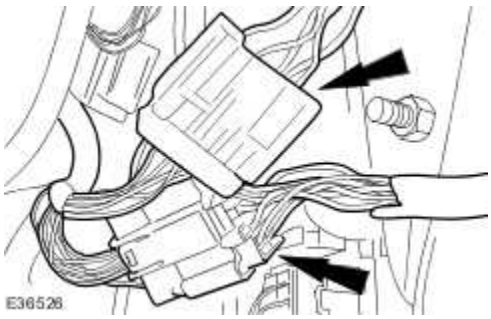
23 . **NOTE:**
From the left-hand footwell.

Disconnect the electrical connector.



24 . **NOTE:**
From the right-hand footwell.

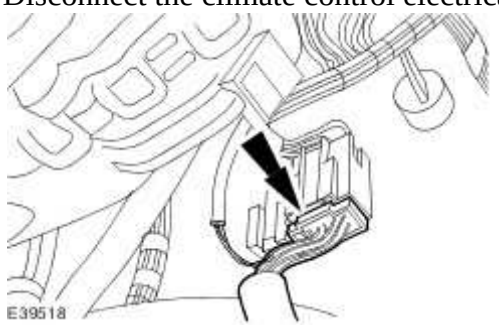
Disconnect the electrical connectors.



25 . **NOTE:**

Left-hand shown, right-hand similar.

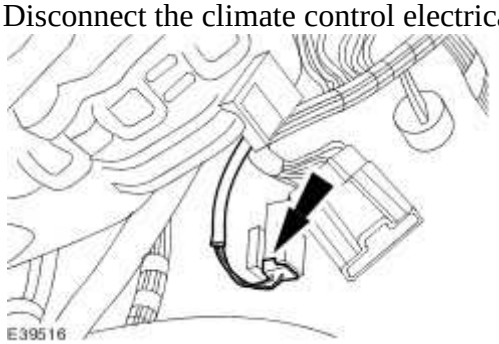
Disconnect the climate control electrical connector.



26 . **NOTE:**

Left-hand shown, right-hand similar.

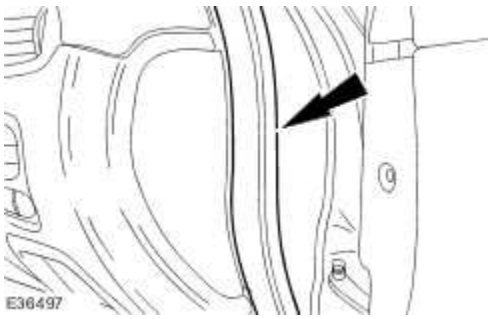
Disconnect the climate control electrical connector.



27 . **NOTE:**

Right-hand shown, left-hand similar.

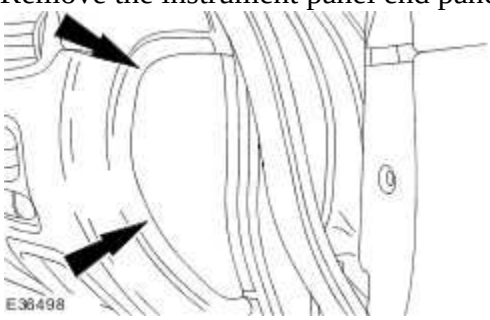
Detach the front door opening weather strip.



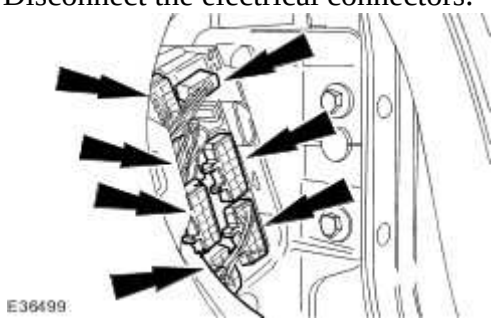
28 . **NOTE:**

Right-hand shown, left-hand similar.

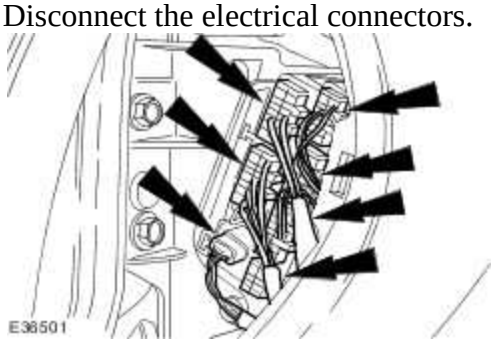
Remove the instrument panel end panel.



29 . Disconnect the electrical connectors.



30 . Disconnect the electrical connectors.

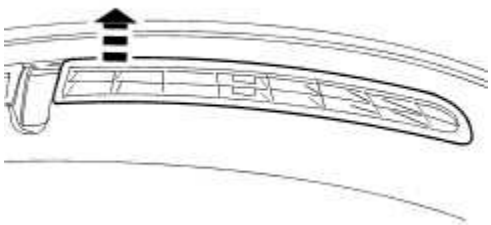


31 . Remove the sunload sensor. <<412-04>>

32 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the defogger duct.



E36511

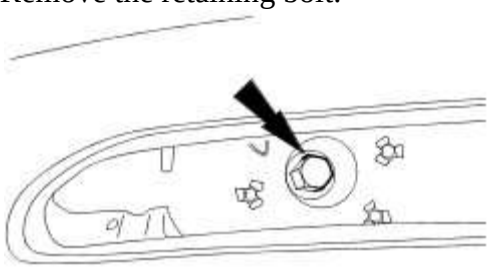
33 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the defogger duct.

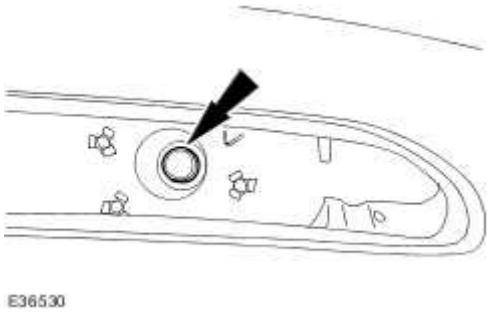
E36510

34 . Remove the retaining bolt.

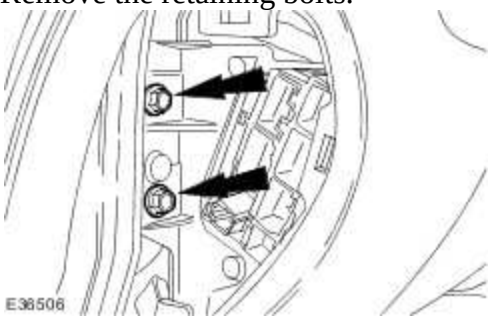


E36529

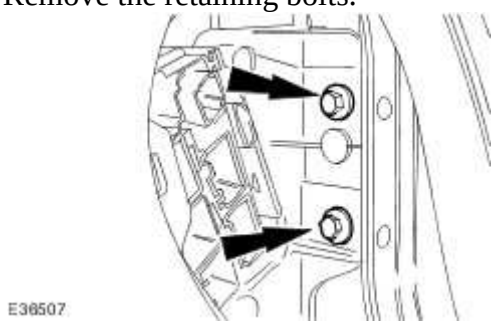
35 . Remove the retaining bolt.



36 . Remove the retaining bolts.



37 . Remove the retaining bolts.



38 . **CAUTION: Make sure damage does not occur to the instrument panel and interior trim on removal of the instrument panel.**

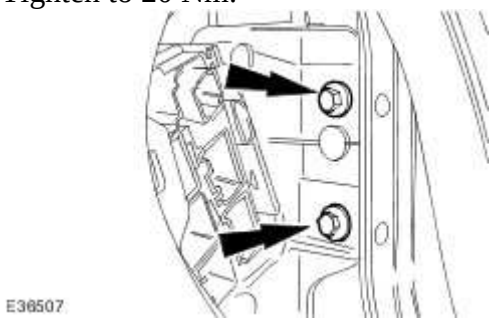
Remove the instrument panel.

Installation

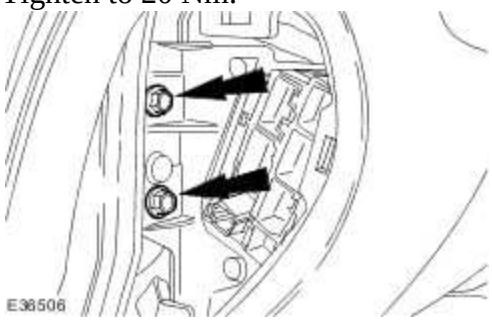
CAUTION: Make sure damage does not occur to the instrument panel and interior trim on installation of the instrument panel.

1 . To install, reverse the removal procedure.

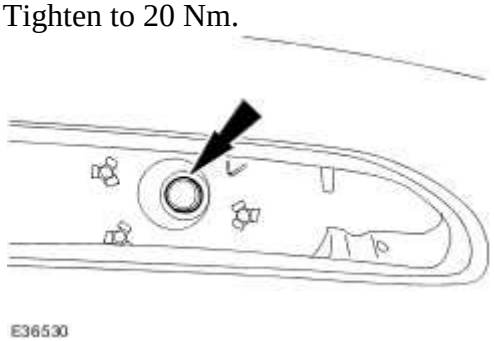
2 . Tighten to 20 Nm.



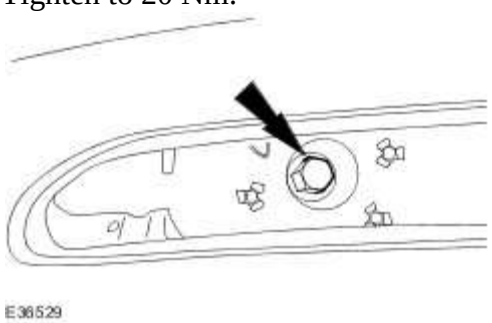
3 . Tighten to 20 Nm.



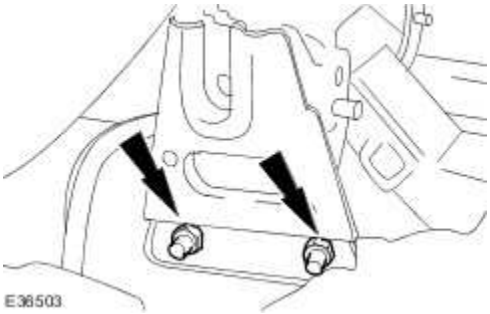
4 . Tighten to 20 Nm.



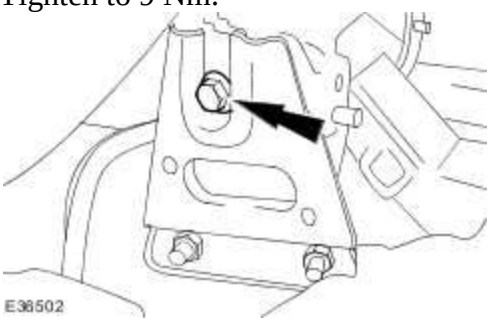
5 . Tighten to 20 Nm.



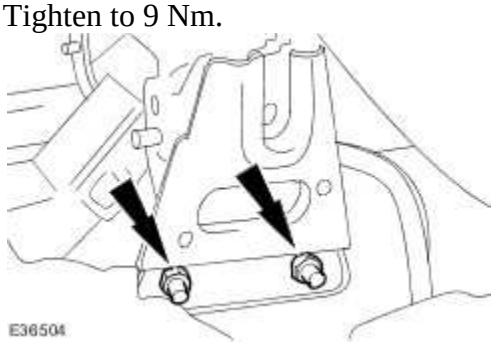
6 . Tighten to 9 Nm.



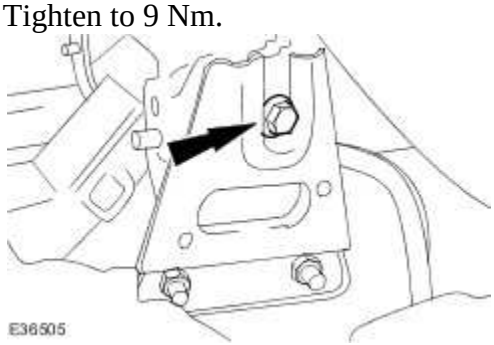
7 . Tighten to 9 Nm.



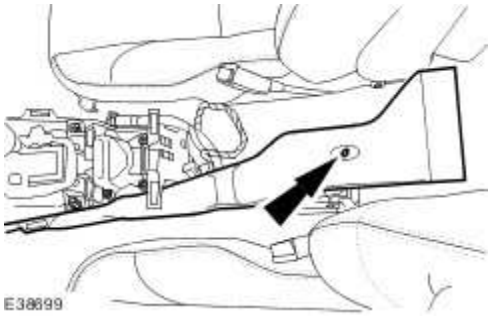
8 . Tighten to 9 Nm.



9 . Tighten to 9 Nm.



10 . Tighten to 3 Nm.


E38899

Instrument Panel Console (88.20.34)

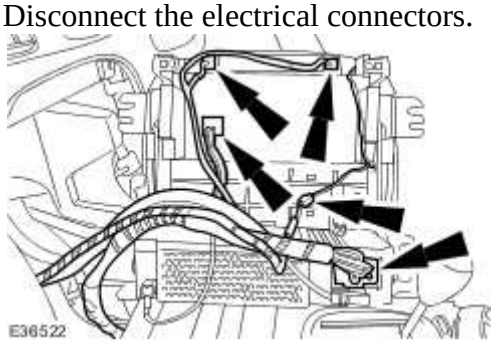
Removal

1 Remove the floor console.
. For additional information, refer to Floor Console - Vehicles Without: Auxiliary Climate Control (76.25.01)

2 . Detach the instrument panel console.

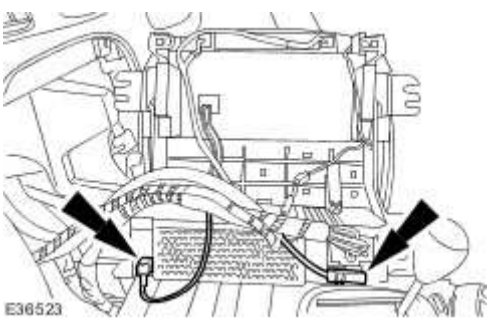
- Remove the retaining screws.

3 . Disconnect the electrical connectors.



4 . Remove the instrument panel console.

- Disconnect the antenna connectors.



Installation

1 . To install, reverse the removal procedure.

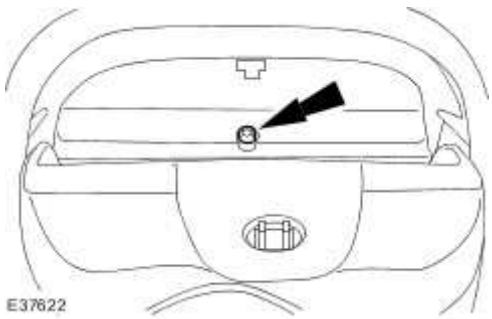
Overhead Console (76.13.69)

Removal

Vehicles without roof opening panel

1 . Remove the retaining screw.

- Open the sunglasses compartment.



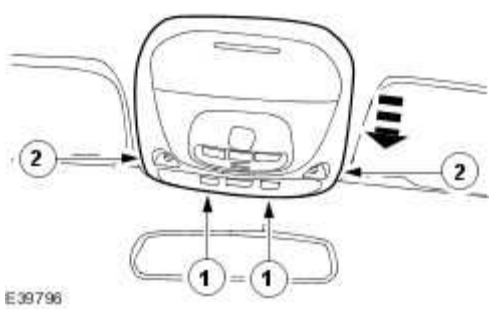
All vehicles

2 . Detach the overhead console from bulb carrier retaining clips.

1) Release the overhead console to bulb carrier front retaining clips.

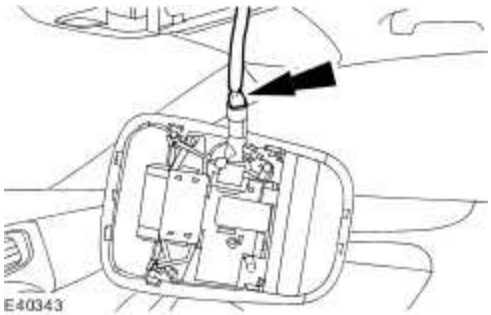
2) Release the overhead console to bulb carrier side retaining clips.

- Lower the overhead console.



3 . Remove the overhead console.

- Disconnect the electrical connector.



Installation

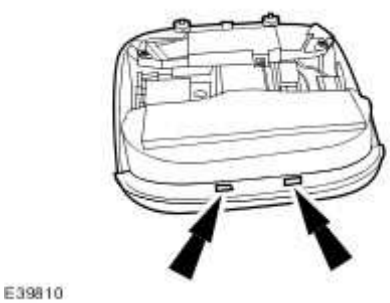
All vehicles

1 **NOTE:**

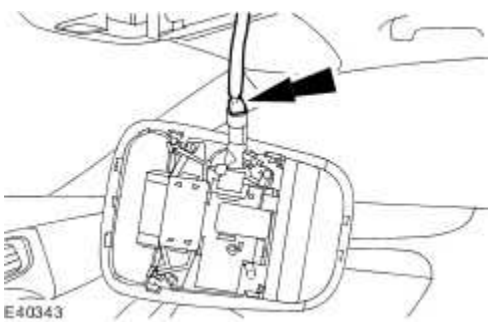
.

Do not remove the sunglasses housing from the overhead console.

Release the overhead console clips to aid correct installation of the overhead console to the headlining.



2 . Connect the electrical connector.



3 . **NOTE:**

Make sure the headlining is correctly located in to the overhead console.

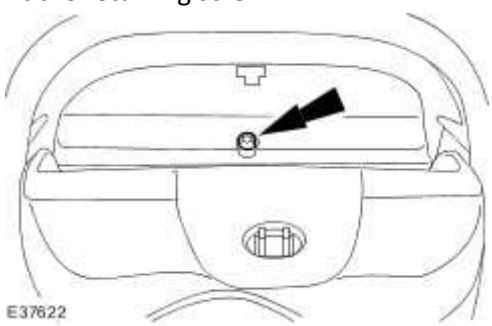
NOTE:

Make sure the overhead console clips engage in the sunglasses housing.

Install the overhead console.

Vehicles without roof opening panel

4 . Fit the retaining screw.



Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front door lock actuator retaining screws	7	—	62
Rear door lock actuator retaining screws	7	—	62
Exterior door handle mechanism retaining screws	7	—	62
Exterior door handle retaining screws	7	—	62
Luggage compartment lid latch actuator retaining screws	15	11	—
Luggage compartment lid lock cylinder retaining bolt	7	—	62
Front door lower security shield retaining screws	7	—	62
Front door upper security shield retaining screw	7	—	62
Front door lock cylinder retaining screw	7	—	62

Remote Transmitter Programming

NOTE:

All remote transmitters are programmable and must be set at the same time.

NOTE:

If an attempt is made to program a sixth remote transmitter after five remote transmitters have already been programmed, the sixth attempt will over write the first remote transmitter programmed.

NOTE:

If two audible chimes are heard at any stage of the programming sequence an error has occurred and the process must be repeated.

1. Open the driver door.

2. Pull the multifunction switch to the headlamp main beam flash position and hold.

3. Insert the ignition key to the ignition lock cylinder and turn to the ACCESSORY position.

4. **NOTE:**

   On completion of this step an audible chime will be heard and the alarm Light Emitting Diode (LED) will flash once.

Operate the multifunction switch to flash the headlamp main beam five times.

5. **NOTE:**

   On completion of this step an audible chime will be heard and the alarm LED will flash once.

NOTE:

If more than one remote transmitter is to be programmed, operate the additional remote transmitter(s) button once the first remote transmitter has been acknowledged by the audible chime and alarm LED flash.

Operate any of the remote transmitter buttons.

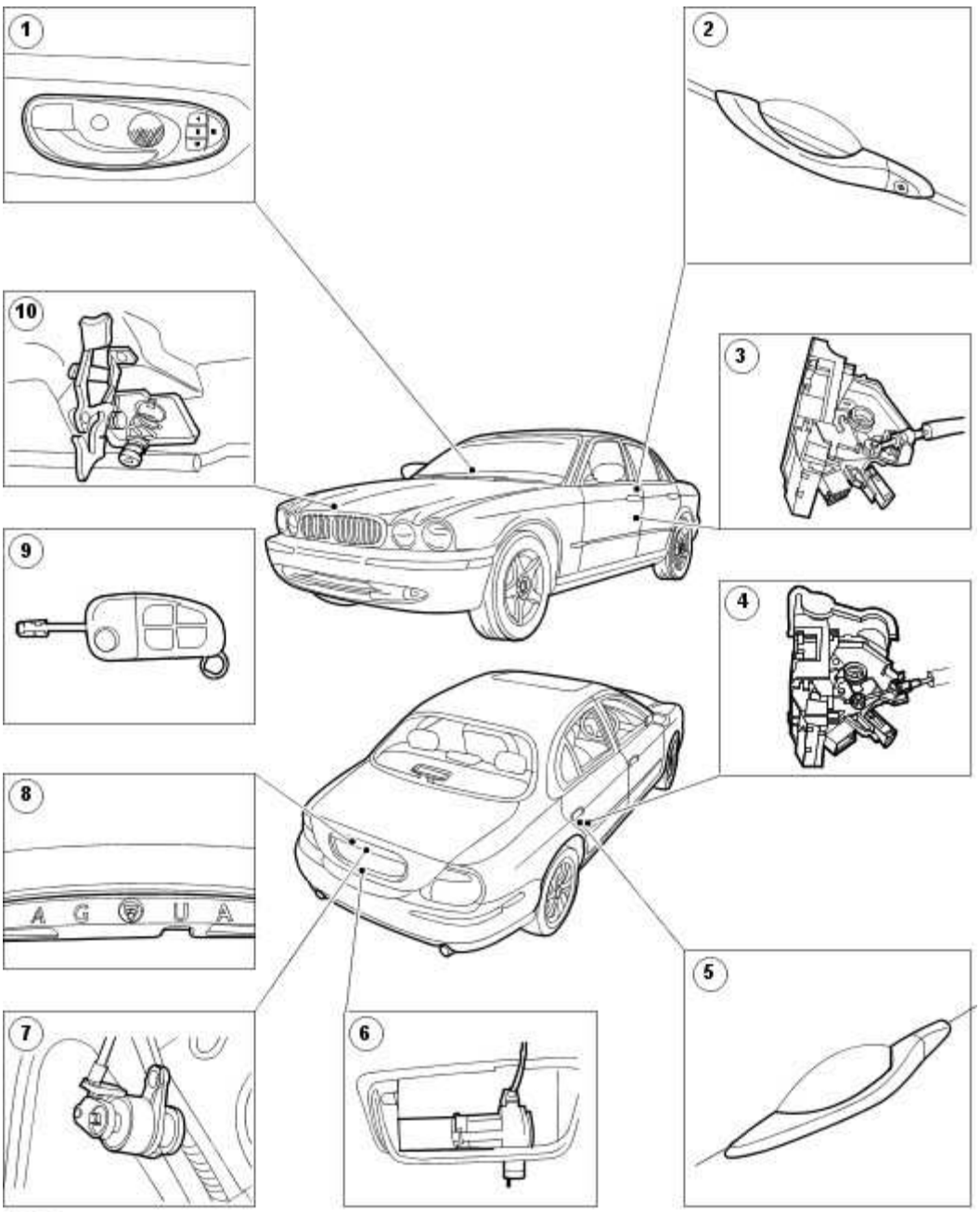
6. **NOTE:**

On completion of this step an audible chime will be heard and the alarm LED will flash once.

Remove the ignition key.

7. Close the driver door and check operation of the remote transmitter(s).

Handles, Locks, Latches and Entry Systems



Item	Part Number	Description
1	—	Interior door handle
2	—	Exterior front door handle

3	—	Front door lock actuator
4	—	Rear door lock actuator
5	—	Exterior rear door handle
6	—	Luggage compartment lid latch actuator
7	—	Luggage compartment lid lock cylinder
8	—	Luggage compartment release switch
9	—	Integrated key remote entry transmitter
10	—	Hood latch release handle

For most markets excluding North America and Japan, the remote central locking system incorporates a double locking facility for optimum security. All locks use the Tibbe key system, using 6 elements and 4 cuts. The keys include 'in-key' transponders which are programmed to the vehicle engine immobilization system by using the Jaguar approved diagnostic system.

The central locking system employs single key access to the driver door, luggage compartment and ignition switch/steering column lock with the exception of the valet key which gives no access to the luggage compartment.

When the vehicle is not locked, each door catch can be externally released by the corresponding exterior door handle which is operated by a single rod. When unlocked, or central locked, the door latches can also be released by the interior handles, each of which are operated by a single cable. Operation of the front door interior handles will also unlock the rear doors. Use of the key in the driver door lock cylinder operates the lock by a short rod to provide locking of the door latch. This in turn locks all other doors and the luggage compartment through the central locking system. These locking functions can also be achieved by use of the remote transmitter.

NOTE:

To unlock the rear doors on a North American specification vehicle from within the vehicle the locking lever has to be moved to the unlocked position first and then the opening lever pulled to open the door.

All markets (except Japan), have a 'drive-away door locking' feature incorporated into the central locking system, the system is installed during manufacturing and disabled or reinstated with the Jaguar approved diagnostic system. The 'drive-away door locking' operates when the ignition is in the 'on' position and all the doors are closed, all the doors will lock when the gear selector lever is moved from the park (P) or neutral (N) position. The gear selector lever has to be moved out of the P or N position and to a different gear position for more than one second to trigger the system.

If the vehicle is stopped and a door is opened and closed, the doors will lock again when the gear selector lever is moved from the P or N position to a different gear position for more than one second. If the vehicle is stopped and a door is opened and closed, but the gear selector lever is not moved the the P or N position, the doors will remain unlocked.

Key operation

To central lock or unlock the vehicle, the key is inserted in the driver door lock cylinder, turned clockwise or counter clockwise respectively, and released. Holding the key in the lock position for 1.5 seconds will close all windows. Releasing the key stops all operations. Central locking of the vehicle locks all the doors, the luggage compartment, and sets the alarm system. In addition to all of the above functions, double locking prevents the doors opening from the interior. To 'double lock' the vehicle, the key is inserted in the driver door lock cylinder and turned to the unlock position, then within three seconds, turned to the lock position and released. The same procedure is required to unlock a 'double locked' vehicle as with a central locked vehicle. The key is inserted in the driver door lock cylinder and turned to the unlock position. This function can also be activated using the remote transmitter.

If an attempt is made to lock the doors through either the driver or front passenger door interior handle, when a door is ajar, all doors will lock temporarily and then centrally unlock.

The fuel filler flap switch is used to allow the driver to release the fuel filler flap from inside the vehicle. This function can be used at all times providing the vehicle is not locked by the remote transmitter or the drivers door lock cylinder.

Keyless Entry

The Integrated key remote transmitter operates the following functions:

- unlocking the driver door (market dependent)
- unlocking/locking all doors (market dependent)
- releasing the luggage compartment lid.
- activate/deactivate the double locking (market dependent)
- arms/disarms the anti-theft alarm system, interior scanning system and the inclination sensor (if equipped)
- activates global closing (market dependent)
- deactivates a triggered alarm (market dependent)

Inputs and Outputs

Rear Electronics Module (REM)

The REM controls all locking functions for the passenger doors and controls the luggage compartment release operation. The REM also has the sense inputs from the front electronic module (FEM), driver door module (DDM), and the fuel filler flap actuator.

Driver Door Module (DDM)

The DDM controls all the locking functions for the driver door and stores the configurations for the central locking and global opening systems.

Front Electronics Module (FEM)

The FEM controls the inputs to the system from the:

- valet switch
- interior luggage compartment release
- fuel filler flap switch
- hood latch switch
- glove compartment lid

Transmitter, Keyless Entry Remote

The keyless entry/remote operated lock system is completely independent in function but fully integrated within the DDM (except for Japan and Korea). 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 will be up to 10 meters for the USA, Canada and the rest of the world. The normal range between transmitter and antenna will be up to 10 meters for the UK and Europe and five meters for Japan (dependent on the surrounding environment).

Before the remote control system can be used, each transmitter must be initialized to the vehicle. A maximum number of five 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 (lock button only) when the door is ajar, the luggage compartment lid is ajar or if the hood is ajar. All the keyless entry/remote operated functions are inhibited if the ignition key is in the ignition lock.

Locking and Unlocking

The remote transmitter is integrated into the key and contains four buttons (lock, unlock, trunk release, headlamp convenience). To operate the system:

- press the lock button once to activate the central locking system and the alarm system
- press the lock button twice within three seconds to activate the central locking system, double locking system, alarm system and the interior scanning system (if equipped)
- press the unlock button once to deactivate the central or double locking, the alarm system is deactivated and only the driver door is fully unlocked (this is programmable using the Jaguar approved diagnostic system or via the key fob (press and hold the lock and unlock buttons for four seconds)) (market dependent)
- press the unlock button twice within three seconds, will unlock the remaining doors (this is programmable using the Jaguar approved diagnostic system) (market dependent)
- press the luggage compartment release button once releases the luggage compartment lid. The vehicles gear selector lever must be in the park position
- press the headlamp convenience button once to activate the headlamp main beam function, press the headlamp convenience button again to deactivate the headlamp main beam function. This function will automatically deactivate after 25 seconds

- press the headlamp convenience button three times with in three seconds to activate the panic alarm, to deactivate the panic alarm insert a valid ignition key into the ignition lock and turn to the 'ON' position

Double Locking

Double locking prevents the interior door handles from unlocking the doors.

Double locking is activated by turning the key, using the driver door lock cylinder to the unlock position and then to the lock position within three seconds or by pressing the lock button twice within three seconds on the remote transmitter.

Successful double locking is indicated by the turn signals flashing twice, one short flash followed by a long flash and a chirp (if enabled).

Double locking will be inhibited if the REM or FEM senses the hood, a door or the luggage compartment is ajar or open. The REM/FEM receives its input from the door ajar switches.

If the vehicle battery becomes discharged after the double locking or central locking has been activated, opening the driver door with the key will mechanically deactivate the double locking on the driver door only.

Master Lock Switch

NOTE:

Operating the locks more than 15 times in 20 seconds will cause the central locking to be inhibited for 20 seconds. If the locks are required to be operated in the 20 second waiting period they can be operated individually.

The master lock switch will only operate the central locking if the ignition key is in the 'accessory' or 'on' positions. If any door is open and the master lock switch is pressed to centrally lock the vehicle, no doors will lock. If the hood or luggage compartment lid is open and the master lock switch is pressed to centrally lock the vehicle all doors will lock.

Glove Compartment Lid

The glove compartment lid has no release handle. It is opened automatically when the release switch is operated. The release switch is located in the instrument panel between the glove compartment lid and the floor console.

The glove compartment lid latch is released by a 12 volt electric motor which is operated by the glove compartment lid release switch.

The glove compartment lid cannot be opened when the following occurs:

- the vehicle is being driven using the green valet key and the vehicle is in the valet mode
- the vehicle is centrally or double locked

- the vehicle is locked with the front door lock cylinder, when in the valet mode

The glove compartment lid opening will also be inhibited if:

- the ignition key has been removed from the ignition lock for 40 minutes and the driver door has not been opened or closed
- the ignition key has been removed from the ignition lock for 30 minutes and the drive door has been opened and closed

Locks, Latches and Entry Systems

Inspection and Verification

1 . Verify the customer concern.

2 . Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Misaligned door(s), hood or luggage compartment lid • Door latch(es) • Actuating rod(s) • Exterior door handle(s) • Interior door handle(s) • Door lock cylinder • Cable(s) • Luggage compartment lid exterior release switch	• Fuse(s) • Wiring harness • Electrical connector(s) • Door lock actuator(s) • Remote transmitter batteries • Vehicle battery • Remote transmitter • Door lock switch(es) • Front electronic module (FEM)

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

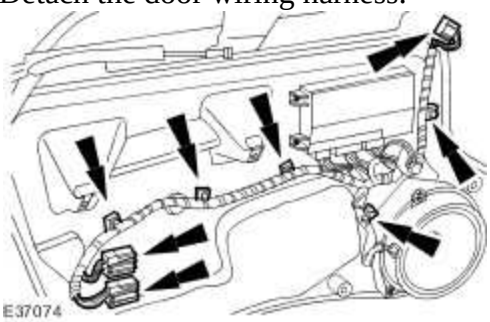
2 . If the cause is not visually evident, verify the symptom and refer to the Jaguar Approved Diagnostic System.

Exterior Door Handle (76.58.07)

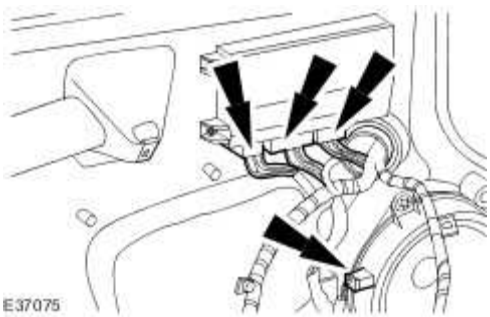
Removal

1 . Remove the interior front door trim panel. <<501-05>>

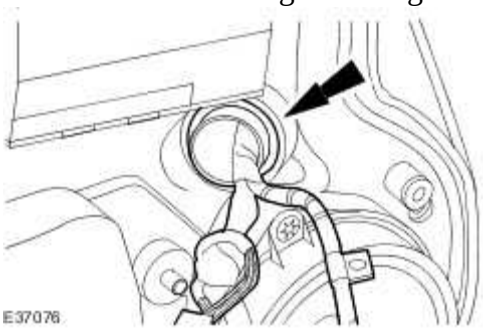
2 . Detach the door wiring harness.



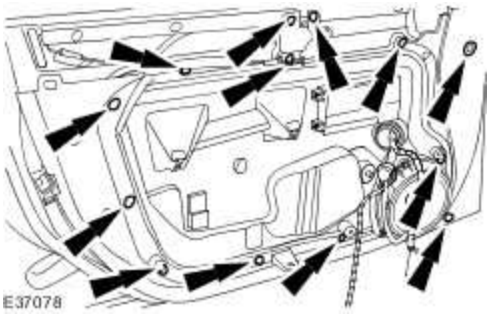
3 . Disconnect the electrical connectors.



4 . Detach the door wiring harness grommet.



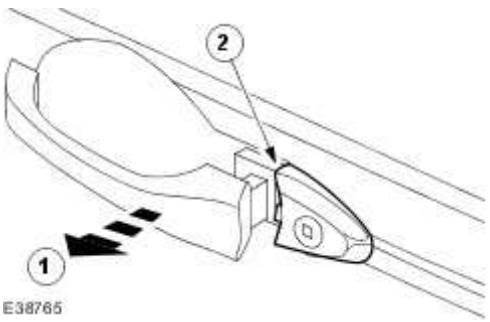
5 . Remove the door inner weathershield.



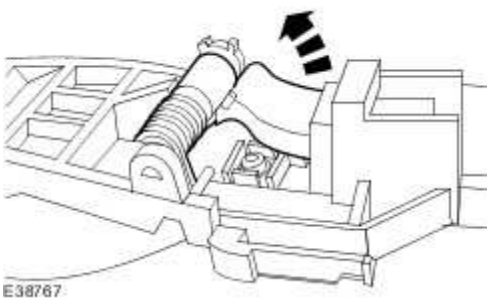
6 . Remove the front door lock bezel.

1) Hold the exterior door handle in the open position.

2) Remove the front door lock bezel.



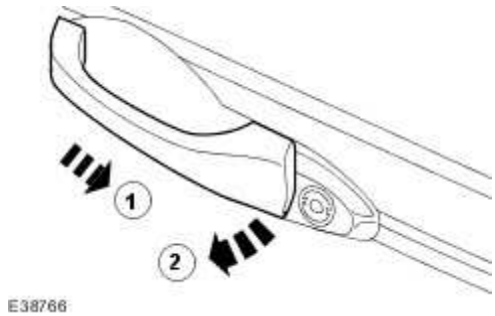
7 . Release and hold the exterior door handle retaining clip.



8 . Remove the exterior door handle.

1) Release the exterior door handle.

2) Remove the exterior door handle.



Installation

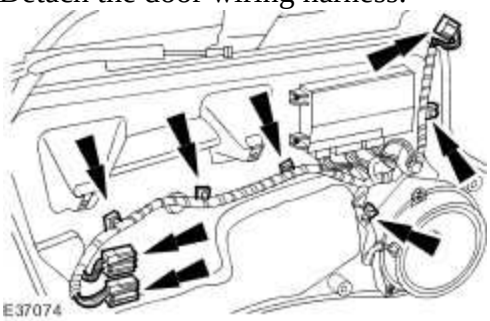
1 . To install, reverse the removal procedure.

Front Door Lock Actuator (76.37.74)

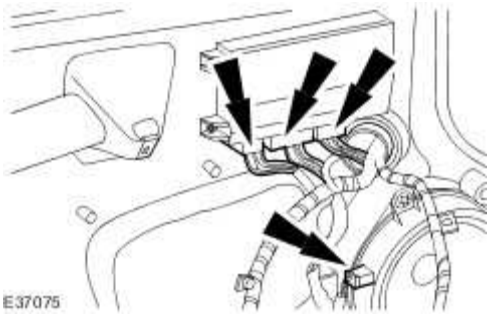
Removal

1 . Remove the front door trim panel. <<501-05>>

2 . Detach the door wiring harness.

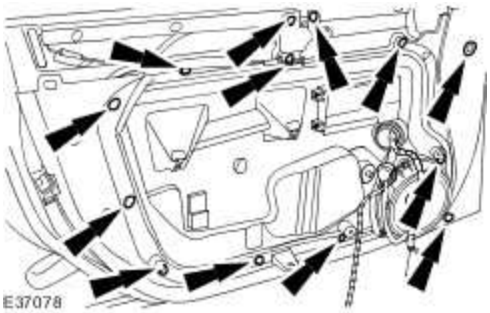


3 . Disconnect the electrical connectors.

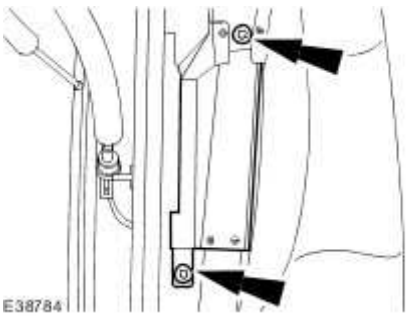


4 . Detach the door wiring harness grommet.

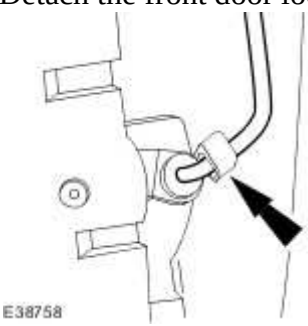
5 . Remove the door inner weathershield.



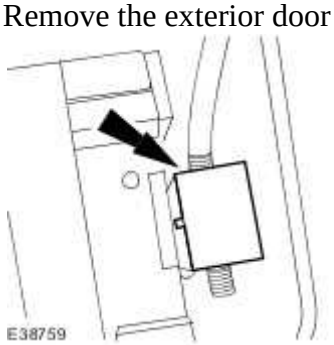
6 . Remove the front door lower security shield.



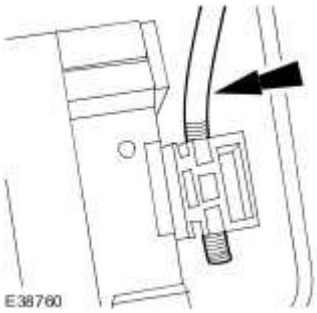
7 . Detach the front door lock cylinder connecting rod from the front door lock actuator.



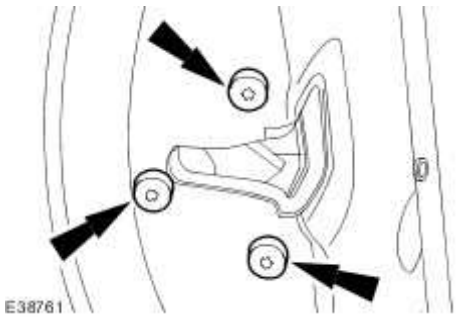
8 . Remove the exterior door handle connecting rod retaining clip.



9 . Detach the exterior door handle connecting rod from the front door lock actuator.



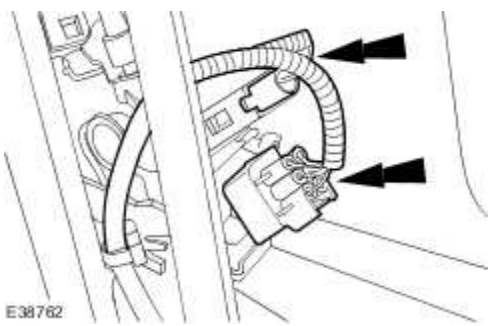
10 . Remove the front door lock actuator retaining screws.



11 . Reposition the front door lock actuator and actuator remote cable assembly.

12 . Remove the front door lock actuator and actuator remote cable assembly.

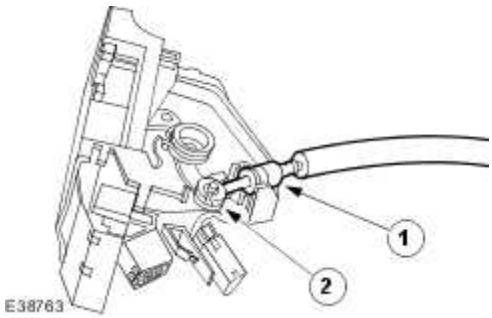
- Disconnect the electrical connectors.



13 . Remove the actuator remote cable from the front door lock actuator.

1) Detach the actuator remote outer cable.

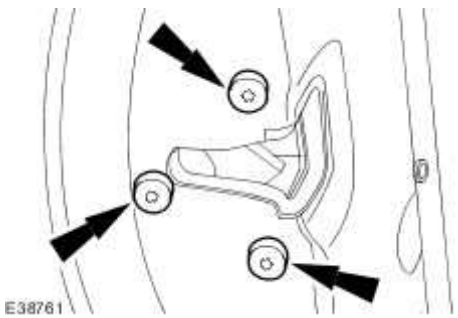
2) Remove the actuator remote cable from the front door lock actuator.



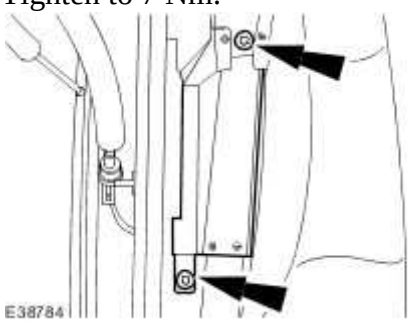
Installation

1 . To install, reverse the removal procedure.

Tighten to 7 Nm.

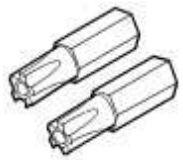


2 . Tighten to 7 Nm.



Front Door Lock Cylinder (76.37.71)

Special Service Tools

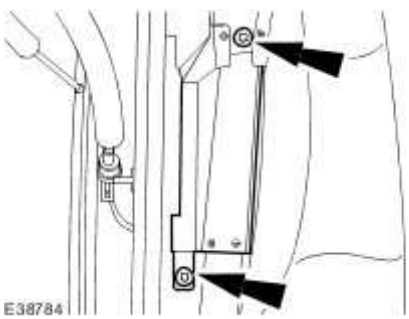


5 point security torx bit
418-535

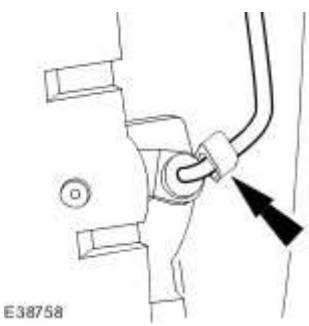
Removal

1 . Remove the front door exterior door handle.
For additional information, refer to Exterior Door Handle (76.58.07)

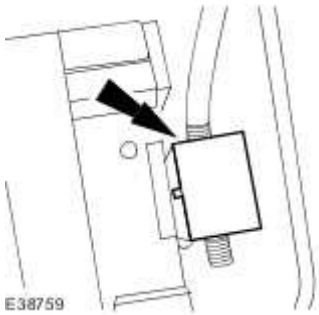
2 . Remove the front door lower security shield.



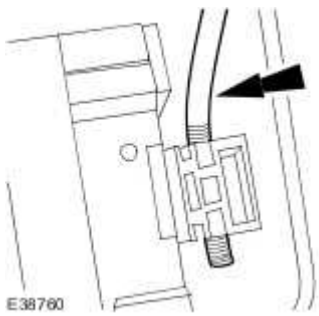
3 . Detach the front door lock cylinder connecting rod from the front door lock actuator.



4 . Remove the exterior door handle connecting rod retaining clip.

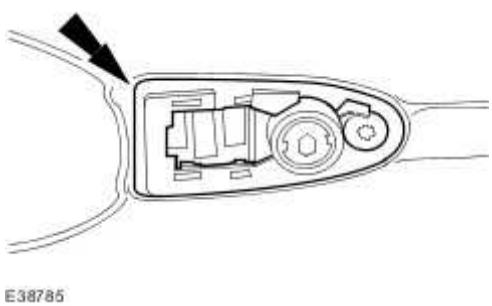


5 . Detach the exterior door handle connecting rod from the front door lock actuator.

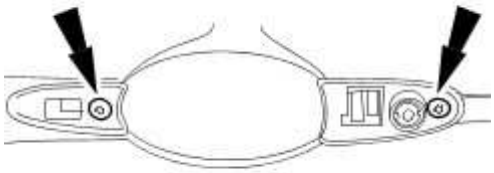


6 . Remove the front door lock cylinder retaining screw.

7 . Remove the exterior door handle gasket.

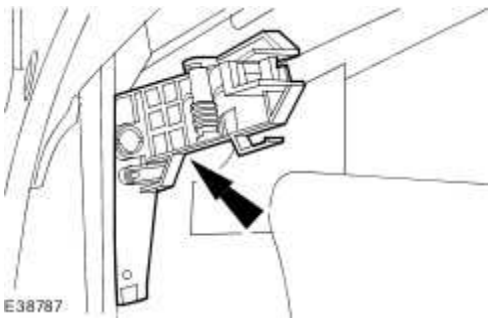


8 . Using the special tool, remove the exterior door handle mechanism retaining screws.



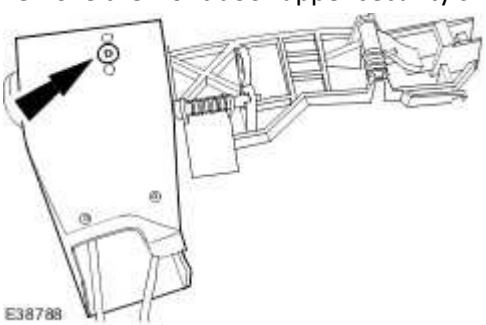
E38786

9 . Remove the exterior door handle mechanism.



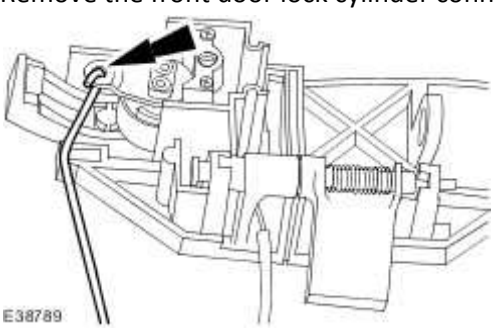
E38787

10 . Remove the front door upper security shield.



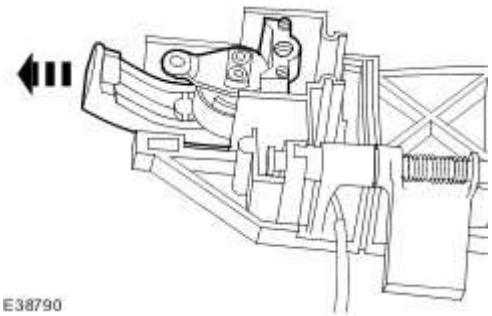
E38788

11 . Remove the front door lock cylinder connecting rod.



E38789

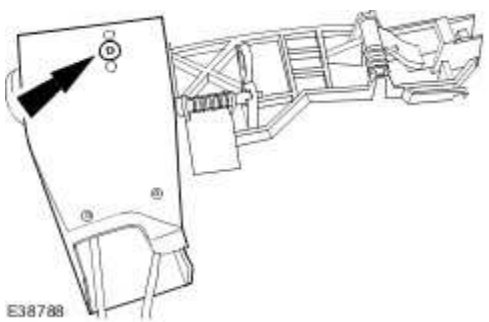
12 . Remove the front door lock cylinder.



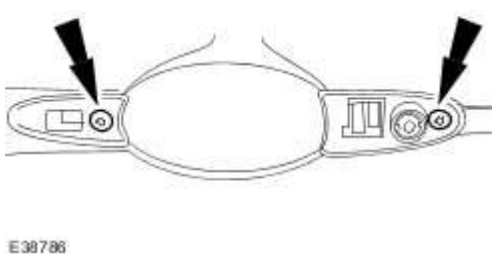
Installation

1 . To install, reverse the removal procedure.

1) Tighten to 7 Nm.

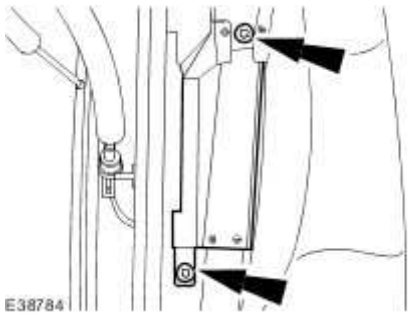


2 . Using the special tool, tighten to 7 Nm.



3 . Tighten to 7 Nm.

4 . Tighten to 7 Nm.

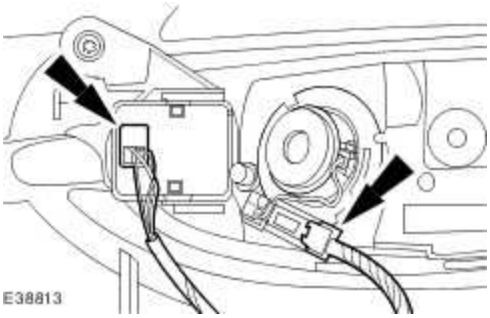


Interior Door Handle (76.37.31)

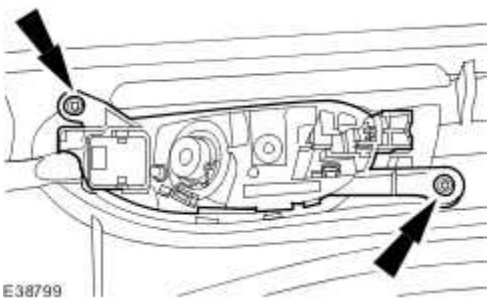
Removal

1 . Remove the interior front door trim panel. <<501-05>>

2 . Disconnect the electrical connectors.



3 . Remove the interior door handle.



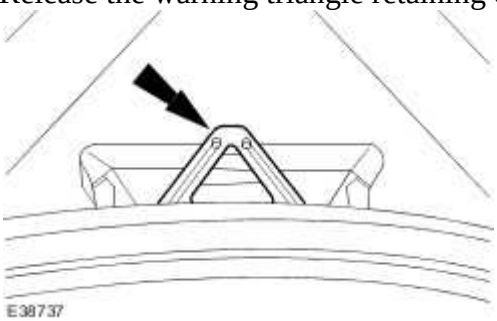
Installation

1 . To install, reverse the removal procedure.

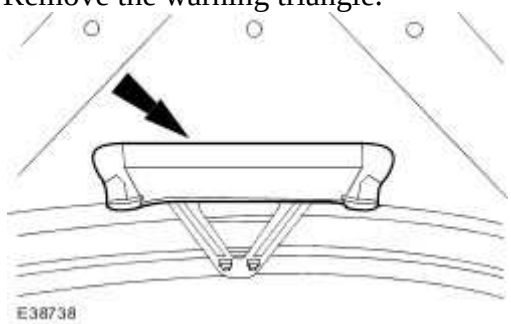
Luggage Compartment Lid Latch Actuator - VIN Range: G00442->H18679 (76.19.25)

Removal

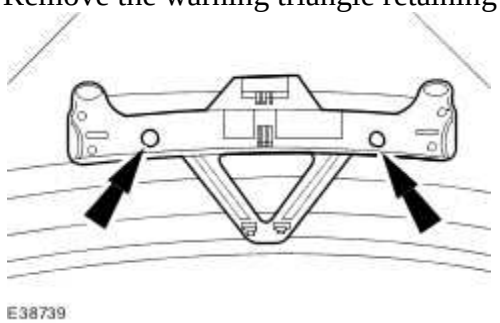
1 . Release the warning triangle retaining clip.



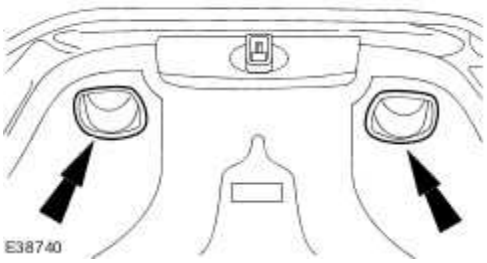
2 . Remove the warning triangle.



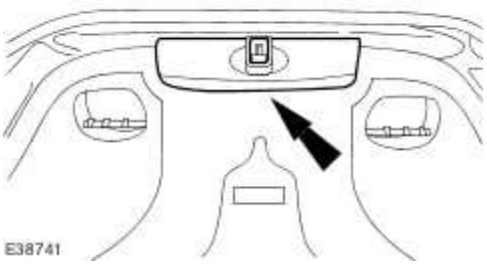
3 . Remove the warning triangle retaining bracket.



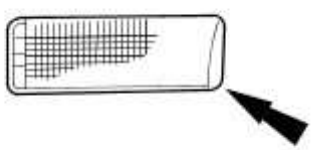
4 . Remove the luggage compartment lid grab handles.



5 . Remove the luggage compartment lid latch trim cover.

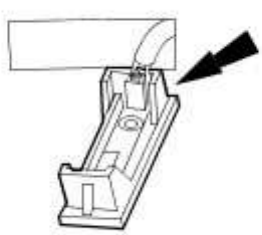


6 . Detach the luggage compartment lid courtesy lamp.

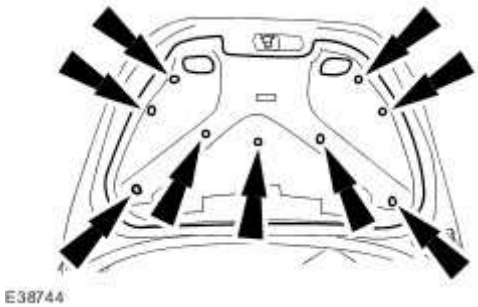


7 Remove the luggage compartment lid courtesy lamp.

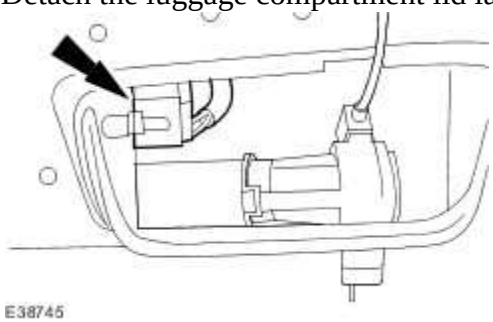
· Disconnect the luggage compartment lid courtesy lamp electrical connector.



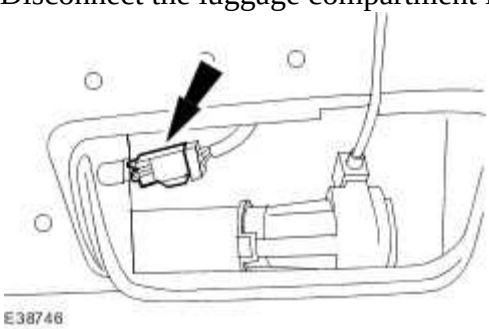
8 . Remove the luggage compartment lid liner.



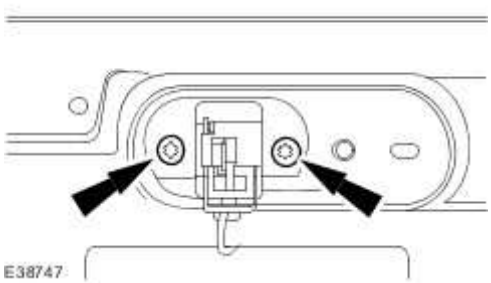
9 . Detach the luggage compartment lid latch actuator electrical connector.



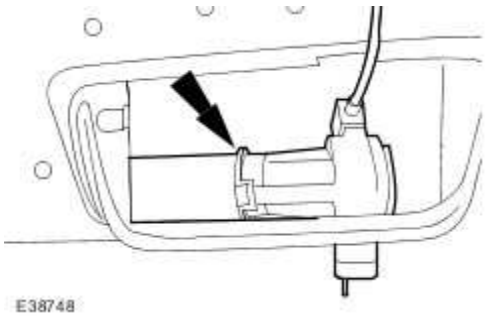
10 . Disconnect the luggage compartment lid latch actuator electrical connector.



11 . Remove the luggage compartment lid latch actuator retaining bolts.



12 . Detach the luggage compartment lid latch actuator.

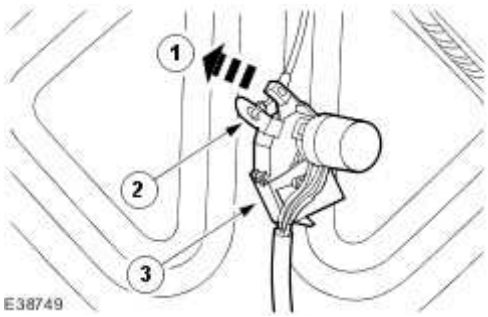


13 . Remove the luggage compartment lid latch actuator.

1) Detach the luggage compartment lid latch actuator release cable.

2) Remove the luggage compartment lid latch actuator release cable.

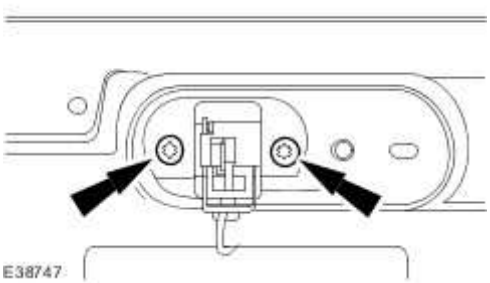
3) Remove the luggage compartment lid latch actuator.



Installation

1 . To install, reverse the removal procedure.

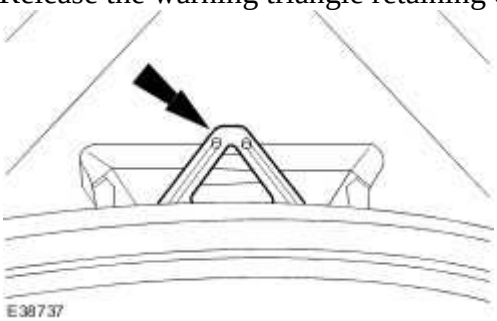
Tighten to 15 Nm.



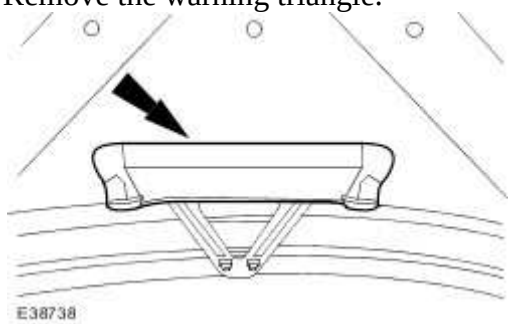
Luggage Compartment Lid Latch Actuator - VIN Range: H18680->H99999 (76.19.25)

Removal

1 . Release the warning triangle retaining clip.

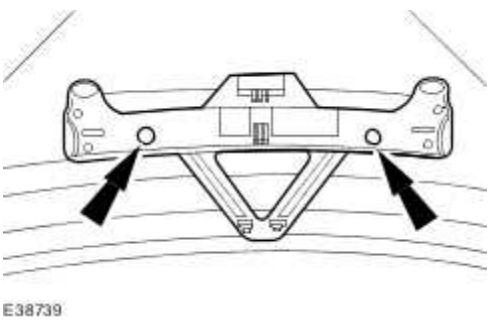


2 . Remove the warning triangle.



3 . Remove the warning triangle retaining bracket.

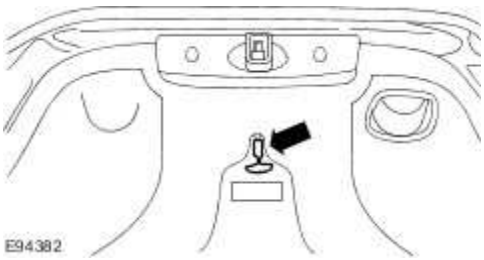
- Remove the retaining bolts.



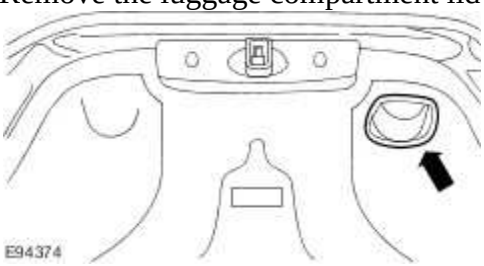
4 . **NOTE:**

Federal market vehicles only.

Detach the luggage compartment emergency release handle.

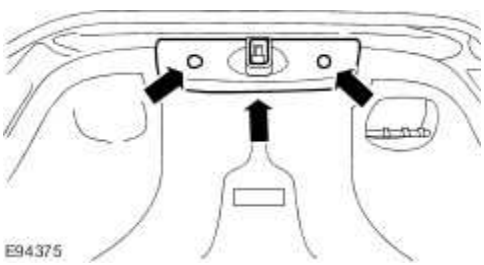


5 . Remove the luggage compartment lid grab handle.

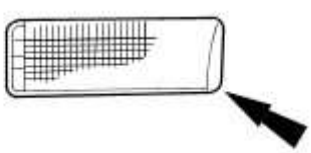


6 . Remove the luggage compartment lid latch trim cover.

- Remove the retaining clips.

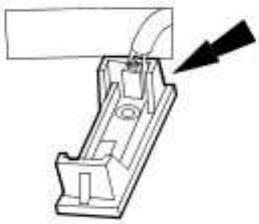


7 . Detach the luggage compartment lid courtesy lamp.



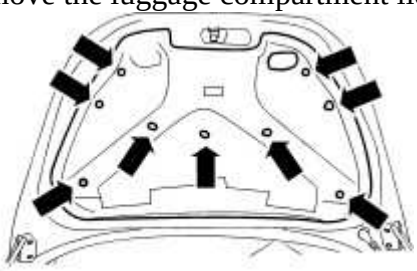
8 . Remove the luggage compartment lid courtesy lamp.

- Disconnect the electrical connector.



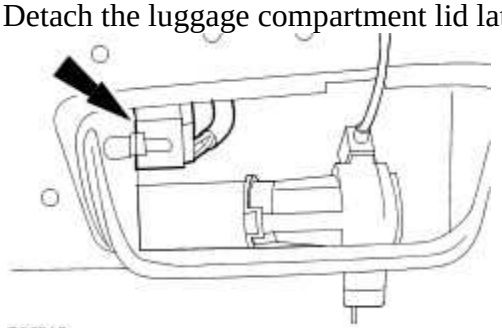
E38743

9 . Remove the luggage compartment lid liner.



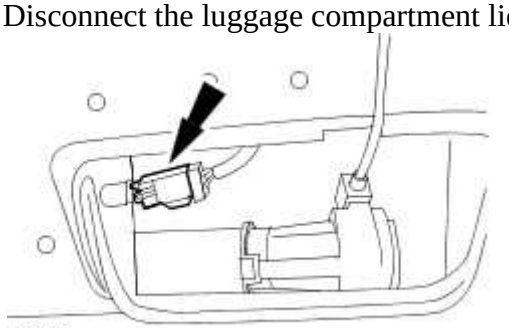
E94376

10 . Detach the luggage compartment lid latch actuator electrical connector.



E38745

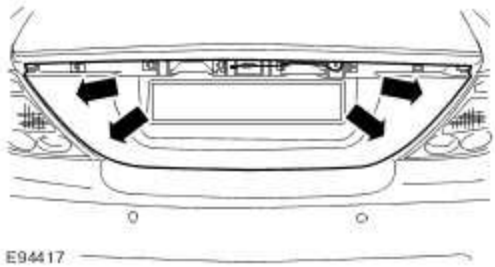
11 . Disconnect the luggage compartment lid latch actuator electrical connector.



E38746

12 . Remove the luggage compartment lid plastic facia trim.

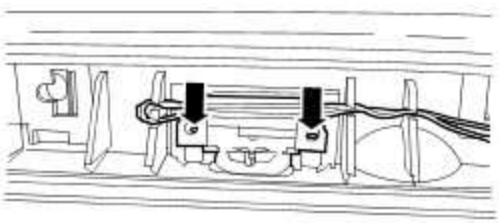
- Release the retaining clips.



E94417

13 . Remove the luggage compartment lid latch actuator.

- Remove the retaining bolts.



E94416

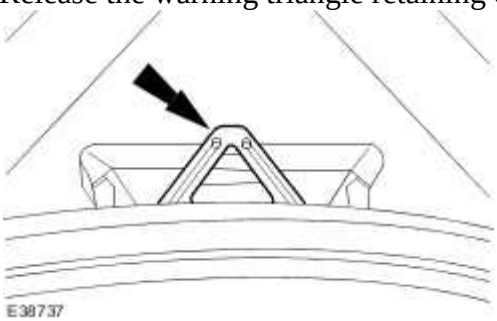
Installation

1 . To install, reverse the removal procedure.

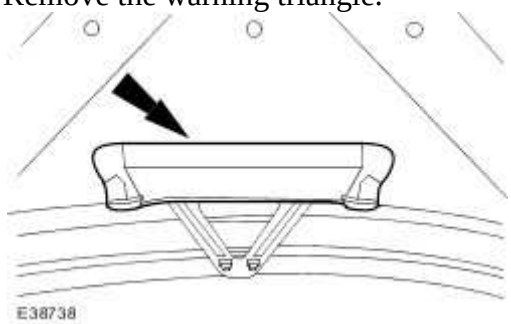
Luggage Compartment Lid Lock Cylinder - VIN Range: G00442->H18679 (76.19.19)

Removal

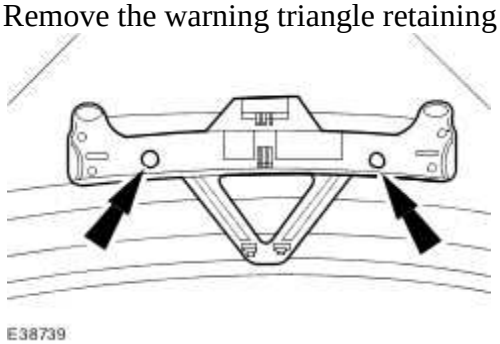
1 . Release the warning triangle retaining clip.



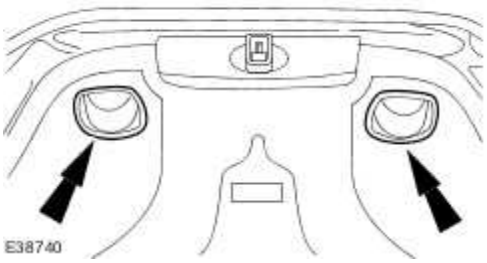
2 . Remove the warning triangle.



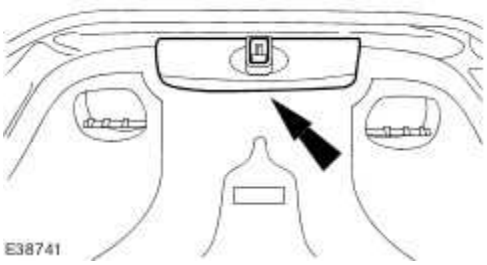
3 . Remove the warning triangle retaining bracket.



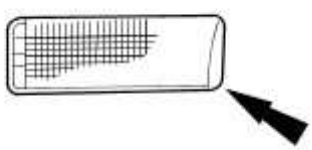
4 . Remove the luggage compartment lid grab handles.



5 . Remove the luggage compartment lid latch trim cover.

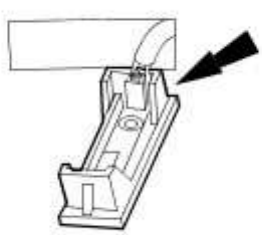


6 . Detach the luggage compartment lid courtesy lamp.

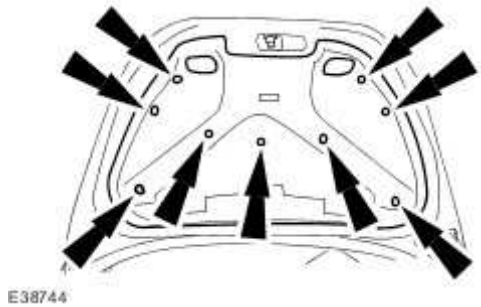


7 Remove the luggage compartment lid courtesy lamp.

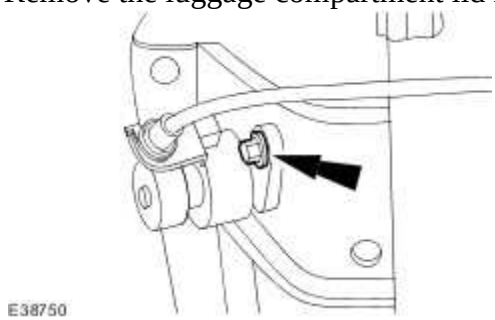
· Disconnect the luggage compartment lid courtesy lamp electrical connector.



8 . Remove the luggage compartment lid liner.



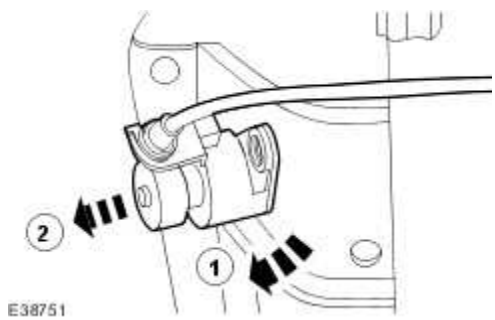
9 . Remove the luggage compartment lid lock cylinder retaining bolt.



10 . Detach the luggage compartment lid lock cylinder

1) Rotate the luggage compartment lid lock cylinder clockwise.

2) Detach the luggage compartment lid lock cylinder

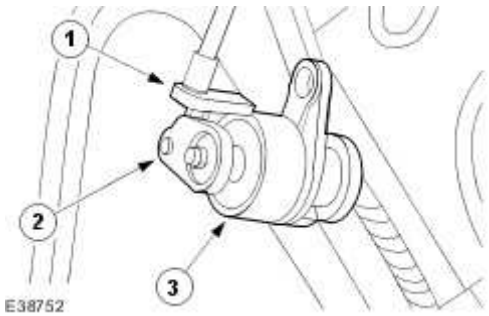


11 . Remove the luggage compartment lid lock cylinder.

1) Detach the luggage compartment lid latch actuator release cable.

2) Remove the luggage compartment lid latch actuator release cable.

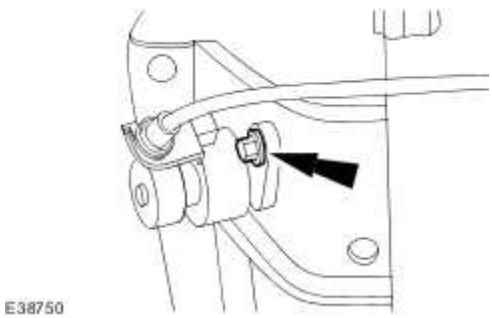
3) Remove the luggage compartment lid lock cylinder.



Installation

1 . To install, reverse the removal procedure.

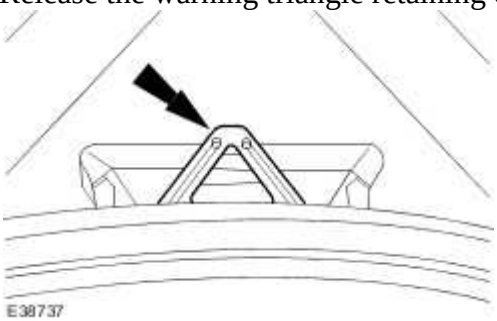
- Tighten to 7 Nm.



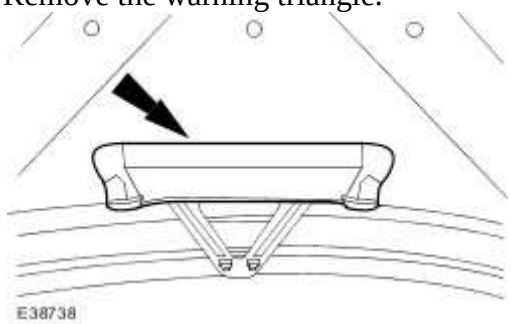
Luggage Compartment Lid Lock Cylinder - VIN Range: H18680->H99999 (76.19.19)

Removal

1 . Release the warning triangle retaining clip.

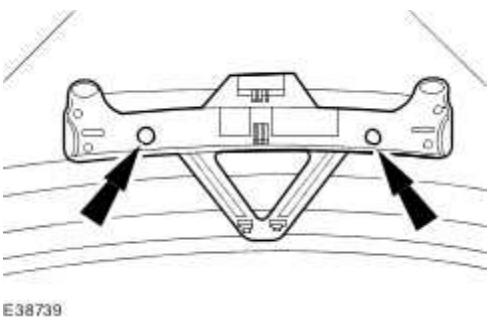


2 . Remove the warning triangle.



3 . Remove the warning triangle retaining bracket.

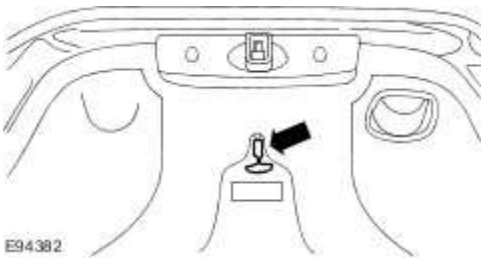
- Remove the retaining bolts.



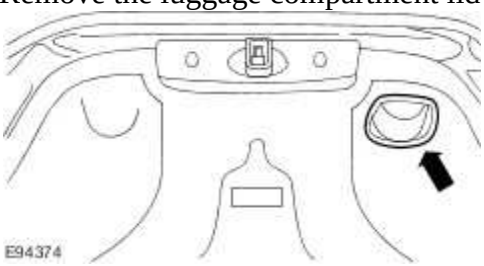
4 . **NOTE:**

Federal market vehicles only.

Detach the luggage compartment emergency release handle.

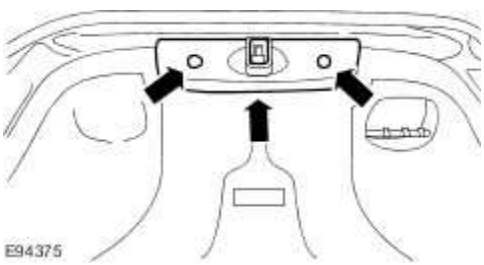


5 . Remove the luggage compartment lid grab handle.

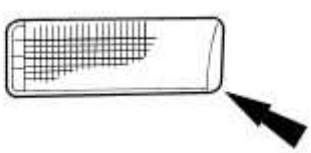


6 . Remove the luggage compartment lid latch trim cover.

- Remove the retaining clips.

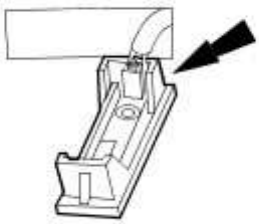


7 . Detach the luggage compartment lid courtesy lamp.



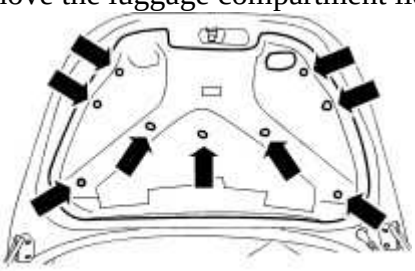
8 . Remove the luggage compartment lid courtesy lamp.

- Disconnect the electrical connector.



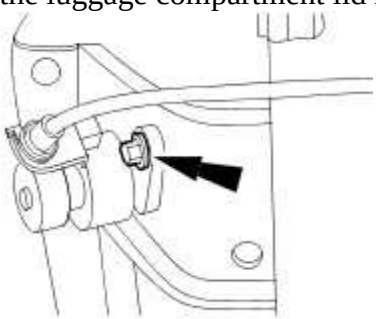
E38743

9 . Remove the luggage compartment lid liner.



E94376

10 . Remove the luggage compartment lid lock cylinder retaining bolt.



E38750

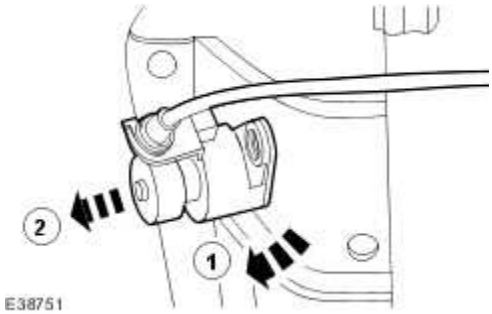
11 . **NOTE:**

Note the position of the sealing washer.

Detach the luggage compartment lid lock cylinder

1) Rotate the luggage compartment lid lock cylinder clockwise.

2) Detach the luggage compartment lid lock cylinder

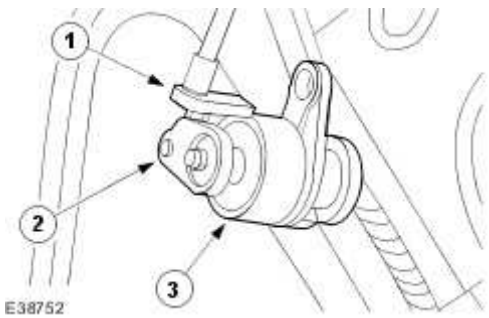


12 . Remove the luggage compartment lid lock cylinder.

1) Detach the luggage compartment lid latch actuator release cable.

2) Remove the luggage compartment lid latch actuator release cable.

3) Remove the luggage compartment lid lock cylinder.



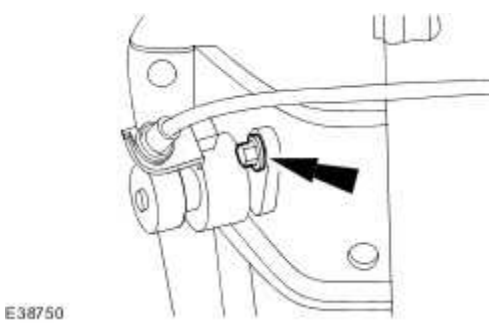
Installation

1 . **NOTE:**

Make sure that the sealing washer is installed correctly.

To install, reverse the removal procedure.

Tighten to 7 Nm.

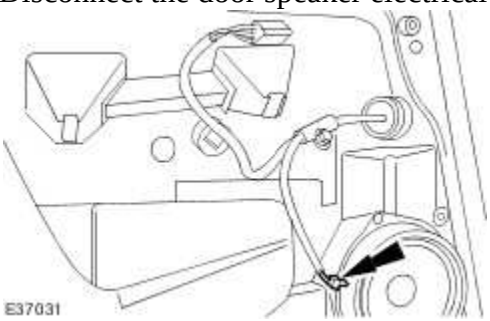


Rear Door Lock Actuator (76.37.09)

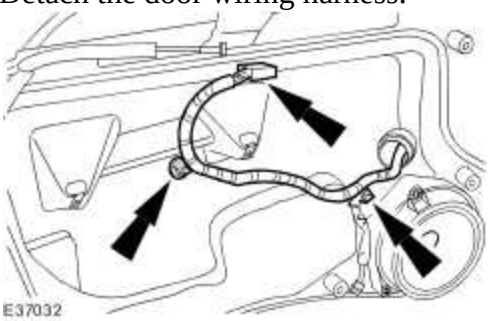
Removal

1 . Remove the rear door trim panel. <<501-05>>

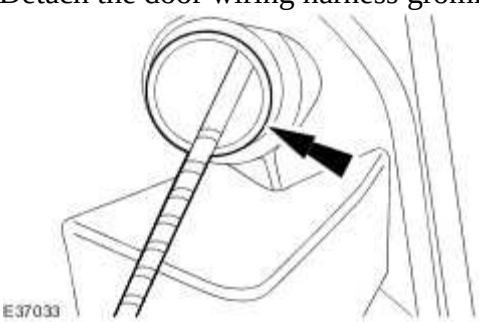
2 . Disconnect the door speaker electrical connector.



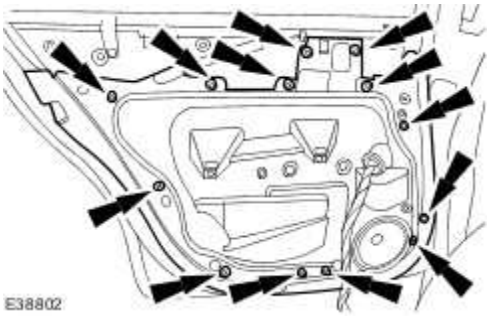
3 . Detach the door wiring harness.



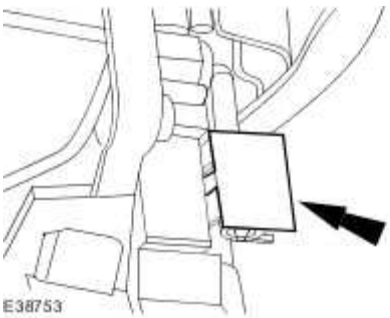
4 . Detach the door wiring harness grommet.



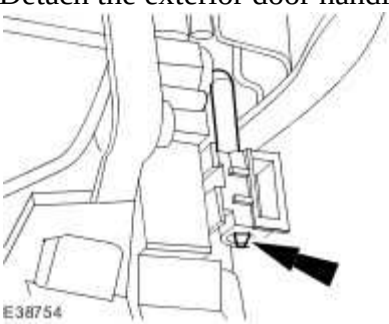
5 . Remove the door inner weathershield.



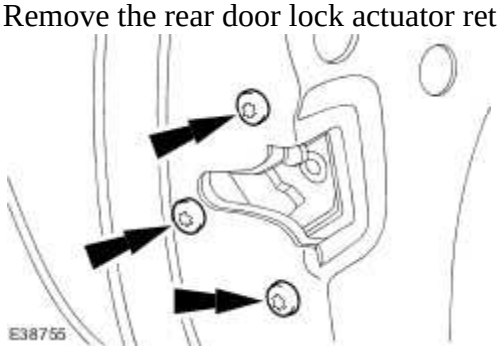
6 . Remove the exterior door handle connecting rod retaining clip.



7 . Detach the exterior door handle connecting rod from the front door lock actuator.



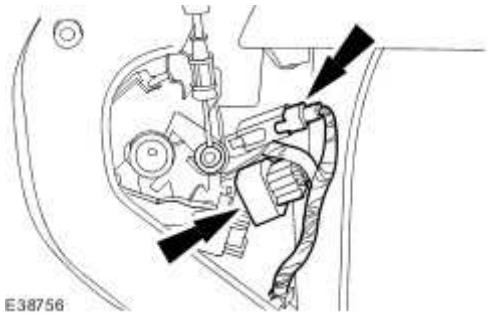
8 . Remove the rear door lock actuator retaining screws.



9 . Reposition the rear door lock actuator and actuator remote cable assembly.

10 . Remove the rear door lock actuator and actuator remote cable assembly.

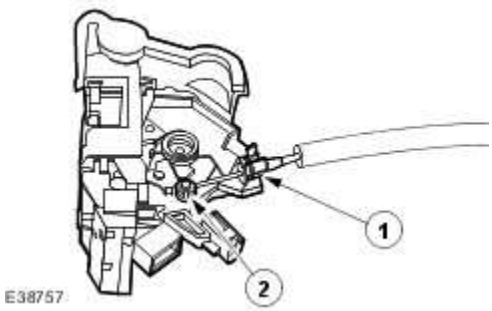
- Disconnect the electrical connectors.



11 . Remove the actuator remote cable from the rear door lock actuator.

1) Detach the actuator remote outer cable.

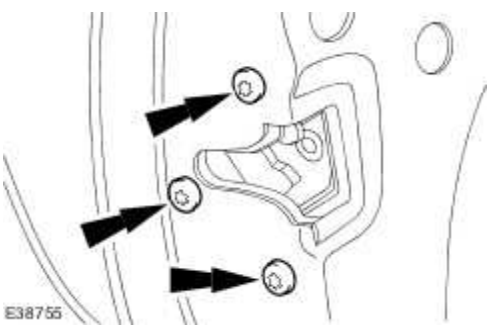
2) Remove the actuator remote cable from the rear door lock actuator.



Installation

1 . To install, reverse the removal procedure.

Tighten to 7 Nm.



Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Mounting arm and pivot shaft retaing bolts	12	9	—
Wiper arm retaining nuts	17	13	—
Wiper motor retaining retaining screws	15	11	—
Wiper motor shaft retaining nut	17	13	—

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Wiper linkage assembly retaining bolts	12	9	—
Wiper arm retaining nuts	17	13	—
Windshield washer reservoir retaining bolts	9	-	80

Wipers and Washers - VIN Range: G00442->G45703

Item	Part Number	Description
1	—	Windshield washer pump
2	—	Headlamp washer pump
3	—	Wiper arm / blade assembly
4	—	Rain sensor
5	—	Wiper arm and pivot assembly
6	—	Headlamp washer jet
7	—	Windshield washer reservoir

The wipers and washers system consists of the following components: wipers and washers, mounting arm and pivot shaft, wiper motor, washer reservoir and washer pump, a headlamp washing system is available as an additional option.

The wipers have 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.

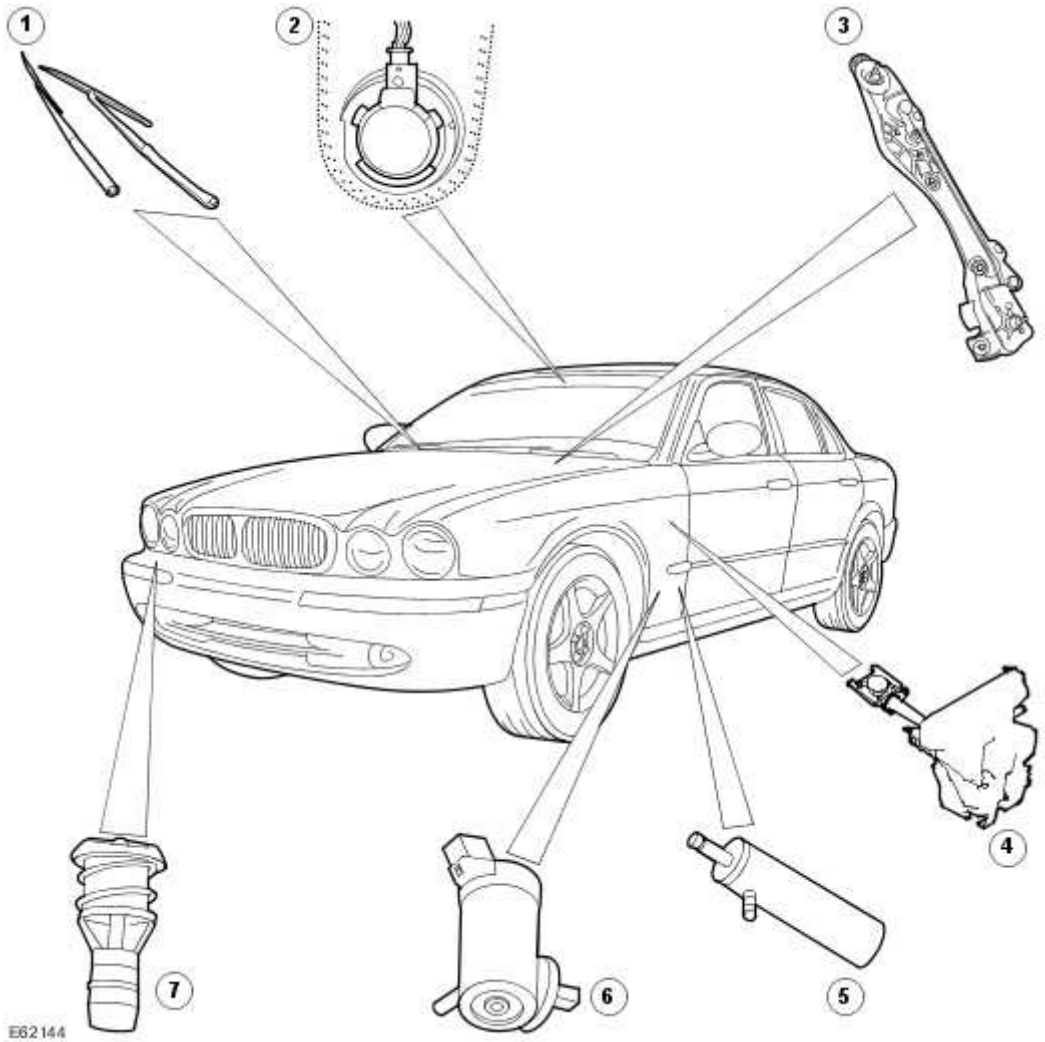
Within the wiper and washer system the following features can be attained, adjustable interval intermittent wiping, programmable wash and wipe sequencing, autolamp activation and moisture sensitive wiping. The system and features are centrally controlled by the Front electronic module (FEM).

The intermittent wiping has seven speed settings, 3, 6, 9, 12, 15, 18 seconds and speed dependant. The driver also has the capacity to select these via a switch with seven settings.

The programmed 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 the depression of the wash switch.

The moisture sensitive wiping will be initiated when the vehicle is running and not in the PARK or NEUTRAL gear selection. The wiper switch must be in the AUTO position.

Wipers and Washers - VIN Range: G45704->G99999



Item	Part Number	Description
1	—	Wiper arm / blade assembly
2	—	Rain sensor
3	—	Wiper linkage assembly
4	—	Windshield washer reservoir
5	—	Headlamp washer pump
6	—	Windshield washer pump
7	—	Headlamp washer jet

The wipers and washers system consists of the following components: wipers and washers, wiper linkage assembly, wiper motor, washer reservoir and washer pump, a headlamp washing system is available as an additional option.

The wipers have two speed controls, 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.

Within the wiper and washer system the following features can be attained, adjustable interval intermittent wiping, programmable wash and wipe sequencing, autolamp activation and moisture sensitive wiping. The system and features are centrally controlled by the front electronic module (FEM).

The intermittent wiping has seven speed settings, 3, 6, 9, 12, 15, 18 seconds and speed dependant. The driver also has the ability to select these through a switch with seven settings.

The programmed 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 wiper system is automatically activated with the depression of the wash switch.

The moisture sensitive wiping will be initiated when the vehicle is running and not in the PARK or NEUTRAL gear selection. The wiper switch must be in the AUTO position.

Wipers and Washers

Inspection and Verification

1 . Verify the customer concern.

2 . Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Wiper blade(s) • Wiper pivot arm shaft • Washer reservoir • Hose(s) • Washer jet(s)	• Fuse(s) • Wiring harness • Electrical connector(s) • Washer pump(s) • Wiper motor

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

2 . If the cause is not visually evident, verify the symptom and refer to the Jaguar Approved Diagnostic System.

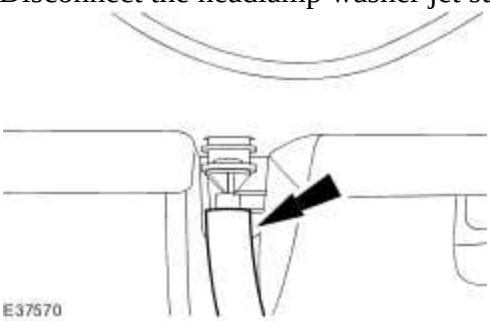
Headlamp Washer Jet (84.20.08)

Removal

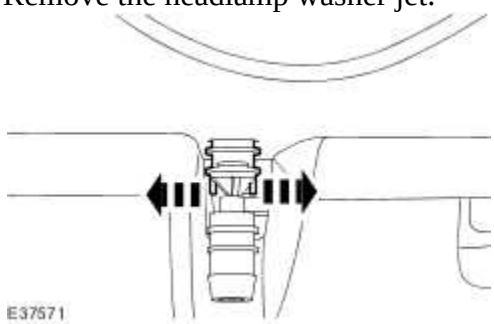
1 . Remove the radiator grille assembly. <<501-08>>

2 . Remove the front bumper cover. <<501-19>>

3 . Disconnect the headlamp washer jet supply hose.



4 . Remove the headlamp washer jet.



Installation

1 . To install, reverse the removal procedure.

Headlamp Washer Pump - VIN Range: G00442->G45703 (84.20.21)

Removal

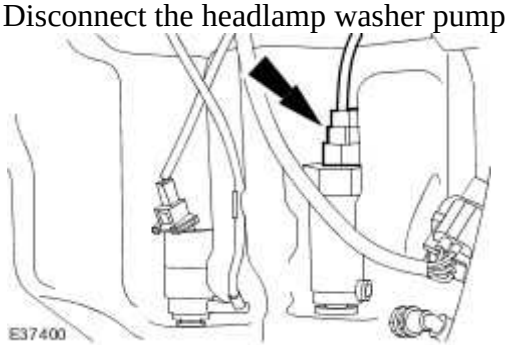
1 . Remove the radiator splash shield. <<501-02>>

2 . Remove the right-hand front wheel and tire. <<204-04>>

3 . Remove the right-hand front fender splash shield. <<501-02>>

4 . Disconnect the headlamp washer pump supply hose.

5 . Disconnect the headlamp washer pump electrical connector.



6 . Remove the headlamp washer pump.

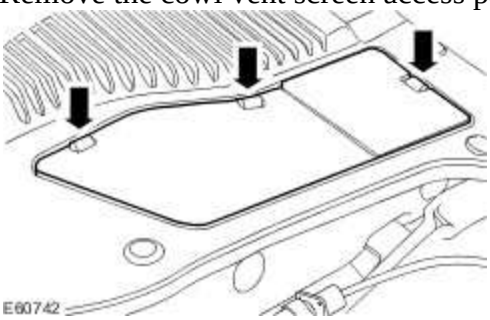
Installation

1 . To install, reverse the removal procedure.

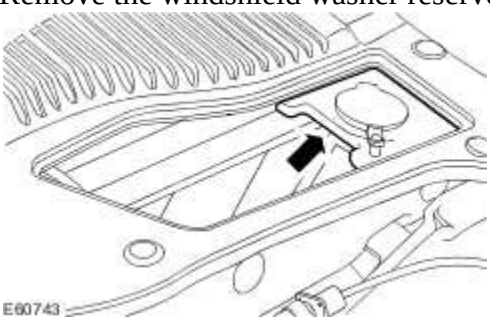
Headlamp Washer Pump - VIN Range: G45704->G99999 (84.20.21)

Removal

1 . Remove the cowl vent screen access panel.



2 . Remove the windshield washer reservoir upper filler neck.



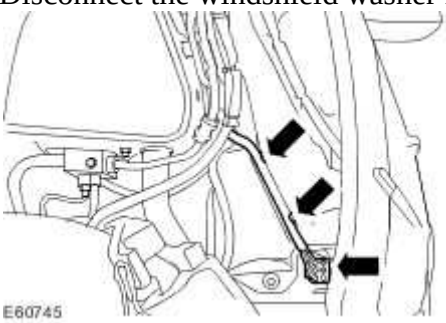
3 . Remove the windshield washer reservoir lower filler neck.

- Remove the retaining scrivet.

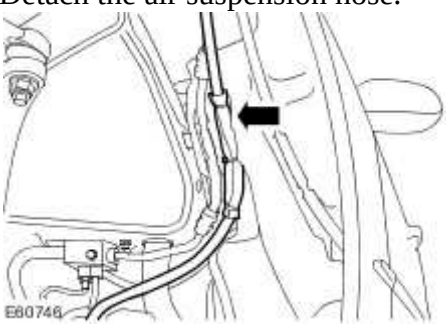
4 . Remove the left-hand front wheel and tire.
For additional information, refer to Wheel and Tire (74.20.05)

5 . Remove the left-hand front fender splash shield.
For additional information, refer to Fender Splash Shield (76.10.90)

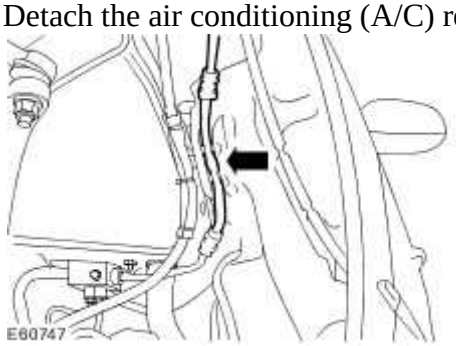
6 . Disconnect the windshield washer reservoir electrical connector.



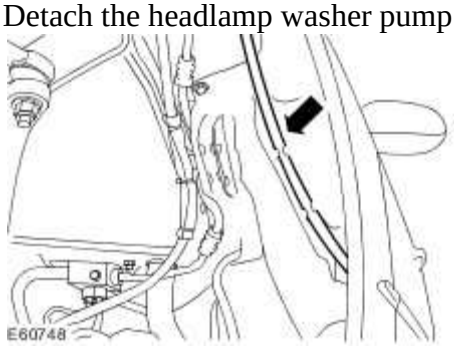
7 . Detach the air suspension hose.



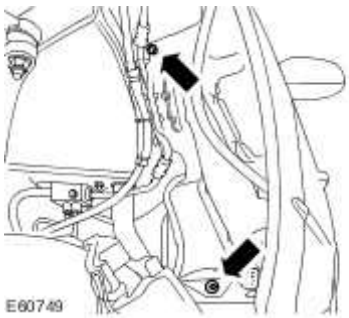
8 . Detach the air conditioning (A/C) refridgerent line.



9 . Detach the headlamp washer pump supply hose.



10 . Remove the windshield washer reservoir retaining bolts.

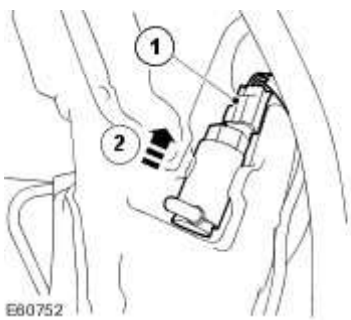


11 . Disconnect the headlamp washer pump outlet hose.

12 . Remove the headlamp washer pump.

1) Disconnect the headlamp washer pump electrical connector.

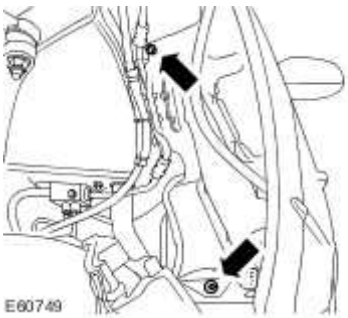
2) Remove the headlamp washer pump.



Installation

1 . To install, reverse the removal procedure.

- Tighten to 9 Nm.


E60749

Rain Sensor (84.12.10)

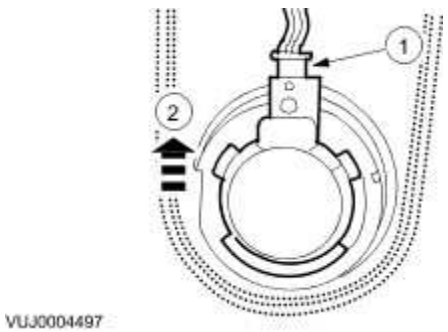
Removal

1 . Remove the interior rear view mirror. <<501-09>>

2 . Remove the rain sensor.

1) Disconnect the rain sensor electrical connector.

2) Remove the rain sensor.



Installation

1 . To install, reverse the removal procedure.

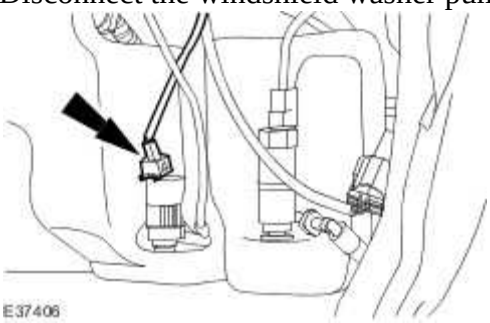
Windshield Washer Pump - VIN Range: G00442->G45703 (84.10.21)

Removal

1 . Remove the right-hand front wheel and tire. <<204-04>>

2 . Remove the right-hand front fender splash shield. <<501-02>>

3 . Disconnect the windshield washer pump electrical connector.



4 . Disconnect the windshield washer pump supply hose.

5 . Remove the windshield washer pump.

Installation

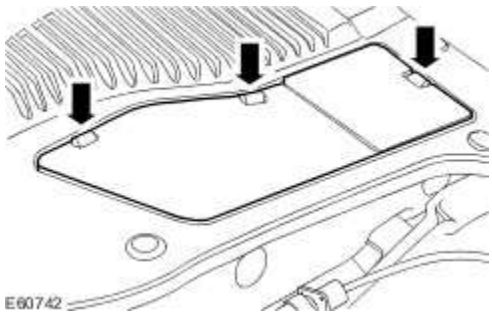
1 . To install, reverse the removal procedure.

Windshield Washer Pump - VIN Range: G45704->G99999 (84.10.21)

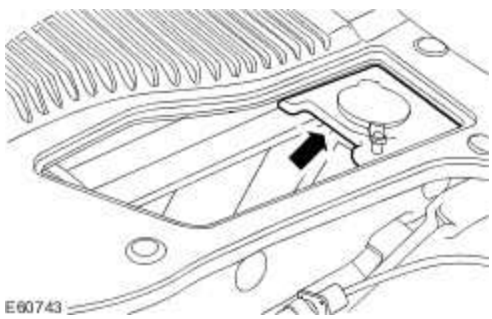
Removal

All vehicles

1 . Remove the cowl vent screen access panel.

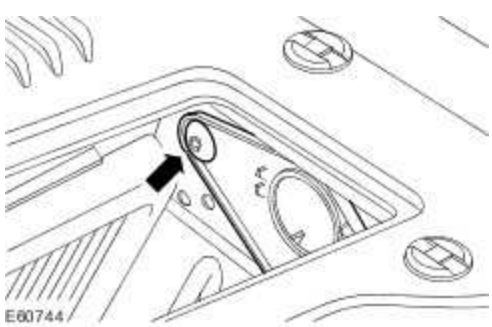


2 . Remove the windshield washer reservoir upper filler neck.



3 . Remove the windshield washer reservoir lower filler neck.

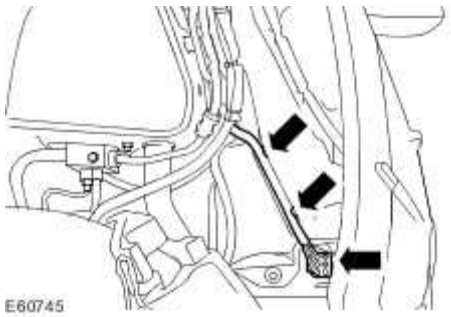
- Remove the retaining scrivet.



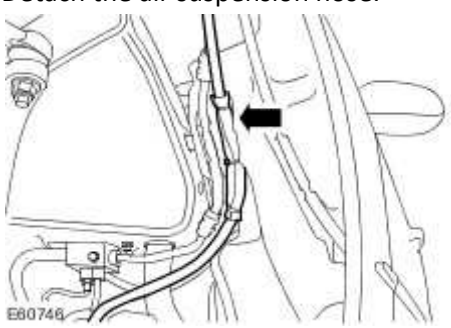
4 . Remove the left-hand front wheel and tire.
For additional information, refer to Wheel and Tire (74.20.05)

5 . Remove the left-hand front fender splash shield.
For additional information, refer to Fender Splash Shield (76.10.90)

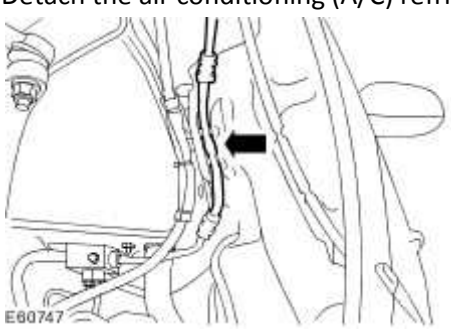
6 . Disconnect the windshield washer reservoir electrical connector.



7 . Detach the air suspension hose.

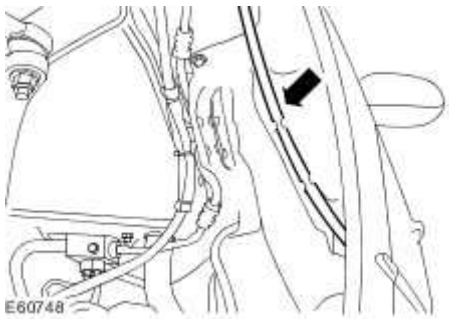


8 . Detach the air conditioning (A/C) refridgerent line.



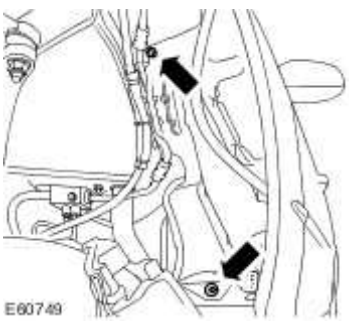
Vehicles with headlamp washers

9 . Detach the headlamp washer pump supply hose.

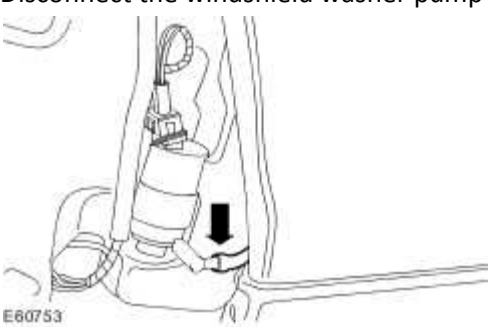


All vehicles

10 . Remove the windshield washer reservoir retaining bolts.



11 . Disconnect the windshield washer pump outlet hose.



12 . Remove the windshield washer pump.

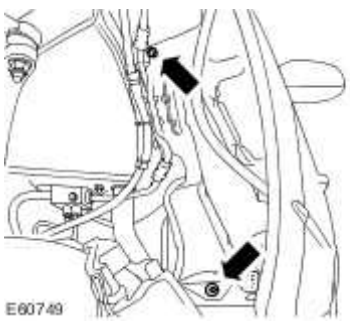
1) Disconnect the windscreen washer pump electrical connector.

2) Remove the windshield washer pump.

Installation

1 . To install, reverse the removal procedure.

Tighten to 9 Nm.



Windshield Washer Reservoir - VIN Range: G00442->G45703 (84.10.01)

Removal

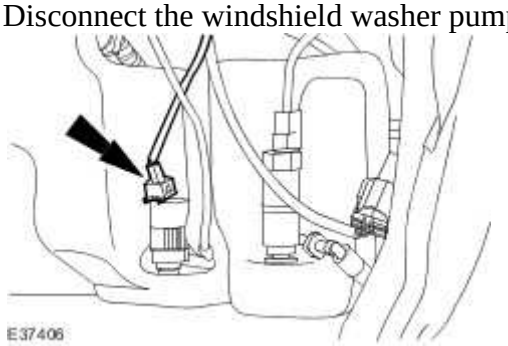
1 . Remove the radiator splash shield. <<501-02>>

2 . Remove the right-hand front wheel and tire. <<204-04>>

3 . Remove the right-hand front fender splash shield. <<501-02>>

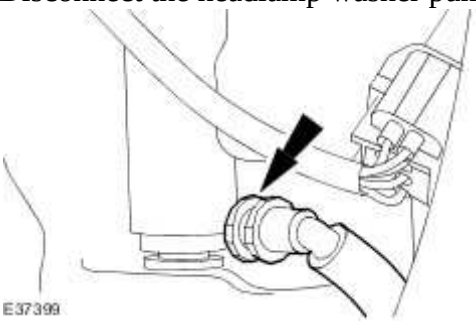
4 . Detach the washer fluid level warning indicator electrical connector.

5 . Disconnect the windshield washer pump electrical connector.

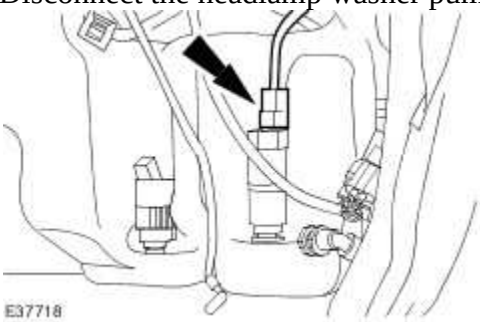


6 . Disconnect the windshield washer pump supply hose.

7 . Disconnect the headlamp washer pump supply hose.

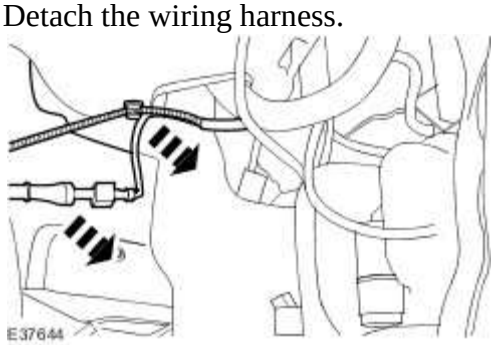


8 . Disconnect the headlamp washer pump electrical connector.

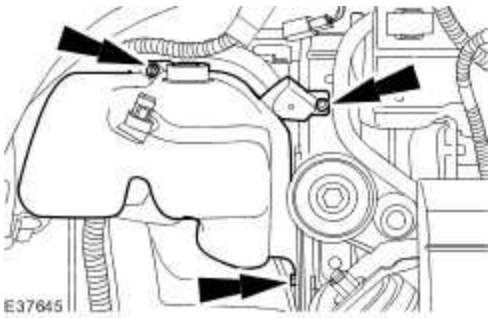


9 . Detach the fog lamp cover.

10 . Detach the wiring harness.



11 . Remove the windshield washer reservoir.



Installation

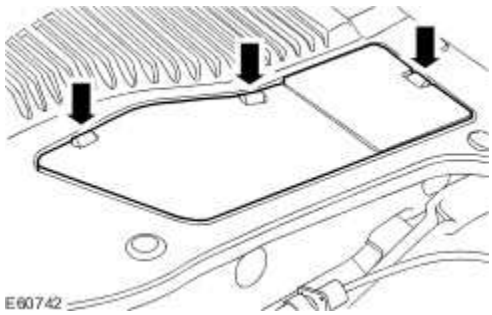
1 . To install, reverse the removal procedure.

Windshield Washer Reservoir - VIN Range: G45704->G99999 (84.10.01)

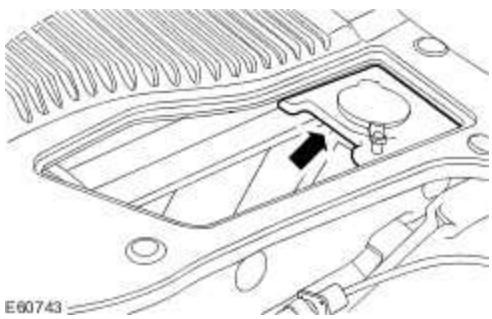
Removal

All vehicles

1 . Remove the cowl vent screen access panel.

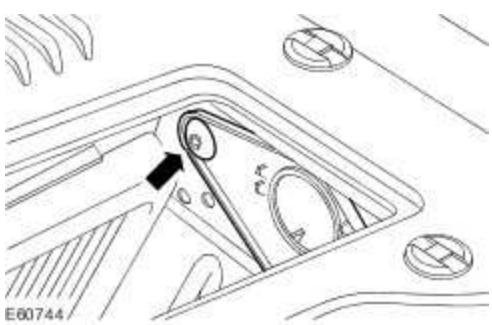


2 . Remove the windshield washer reservoir upper filler neck.



3 . Remove the windshield washer reservoir lower filler neck.

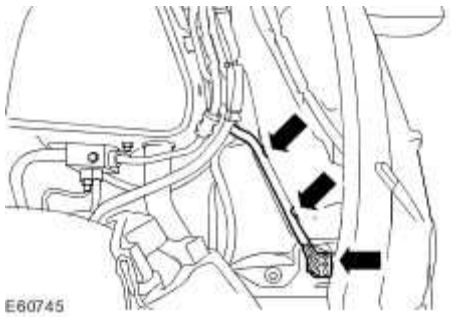
- Remove the retaining scrivet.



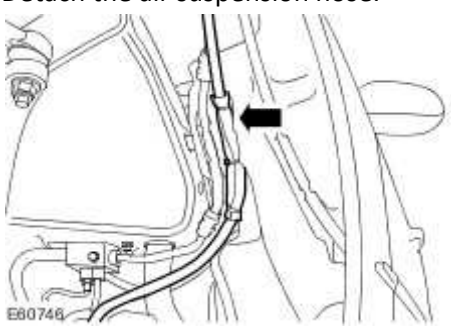
4 . Remove the left-hand front wheel and tire.
For additional information, refer to Wheel and Tire (74.20.05)

5 . Remove the left-hand front fender splash shield.
For additional information, refer to Fender Splash Shield (76.10.90)

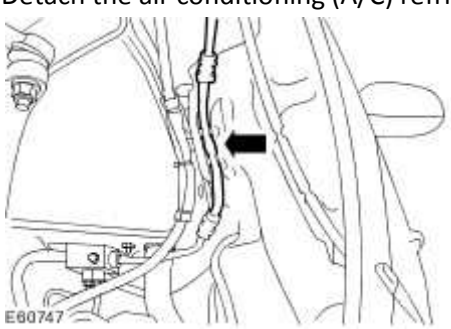
6 . Disconnect the windshield washer reservoir electrical connector.



7 . Detach the air suspension hose.

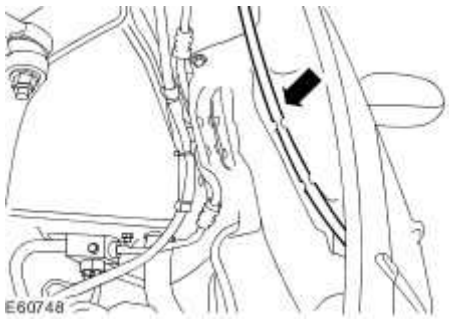


8 . Detach the air conditioning (A/C) refridgerent line.



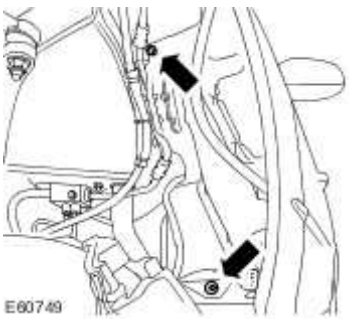
Vehicles with headlamp washers

9 . Detach the headlamp washer pump supply hose.



All vehicles

10 . Remove the windshield washer reservoir retaining bolts.



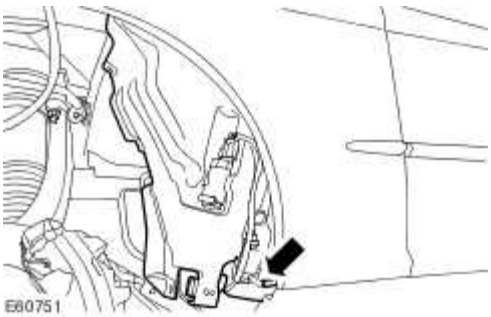
Vehicles with headlamp washers

11 . Disconnect the headlamp washer pump supply hose.

All vehicles

12 . Remove the windshield washer reservoir.

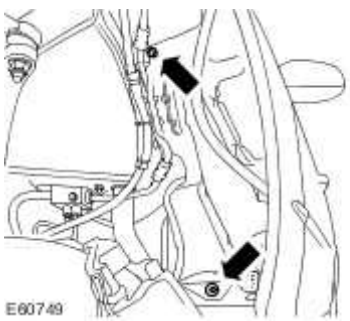
- Disconnect the windscreen washer pump supply hose.



Installation

1 . To install, reverse the removal procedure.

Tighten to 9 Nm.

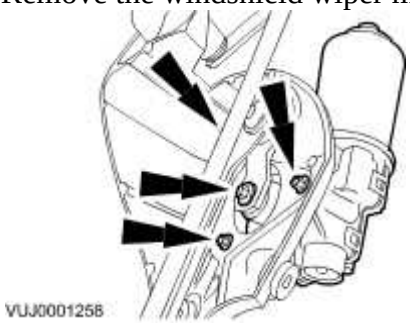


Windshield Wiper Motor (84.15.13)

Removal

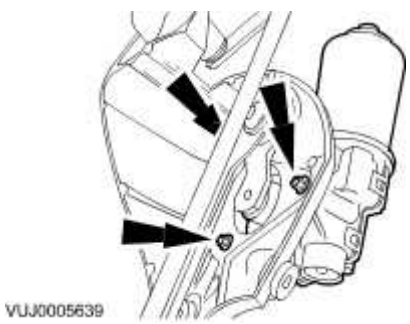
1 . Remove the wiper mounting arm and pivot shaft.
For additional information, refer to

2 . Remove the windshield wiper motor.

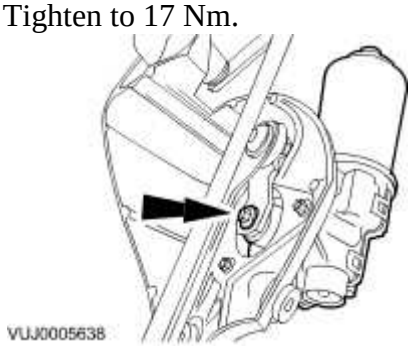


Installation

1 . To install, reverse the removal procedure.
- Tighten to 15 Nm.



2 . Tighten to 17 Nm.



Wiper Mounting Arm and Pivot Shaft (84.15.24)

Removal

All vehicles

1 . Remove the wiper pivot arms.
For additional information, refer to Wiper Pivot Arm (84.15.03)

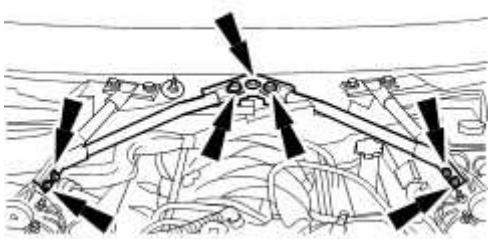
2 . Remove the cowl vent screen.
For additional information, refer to Cowl Vent Screen (76.10.01)

Vehicles with diesel engine

3 . Remove the secondary bulkhead center panel.
For additional information, refer to Secondary Bulkhead Center Panel

Vehicles with 3.5L or 4.2L engine

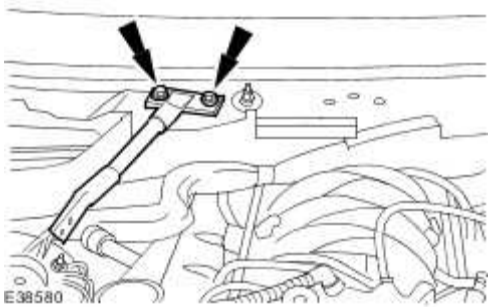
4 . Remove the engine compartment support .


E38576

5 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the engine compartment support.

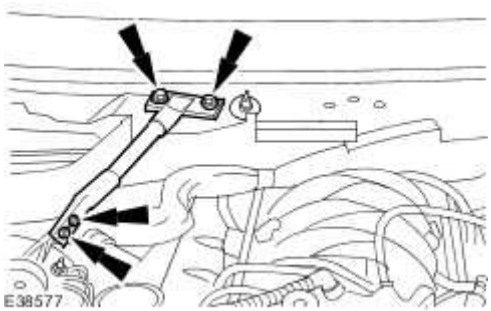


Vehicles with 3.0L engine

6 . **NOTE:**

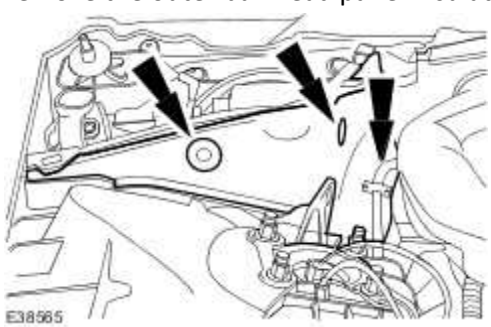
Right-hand shown, left-hand similar.

Remove the engine compartment support.



All except vehicles with diesel engine

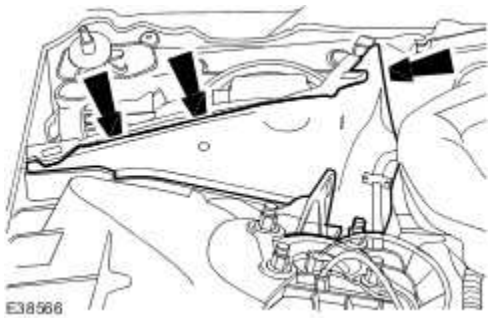
7 . Remove the outer bulkhead panel insulation.



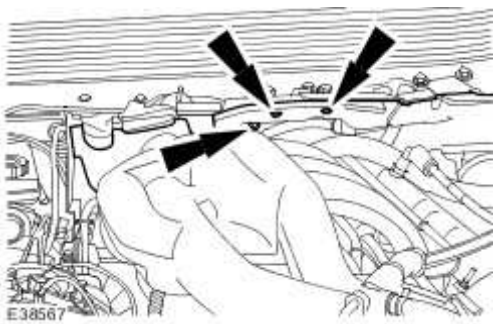
8 . Remove the outer bulkhead panel.

- Remove the securing bolts.

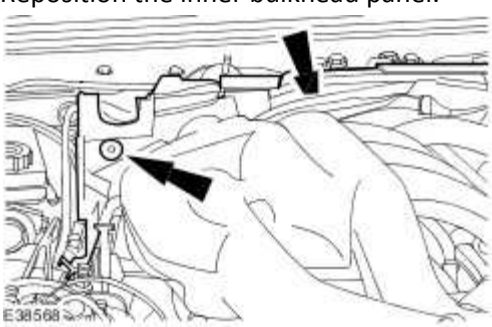
- Remove the retaining clip.



9 . Detach the inner bulkhead panel insulation.

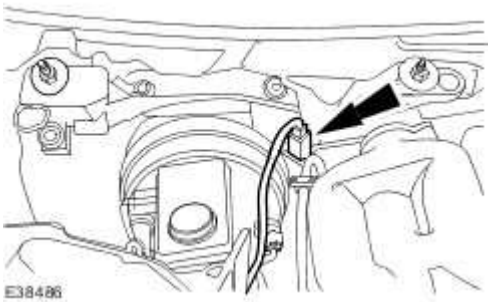


10 . Reposition the inner bulkhead panel.



All vehicles

11 . Disconnect the wiper motor electrical connector.

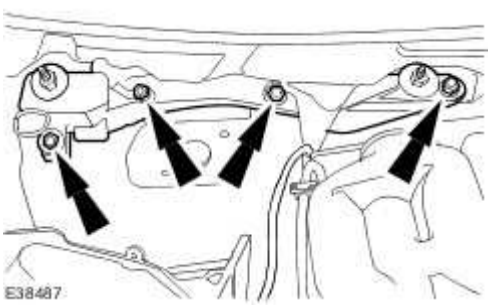


12 Remove the brake master cylinder.

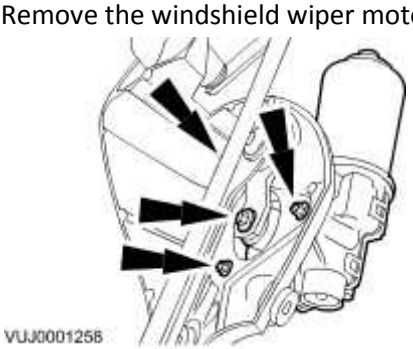
. For additional information, refer to Brake Master Cylinder - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.0L NA V6 - AJ27/3.5L NA V8 - AJV8 (70.30.08)
For additional information, refer to Brake Master Cylinder - 2.7L V6 - TdV6 (70.30.08)

13 . Remove the brake booster.
For additional information, refer to Brake Booster (70.50.17)

14 . Detach the wiper mounting arm and pivot shaft assembly.



15 . Remove the windshield wiper motor.

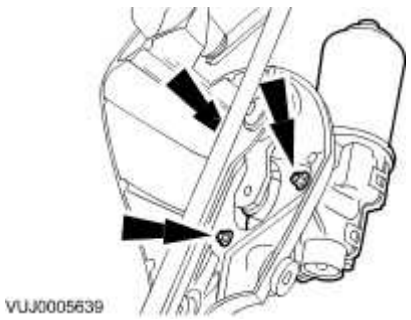


Installation

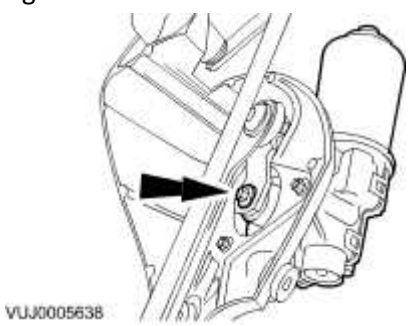
All vehicles

1 . To install, reverse the removal procedure.

- Tighten to 15 Nm.

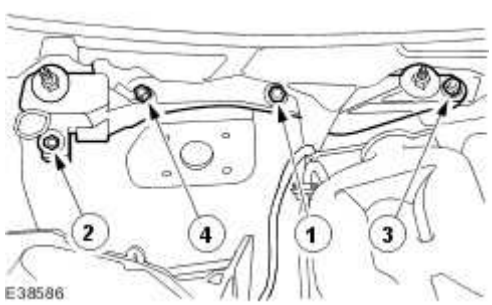


2 . Tighten to 17 Nm.



3 . Tighten to 12 Nm.

- Tighten in the sequence shown.

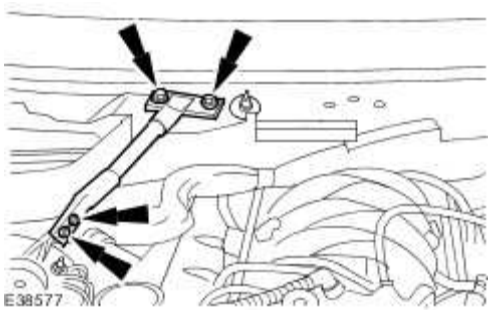


4 Bleed the ABS Brake system.

. For additional information, refer to Brake System Bleeding - VIN Range: G00442->G45703 (70.25.03)
For additional information, refer to Brake System Bleeding - VIN Range: G45704->H99999 (70.25.03)

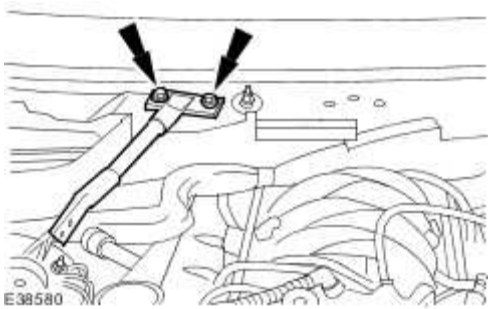
Vehicles with 3.0L engine

5 . Tighten to 25 Nm.

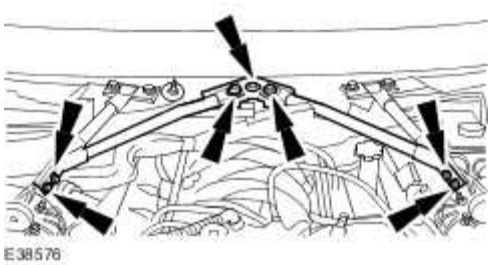


Vehicles with 3.5L or 4.2L engine

6 . Tighten to 25 Nm.



7 . Tighten to 25 Nm.



Wiper Pivot Arm (84.15.03)

Special Service Tools

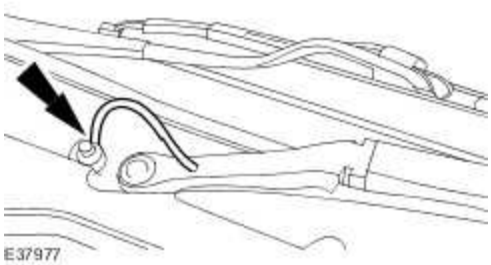
Remover - Windshield Wiper Pivot Arm
501-065

Removal

1 . **NOTE:**

Left-hand shown, right-hand similar.

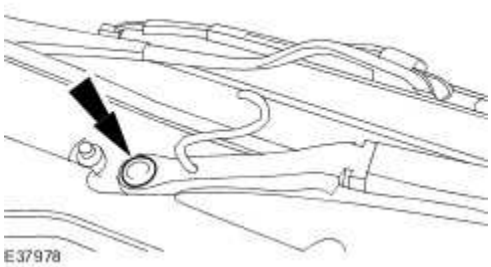
Disconnect the washer pipe.



2 . **NOTE:**

Left-hand shown, right-hand similar.

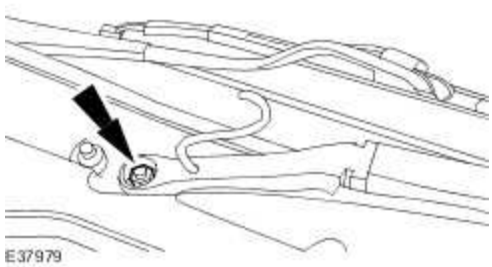
Remove the wiper pivot arm retaining nut cover.



3 . **NOTE:**

Left-hand shown, right-hand similar.

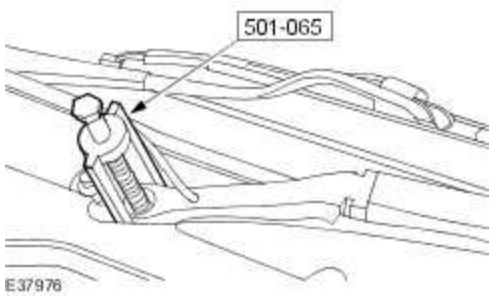
Remove the wiper pivot arm retaining nut.



4 . **NOTE:**

Left-hand shown, right-hand similar.

Using the special tool, remove the wiper pivot arm.



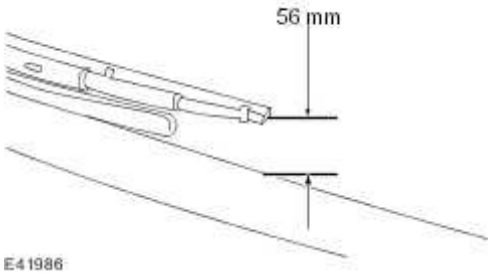
Installation

1 **NOTE:**

.

Measure the distance between the tip of the wiper blade and the upper edge of the cowl vent screen.

Install the driver side wiper pivot arm.

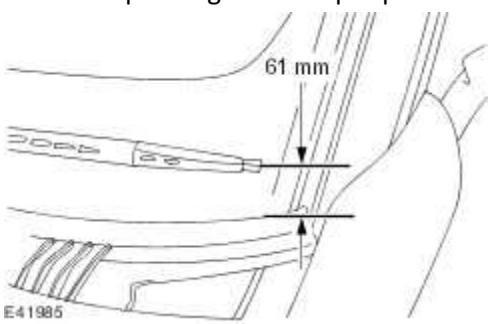


2 **NOTE:**

.

Measure the distance between the tip of the wiper blade and the upper edge of the cowl vent screen.

Install the passenger side wiper pivot arm.

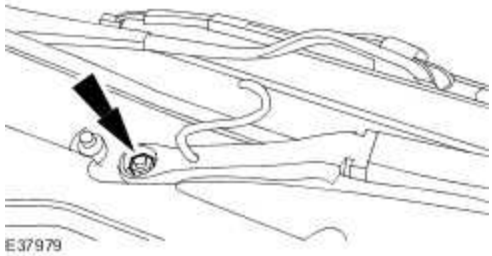


3 . **NOTE:**

Left-hand shown, right-hand similar.

Install the wiper pivot arm retaining nut.

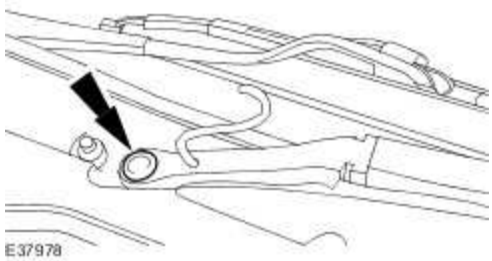
- Tighten to 17 Nm.



4 . **NOTE:**

Left-hand shown, right-hand similar.

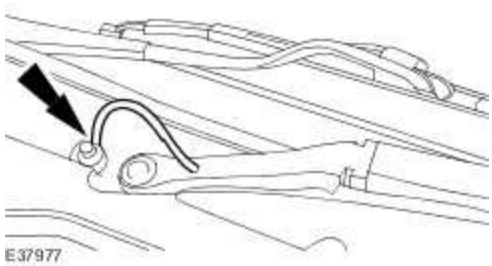
Install the wiper pivot arm retaining nut cover.



5 . **NOTE:**

Left-hand shown, right-hand similar.

Connect the washer pipe.



Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Roof opening panel frame retaining bolts	9	—	80
Roof opening panel motor retaining bolts	3	—	27
Roof opening panel glass retaining screws	4	—	35

Motor Synchronization (76.82.48)

Roof Opening Panel Motor Synchronization Procedure

1. **NOTE:**
   If the is battery is disconnected when the roof opening panel is not operating, the roof opening panel will retain its memory and the synchronization procedure will not be required.

Operate the roof opening panel switch in the tilt position until the roof opening panel is in the fully tilted position.

2. Release the roof opening panel switch.

3. **NOTE:**
   This operation must be done within five seconds of the previous step.

Operate the roof opening panel switch in the tilt position and hold.

4. Release the roof opening panel switch after the roof opening panel has reached the fully closed position.

5. **NOTE:**
   If the roof opening panel motor synchronization has been completed correctly, when the roof opening panel switch is operated in the fully open position the roof opening panel should move to the fully open position automatically.

NOTE:
If the roof opening panel does not move to the fully open position, repeat the roof opening panel motor synchronization procedure.

Operate the roof opening panel switch to check the roof opening panel motor operation.

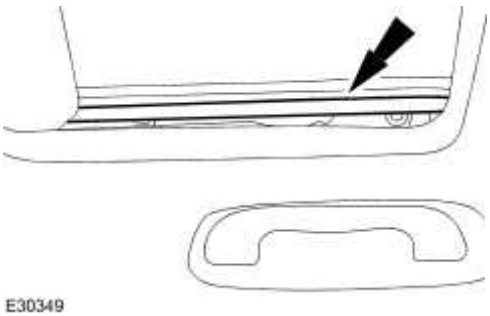
Roof Opening Panel Motor Synchronization De-activation Procedure.

1. Operate the roof opening panel control switch in the tilt position until the roof opening panel is in the fully tilted position and release. Then hold the roof opening panel control switch in the tilt position for at least twenty seconds, there will be a small movement from the roof opening panel to indicate it has been de-activated.

Roof Opening Panel Alignment

1. **NOTE:**
   Left-hand shown, right-hand similar.

Detach the sight shield at the front of the roof and swing inwards towards the rear of vehicle.



2.

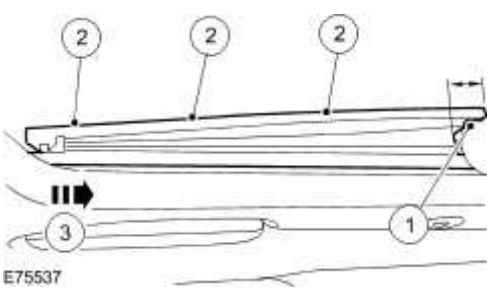
CAUTION: Make sure the air deflector is only detached from the roof opening panel using the 20mm (0.78 inches) area at the end of the air deflector as defined in step 1 of the ilustration and text below. Failure to follow this instruction will result in damage to the component.

CAUTION: Do not pull on the air deflector rubber pleat. Failure to follow this instruction will result in damage to the component.

NOTE:
Right-hand shown, left-hand similar.

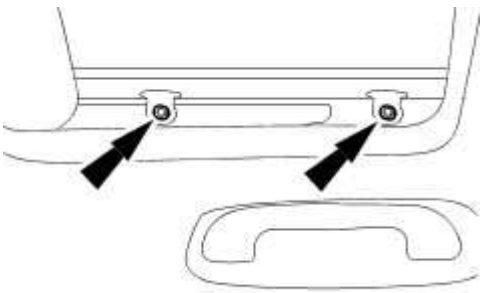
Detach the air deflector.

- Detach the rear of the air deflector.
- Detach the air deflector upper retainer.
- Swing the front of the air deflector inwards towards the rear of the vehicle.

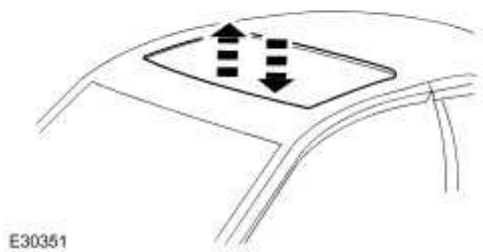


3. **NOTE:**
   Left-hand shown, right-hand similar.

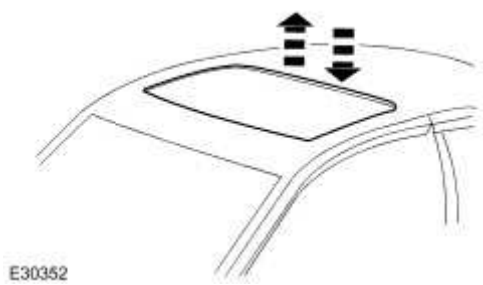
Loosen the roof opening panel glass retaining screws.



4. Adjust the front edge of the roof opening panel glass to between flush and 1 mm (0.04 in) low.

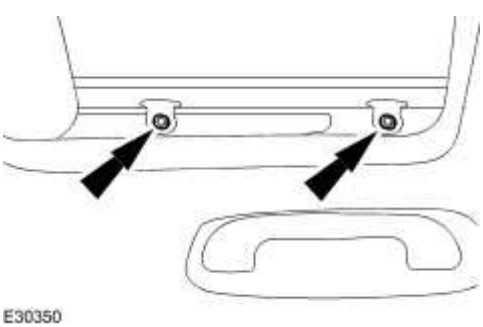


5. Adjust the rear glass edge to between flush and 1 mm (0.04 in) low.



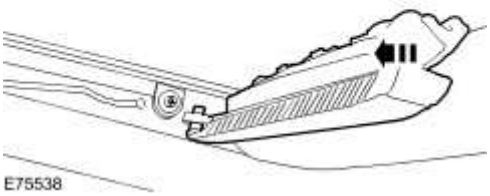
6. **NOTE:**
   Left-hand shown, right-hand similar.

Tighten to 4 Nm.



7. **NOTE:**
   Right-hand shown, left-hand similar.

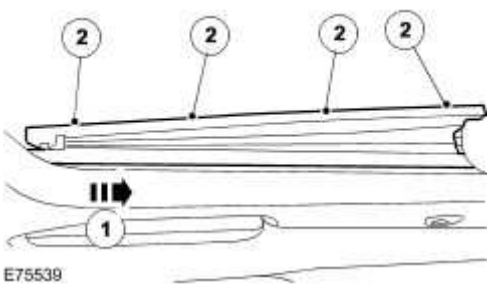
Reposition the air deflector to the roof opening panel runner.



8. **NOTE:**
   Right-hand shown, left-hand similar.

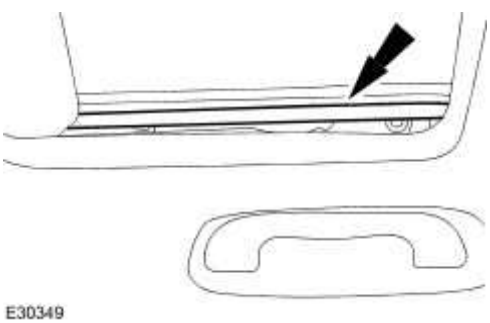
Install the air deflector.

- Make sure the air deflector is fully seated to the rear retaining clip.
- Attach the air deflector upper retainer.

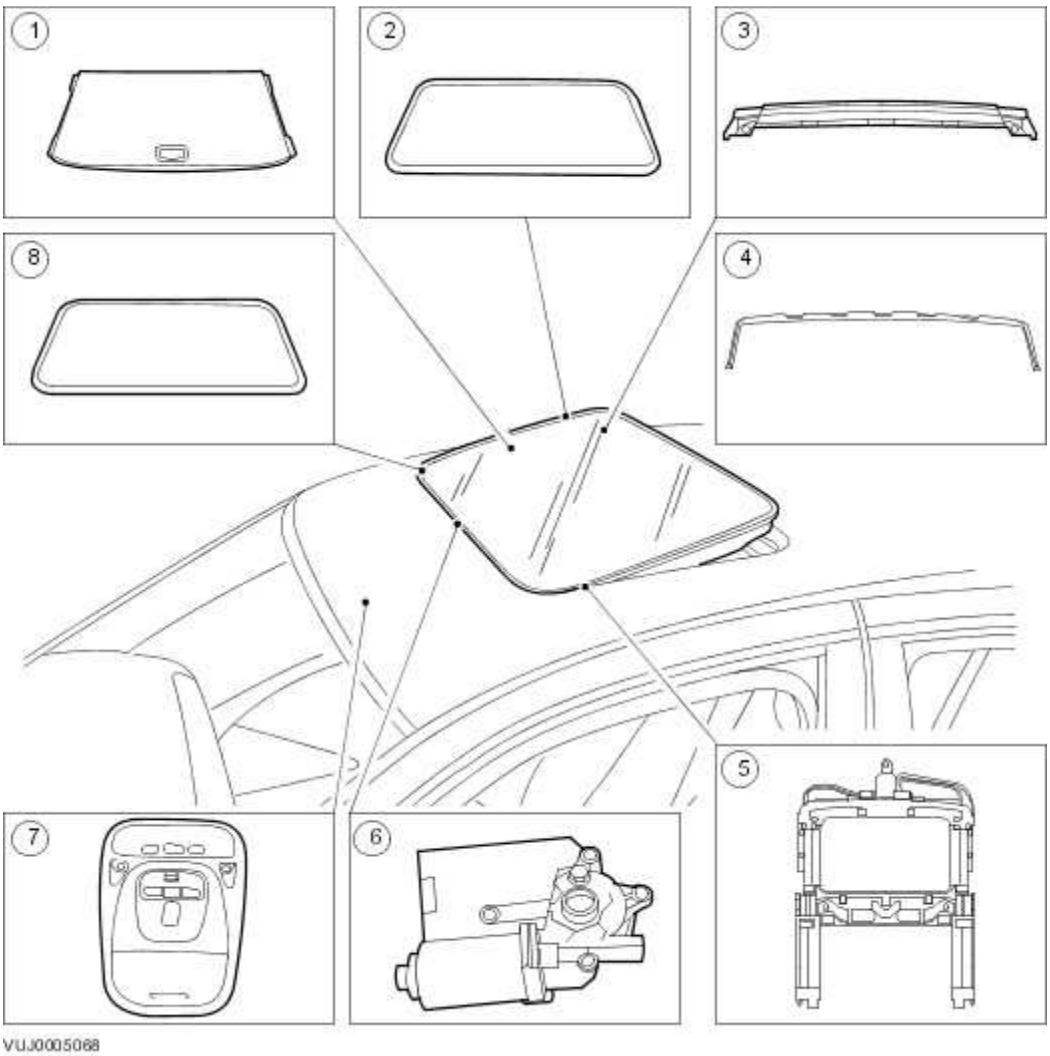


9. **NOTE:**
   Left-hand shown, right-hand similar.

Install the sight shields.



Roof Opening Panel



Item	Part Number	Description
1	—	Roof opening panel shield
2	—	Roof opening panel glass
3	—	Trough assembly
4	—	Air deflector
5	—	Roof opening panel frame
6	—	Roof opening panel motor
7	—	Roof opening panel control switch
8	—	Roof opening panel weatherstrip

The roof opening panel is available as an option. The roof opening panel control module

controls the roof opening panel. The roof opening panel motor and module are not available separately. The roof opening panel may be operated from the roof opening panel switch or the global close function.

Roof Opening Panel Control Switch Operation

The system operates as follows from the roof opening panel switch:

- Press the rear of the switch to the first detent with the roof opening glass in the closed position. The roof opening panel glass opens rearward until the roof opening panel switch is released or the roof opening panel glass reaches the fully open position.
    - The roof opening panel glass opens rearward until the roof opening panel switch is released or the roof opening panel glass reaches the fully open position.
- Press the rear of the switch to the second detent with the roof opening panel glass in the closed position. Activates the 'one touch' open feature. The roof opening panel glass will slide rearward until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully open position.
    - Activates the 'one touch' open feature.
    - The roof opening panel glass will slide rearward until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully open position.
- Press the front of the switch to the first detent with the roof opening panel glass in the closed position. The roof opening panel glass will vent up until the roof opening panel switch is released or the roof opening panel glass reaches the full vent up position.
    - The roof opening panel glass will vent up until the roof opening panel switch is released or the roof opening panel glass reaches the full vent up position.
- Press the front of the switch to the second detent with the roof opening panel glass in the closed position. The roof opening glass will vent up until the roof opening glass reaches the full vent up position or the switch is pressed in any direction.
    - The roof opening glass will vent up until the roof opening glass reaches the full vent up position or the switch is pressed in any direction.
- Press the front of the switch to the first detent with the roof opening panel glass in the fully open position. The roof opening panel glass will slide forward until the roof opening panel glass reaches the fully closed position or the switch is released.
    - The roof opening panel glass will slide forward until the roof opening panel glass reaches the fully closed position or the switch is released.
- Press the front of the switch to the second detent with the roof opening glass in the fully open position. The roof opening panel glass will close until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully closed position.
    - The roof opening panel glass will close until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully closed position.
- Press the rear of the switch to the first detent with the roof opening panel glass in the vent up position. The roof opening panel glass will close until the roof opening panel switch is released or the roof opening panel glass reaches the full closed position.
    - The roof opening panel glass will close until the roof opening panel switch is released or the roof opening panel glass reaches the full closed position.

- Press the rear of the switch to the second detent with the roof opening panel glass in the vent up position. The roof opening panel glass will close until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully closed position.
    - The roof opening panel glass will close until the roof opening panel switch is pressed in any direction or the roof opening panel glass reaches the fully closed position.

Global Opening And Closing Operation

The roof opening panel is included in the global open and close operation. This function opens or closes the power windows and the roof opening panel automatically. For additional information on the global open and close feature for the power windows, refer to <<501-11>>. The global open function is activated by:

- unlocking the drivers door using the remote keyless entry transmitter. Within five seconds, press and hold the unlock button.
- unlocking the drivers door using the driver door lock cylinder and the key. Hold the key in the unlock position.

The global close function is activated by:

- turning the driver door lock cylinder to the lock position and holding.

Global open and close operation is only available with the ignition in the OFF position and the ignition key removed.

When the global open or close operation is selected, the roof opening panel switch is not recognized by the roof opening panel control module throughout the operation and five seconds after the operation is completed.

Global open and close will operate as follows:

- With the roof opening glass in the closed position, activating global open will operate the roof opening panel glass to the fully open position.
- With the roof opening panel glass in the fully open position, activating global close will operate the roof opening panel glass to the closed position.
- If a global open is commanded within five seconds of a completed global operation, the roof opening panel glass will reverse the previous completed global operation. If the roof opening glass was globally closed from the vent position, a global open within five seconds would tilt the roof opening panel glass back to the vent position.
- If the roof opening panel glass was globally closed from the fully open position, a global open within five seconds would slide the roof opening glass back to the fully open position.

Roof Opening Panel

Principles of operation

Roof Opening Panel Control Module

Battery power is continuously supplied to the roof opening panel control module. However, the roof opening panel will only operate from the roof opening panel switch with the ignition switch with the ignition a switch in the RUN or ACC position. The global open and close feature is controlled by two circuits from the REM. The two circuits must be at ground potential before the roof opening panel control module will acknowledge the roof opening panel switch. When the ignition switch is turned to RUN or ACC, the REM provides ground to these circuits.

The roof opening panel control module incorporates soft stops at the end of all travel positions. The roof opening panel control module monitors the internal switches to determine the roof opening glass position and the soft stops. The internal switches are activated by the roof opening panel motor rotation.

The roof opening panel control module supplies the power and ground to the roof opening panel motor depending on the ordered function. Power is supplied to the roof opening panel for a maximum of 12 seconds. Under normal operation, position is monitored by the roof opening panel control module and power is removed from the roof opening panel motor as soon as the roof opening panel reaches the commanded position.

Roof Opening Panel Switch

Four circuits connect the roof opening panel switch to the roof opening panel control module. One circuit is the common return. The other three are control circuits open, close and tilt. The roof opening panel control module monitors these lines for voltage fluctuation to determine which function was selected.

With the ignition switch in the RUN or ACC position, the roof opening panel supplies a five volt reference voltage to three control lines. Activation of the roof opening panel switch connects one or more of these lines to the common return which pulls the line low. The roof opening panel control module will sense the line or lines being connected to the common line and carry out the appropriate function.

The express open function connects the open and tilt circuits to the common return when the roof opening panel switch is moved rearward to the second detent position. The operator-controlled open function connects the open circuit to the common return. The close function connects the close circuit to the common causing the roof opening panel to close from a slide or vent position.

Global Open and Close

Two circuits connect the rear electronics module (REM) to the roof opening panel control module for these functions. Global open and close operation for the roof opening panel is controlled by one of these two circuits being grounded by the REM.

When the ignition switch is in the RUN or ACC position, the REM grounds both of these circuits allowing normal operation of the roof opening panel from the roof opening panel switch. Global open and close operation is only available with the ignition in the OFF position and the ignition key removed.

When global open or close operation is selected, the roof opening panel switch is not recognized by the roof opening panel control module throughout the operation and five seconds after the operation is completed.

With the ignition switch in the OFF position, the roof opening panel control module supplies a constant voltage to these two circuits. The roof opening panel control module monitors these lines for a low state, caused by the REM grounding the line, to determine the ordered global function by the REM.

Global open is commanded by the REM grounding control line two. Line one will remain at previous voltage.

Global close is commanded by the REM grounding control line one. Line two will remain at previous voltage.

If both lines have voltage, the roof opening panel will be inoperative.

Inspection and Verification

1 . Verify the customer concern by operating the system.

2 . Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
• Roof opening panel frame • Roof opening panel glass weatherstrip • Roof opening panel alignment • Motor synchronization	• Fuse(s) • Roof opening panel switch • Roof opening panel motor • Wiring harness • Electrical connector(s)

1 . If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.

2 . If the concern is not visually evident, verify the Symptom Chart.

Symptom Chart

Refer to the Wiring Diagram manual for the connectors cited in the pinpoint tests.

Symptom Chart

The roof opening panel has excessive wind noise

Possible Source(s):

- Incorrect alignment.
- Roof opening panel weatherstrip.

Action(s) to take:

- GO to Pinpoint Test A.

The roof opening panel leaks

Possible Source(s):

- Incorrect alignment.
- Roof opening panel drain hoses.
- Roof opening panel weatherstrip.

Action(s) to take:

- GO to Pinpoint Test B.

The roof opening panel is noisy during operation

Possible Source(s):

- Roof opening panel glass.
- Roof opening panel frame.
- Roof opening panel motor.

Action(s) to take:

- GO to Pinpoint Test C.

The roof opening panel does not open or close

Possible Source(s):

- Roof opening panel frame.

- Roof opening panel motor.
- Rear electronics module (REM).
- Roof opening panel switch.
- Wiring harness.

Action(s) to take:

- GO to the Jaguar approved diagnostic system.

The roof opening panel does not open or close in vent position

Possible Source(s):

- Roof opening panel control module.
- Roof opening panel switch.
- Wiring harness.

Action(s) to take:

- GO to the Jaguar approved diagnostic system.

The roof opening panel does not stop flush from any position.

Possible Source(s):

- Roof opening panel alignment.
- Roof opening weatherstrip.
- Roof opening panel control module.

Action(s) to take:

- GO to Pinpoint Test D.

The 'one touch' open is inoperative

Possible Source(s):

- Roof opening panel control module.
- Roof opening panel switch.
- Motor synchronization.

Action(s) to take:

- GO to the Jaguar approved diagnostic system.

Pinpoint Tests

PINPOINT TEST G189148p1 : THE ROOF OPENING PANEL HAS EXCESSIVE WIND NOISE

G189148t1 : CHECK THE ROOF OPENING PANEL GLASS FIT

1. Cycle the roof opening glass from the fully open to the fully closed position. 2. Inspect the roof opening panel weatherstrip for proper fit or damage.

- **Is the roof opening panel weatherstrip OK?**

-> Yes
GO to Pinpoint Test G189148t2.

-> No
INSTALL a new roof opening panel weatherstrip.
Test the system for normal operation.

G189148t2 : CHECK THE ROOF OPENING PANEL GLASS OPERATION

1. Cycle the roof opening panel glass from the fully open to the fully closed position.

- **Does the roof opening panel glass travel to the fully open and the fully closed position?**

-> Yes
ADJUST the roof opening panel glass.
Test the system for normal operation.

-> No
CHECK the roof opening panel weatherstrip. If necessary, INSTALL a new roof opening panel weatherstrip.
TEST the system for normal operation.

PINPOINT TEST G189148p2 : THE ROOF OPENING PANEL LEAKS

G189148t3 : CHECK THE ROOF OPENING PANEL OPERATION

1. Cycle the roof opening panel glass from the fully open position to the fully closed position.

- **Does the roof opening panel glass operate smoothly and close tightly?**

-> Yes
GO to Pinpoint Test G189148t4.

-> No
CHECK the roof opening panel alignment.
Test the system for normal operation.

G189148t4 : CHECK THE ROOF OPENING PANEL FRAME DRAIN TUBES

1. Gain access to the roof opening panel frame drain tubes.

- **Is there blockage or damage to the roof opening panel frame drain tubes?**

-> Yes
Clear the blockage or if necessary, INSTALL a new drain tube. TEST the system for normal operation.

-> No
GO to Pinpoint Test G189148t5.

G189148t5 : CHECK THE ROOF OPENING PANEL WEATHERSTRIP

1. Actuate the roof opening panel glass to the fully open position.

- **Is the roof opening panel weatherstrip damaged?**

-> Yes
INSTALL a new roof opening panel weatherstrip.
TEST the system for normal operation.

-> No
REPAIR as necessary. TEST the system for normal operation.

PINPOINT TEST G189148p3 : THE ROOF OPENING PANEL IS NOISY DURING OPERATION

G189148t6 : CHECK THE OPERATION OF THE ROOF OPENING PANEL GLASS

1. Cycle the roof opening glass from the fully open to the fully closed position.

- **Is the roof opening panel glass loose?**

-> Yes
ADJUST the roof opening glass.
TEST the system for normal operation.

-> No
GO to Pinpoint Test G189148t7.

G189148t7 : CHECK FOR OBSTRUCTIONS

1. Check the roof opening panel frame for foreign material, damage or looseness.

- **Is the roof opening panel obstructed or damaged?**

-> Yes
REMOVE the obstruction. If necessary, INSTALL a new roof opening panel track and rail assembly.
TEST the system for normal operation.

-> No
GO to Pinpoint Test G189148t8.

G189148t8 : CHECK THE ROOF OPENING PANEL MOTOR

1. Cycle the roof opening panel glass from the fully open to the fully closed position.

- **Does the roof opening panel motor make excessive noise?**

-> Yes
CHECK the roof opening panel motor for correct mounting. If necessary, INSTALL a new roof opening panel motor.
TEST the system for normal operation.

-> No

ADJUST the roof opening panel glass as necessary. TEST the system for normal operation.

PINPOINT TEST G189148p4 : THE ROOF OPENING PANEL DOES NOT STOP FLUSH FROM ANY POSITION

G189148t9 : CHECK THE ROOF OPENING PANEL ALIGNMENT

1. Check the roof opening panel alignment.

- **Is the roof opening glass adjusted correctly?**

-> Yes
GO to Pinpoint Test G189148t10.

-> No
ADJUST the roof opening glass as necessary. TEST the system for normal operation.

G189148t10 : CHECK THE ROOF OPENING PANEL WEATHERSTRIP

1. Inspect the roof opening panel weatherstrip for looseness, damage and correct installation.

- **Is the roof opening panel weatherstrip OK and installed correctly?**

-> Yes
GO to Pinpoint Test G189148t11.

-> No
REPAIR or INSTALL a new roof opening panel weatherstrip as necessary.
TEST the system for normal operation.

G189148t11 : CHECK FOR OBSTRUCTION IN THE ROOF OPENING PANEL

1. Inspect the roof opening panel assembly for obstructions in the frame.

- **Are any obstructions found?**

-> Yes
REMOVE the obstruction. If necessary, INSTALL a new roof opening panel frame.
TEST the system for normal operation.

-> No
INSTALL a new roof opening panel control module.
TEST the system for normal operation.

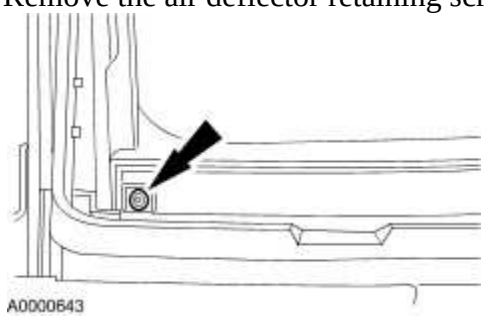
Air Deflector (76.82.07)

Removal

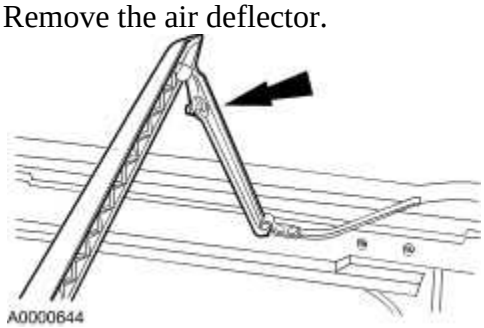
1 . Reposition the roof opening glass fully rearward.

2 . **NOTE:**
Right-hand shown, left-hand similar.

Remove the air deflector retaining screws.



3 . Remove the air deflector.



Installation

1 . **CAUTION: Do not over tighten the air deflector retaining screws when installing.**

To install, reverse the removal procedure.

Roof Opening Panel Frame (76.82.01)

Removal

All vehicles

1 . Remove both A-pillar trim panels.
For additional information, refer to A-Pillar Trim Panel (76.13.31)

2 . Remove both upper B-pillar trim panels.
For additional information, refer to B-Pillar Upper Trim Panel (76.13.28)

3 . Remove both C-pillar upper trim panels.
For additional information, refer to C-Pillar Upper Trim Panel

4 . Remove both sun visors.
For additional information, refer to Sun Visor (76.10.48)

5 . **NOTE:**

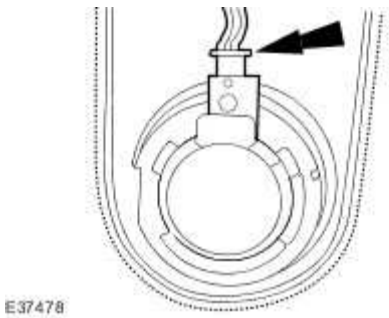
Left-hand shown, right-hand similar.

Remove the sun visor retaining clip.

6 . Remove the auto dimming interior mirror.
For additional information, refer to Auto-Dimming Interior Mirror (76.10.56)

7 . Remove the overhead console.
For additional information, refer to Overhead Console (76.13.69)

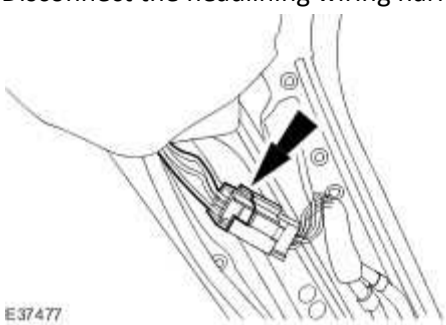
8 . Disconnect the rain sensor electrical connector.



9 . **NOTE:**

Left-hand shown, right-hand similar.

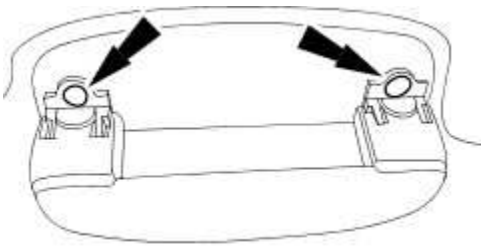
Disconnect the headlining wiring harness front electrical connector.



10 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the front passenger assist handle retaining screw covers.

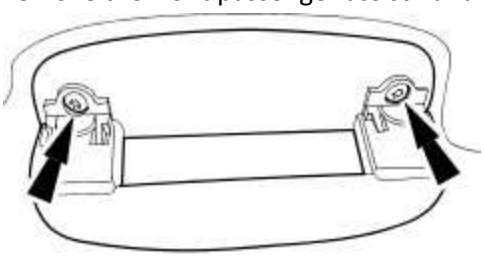


E36775

11 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the front passenger assist handle.

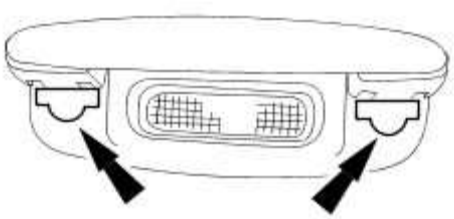


E36776

12 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear passenger assist handle retaining screw covers.

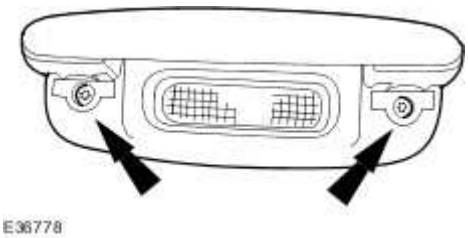


E36777

13 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear passenger assist handle.

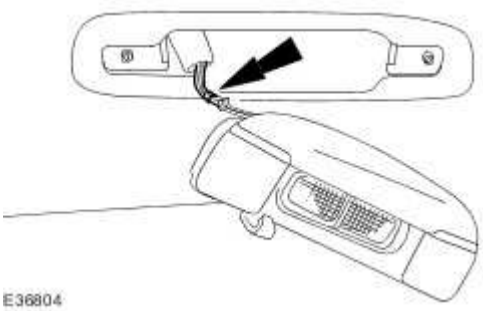


14 . **NOTE:**

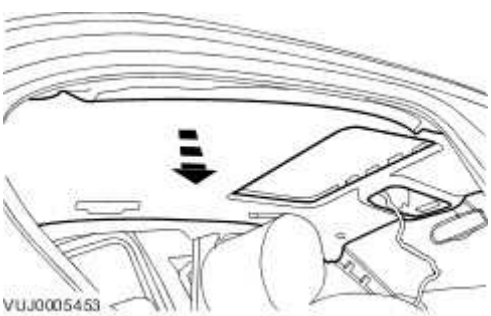
Left-hand shown, right-hand similar.

Remove the rear passenger assist handle.

- Disconnect the electrical connector.



15 . Detach the headliner.

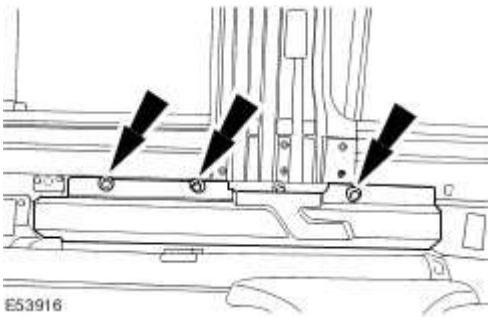


16 . Remove the roof opening panel glass.
For additional information, refer to

Long wheelbase

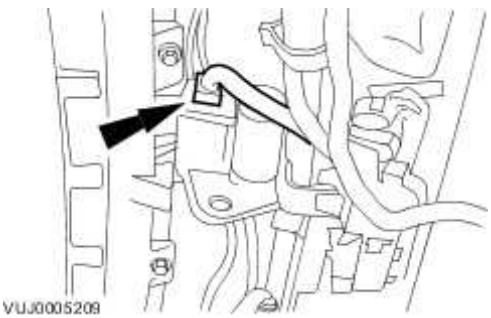
17 . Remove the strengthening bar.

Remove the securing bolts.



All vehicles

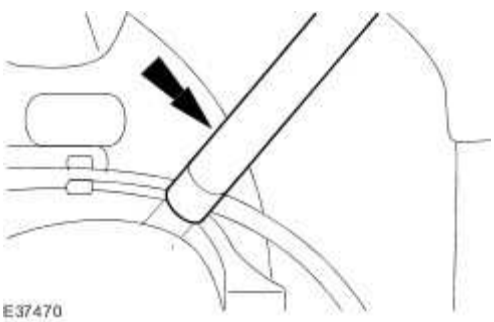
18 . Disconnect the electrical connector



19 . **NOTE:**

Right-hand shown, left-hand similar.

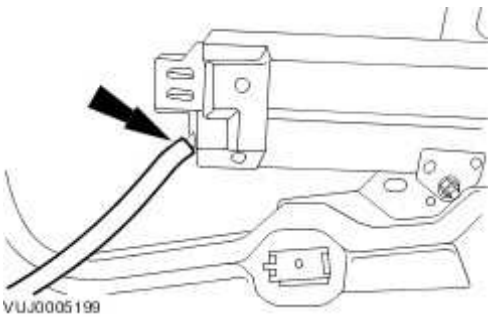
Detach the front drain hose.



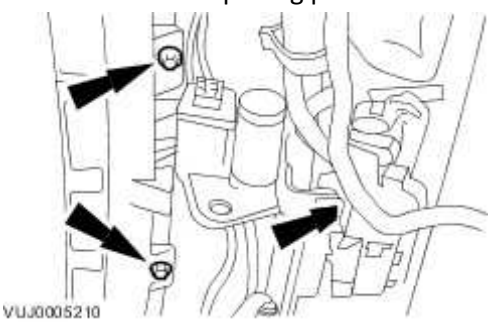
20 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear drain hose.



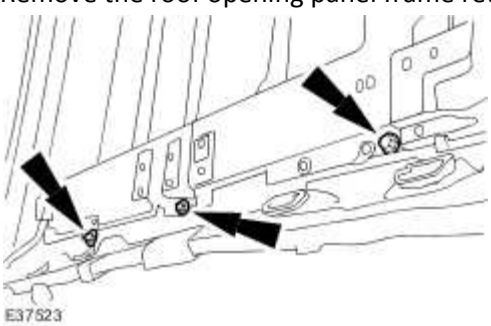
21 . Remove the roof opening panel frame front retaining bolts.



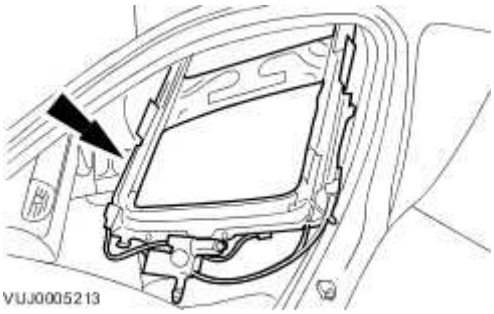
22 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the roof opening panel frame retaining bolts.



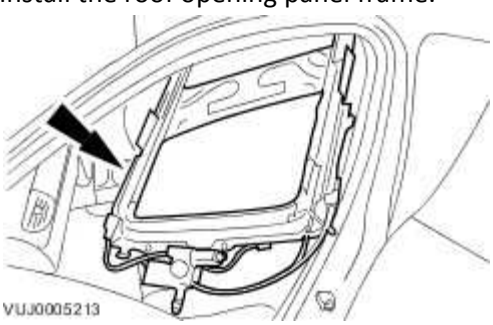
23 . Remove the roof opening panel frame.



Installation

All vehicles

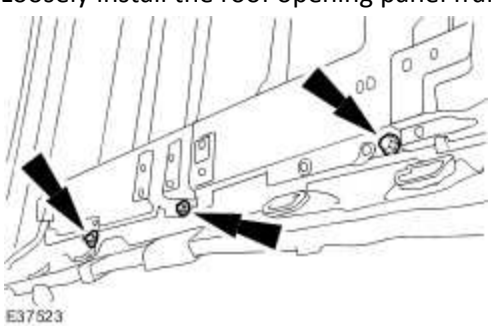
1 . Install the roof opening panel frame.



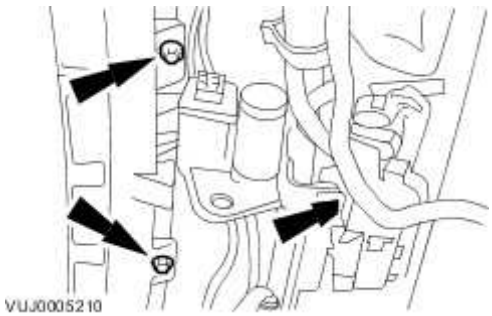
2 . **NOTE:**

Left-hand shown, right-hand similar.

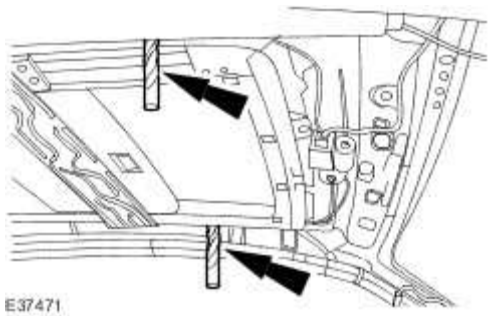
Loosely install the roof opening panel frame bolts.



3 . Loosely install the roof opening panel front frame bolts.



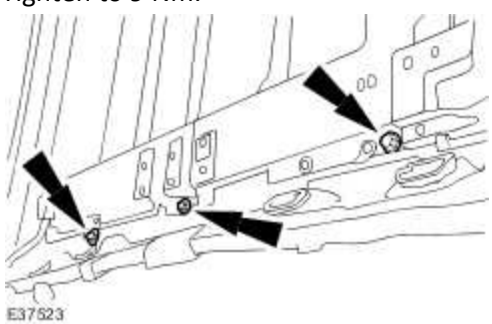
4 . Align the roof opening panel frame using a 12 mm drill bit.



5 . **NOTE:**

Left-hand shown, right-hand similar.

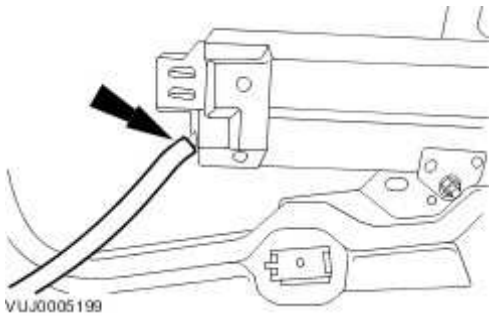
Tighten to 9 Nm.



6 . **NOTE:**

Left-hand shown, right-hand similar.

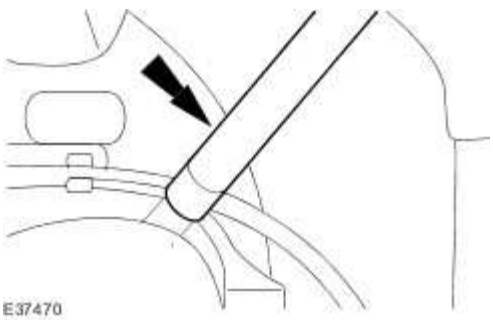
Install the rear drain hose.



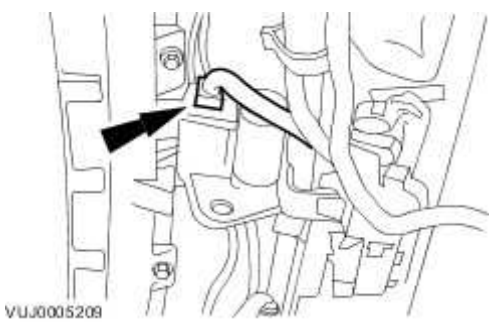
7 . **NOTE:**

Right-hand shown, left-hand similar.

Install the front drain hose.



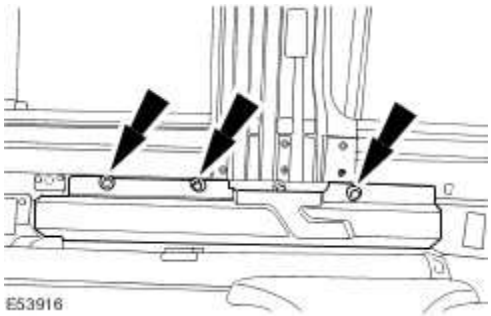
8 . Connect the electrical connector.



Long wheelbase

9 . Install the strengthening bar.

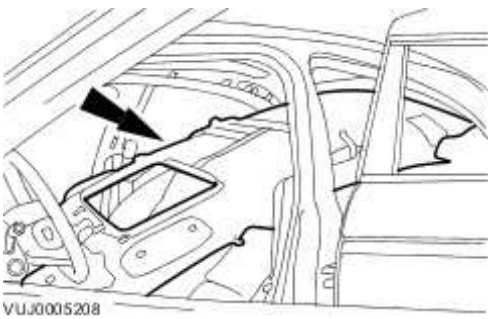
Tighten to 9 Nm.



All vehicles

10 . Install the roof opening panel glass.
For additional information, refer to

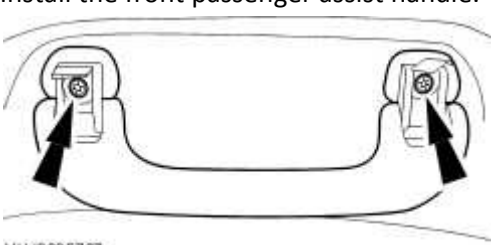
11 . Install the headliner.



12 . **NOTE:**

Left-hand shown, right-hand similar.

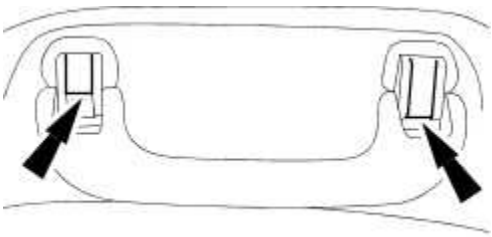
Install the front passenger assist handle.



13 . **NOTE:**

Left-hand shown, right-hand similar.

Install the front passenger assist handle retaining screw covers.



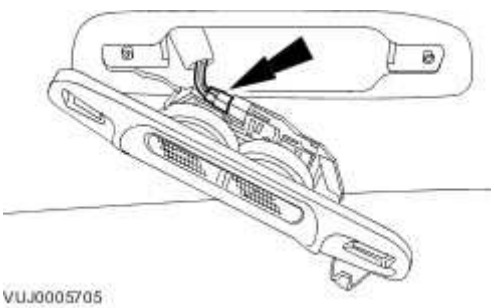
VUJ0005706

14 . **NOTE:**

Left-hand shown, right-hand similar.

Install the rear passenger assist handle.

- Connect the electrical connector.

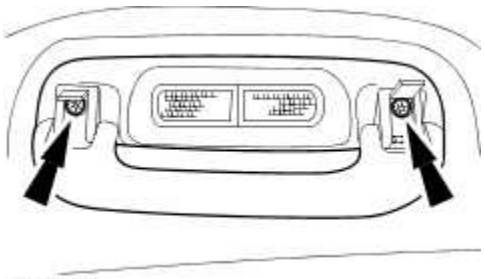


VUJ0005705

15 . **NOTE:**

Left-hand shown, right-hand similar.

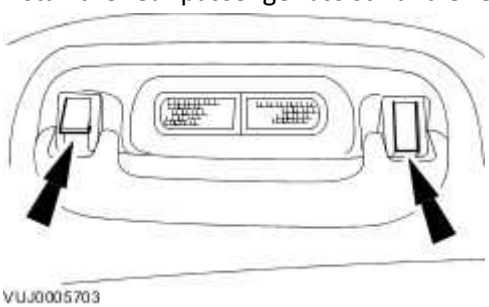
Install the rear passenger assist handle retaining screws.



16 . **NOTE:**

Left-hand shown, right-hand similar.

Install the rear passenger assist handle retaining screw covers.

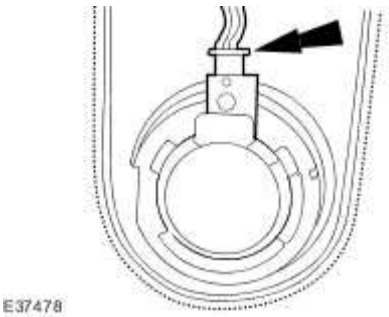


17 . **NOTE:**

Left-hand shown, right-hand similar.

Connect the headlining wiring harness front electrical connector.

18 . Connect the rain sensor electrical connector.



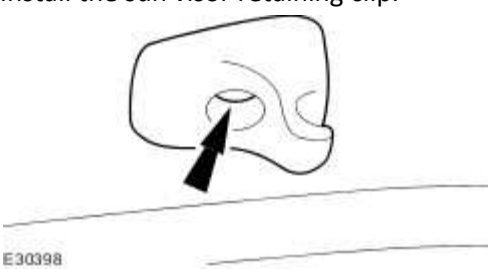
19 . Install the overhead console.
For additional information, refer to Overhead Console (76.13.69)

20 . Install the auto dimming interior mirror.
For additional information, refer to Auto-Dimming Interior Mirror (76.10.56)

21 . **NOTE:**

Left-hand shown, right-hand similar.

Install the sun visor retaining clip.



22 . Install both sun visors.
For additional information, refer to Sun Visor (76.10.48)

23 . Install both C-pillar upper trims panels.
For additional information, refer to C-Pillar Upper Trim Panel

24 . Install both B-pillar trim panels.

For additional information, refer to B-Pillar Upper Trim Panel (76.13.28)

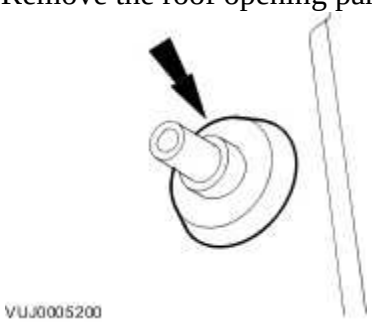
25 . Install both A-pillar trim panels.
For additional information, refer to A-Pillar Trim Panel (76.13.31)

Roof Opening Panel Front Drain Hose (76.82.21)

Removal

1 . Remove the fender splash shield. <<501-02>>

2 . Remove the roof opening panel front drain hose lower grommet.



3 . Remove both A-pillar trim panels. <<501-05>>

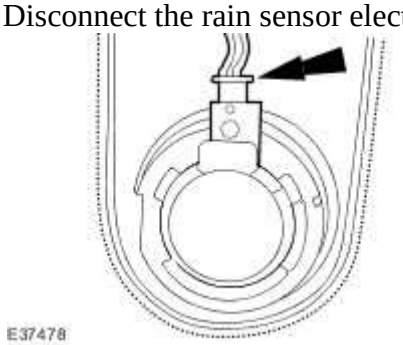
4 . Remove both B-pillar trim panels. <<501-05>>

5 . Remove both C-pillar upper trim panels. <<501-05>>

6 . Remove both sun visors. <<501-05>>

7 . Remove the auto dimming interior mirror. <<501-09>>

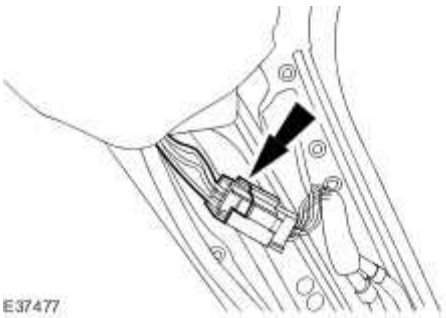
8 . Disconnect the rain sensor electrical connector.



9 . **NOTE:**

Left-hand shown, right-hand similar.

Disconnect the headlining wiring harness front electrical connector.



10 . **NOTE:**

Left-hand shown, right-hand similar.

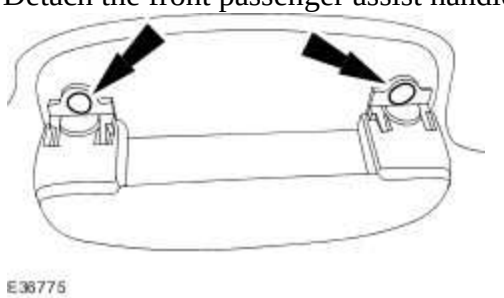
Remove the sun visor retaining clip.

11 . Remove the overhead console. <<501-12>>

12 . **NOTE:**

Left-hand shown, right-hand similar.

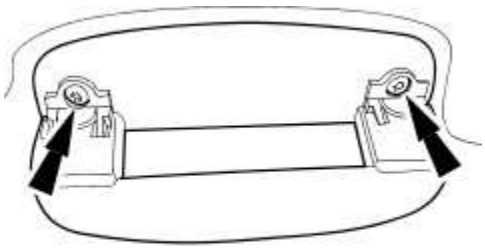
Detach the front passenger assist handle retaining screw covers.



13 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the front passenger assist handle.

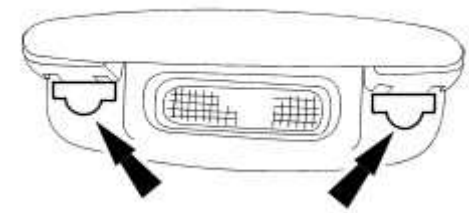


E36776

14 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear passenger assist handle retaining screw covers.

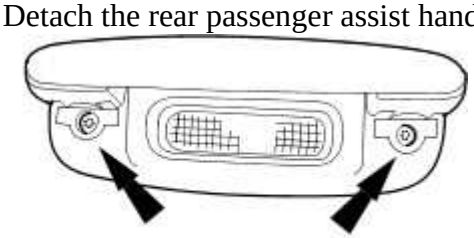


E36777

15 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear passenger assist handle.



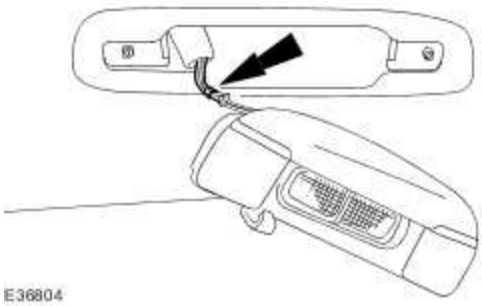
E36778

16 . **NOTE:**

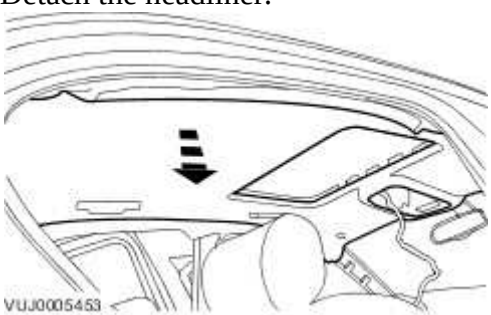
Left-hand shown, right-hand similar.

Remove the rear passenger assist handle.

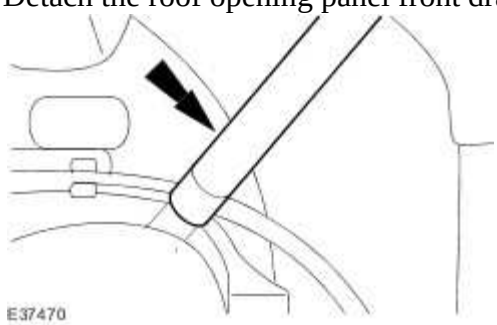
- Disconnect the electrical connector.



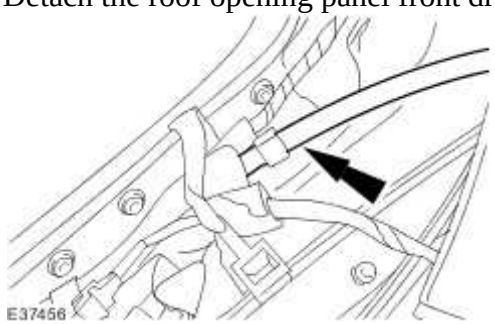
17 . Detach the headliner.



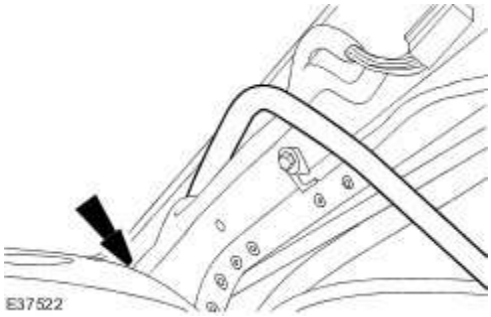
18 . Detach the roof opening panel front drain hose.



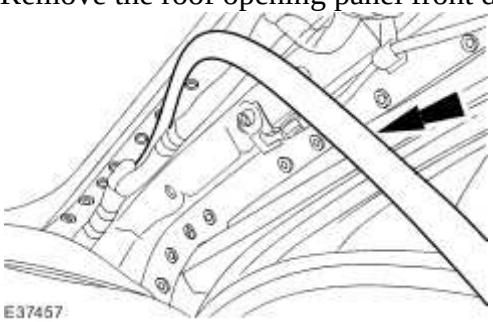
19 . Detach the roof opening panel front drain hose upper retaining clip.



20 . Detach the roof opening panel front drain hose lower retaining clip.



21 . Remove the roof opening panel front drain hose.



Installation

1 . To install, reverse the removal procedure.

Roof Opening Panel Glass (76.82.05)

Removal

Short wheelbase

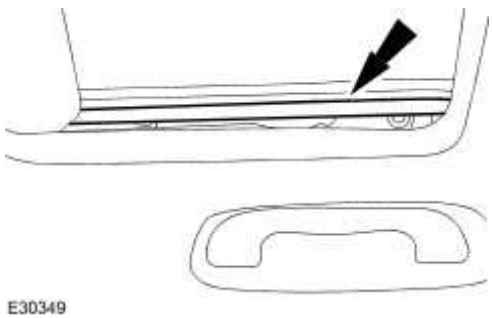
1 . **NOTE:**

Make sure the roof opening glass assembly is in the closed position.

NOTE:

Left-hand shown, right-hand similar.

Detach the sight shield at the front of the roof and swing inwards towards the rear of vehicle.



Long wheelbase

2 . **CAUTION: Make sure the air deflector is only detached from the roof opening panel using the 20mm (0.78 inches) area at the end of the air deflector as defined in step 1 of the ilustration and text below. Failure to follow this instruction will result in damage to the component.**

CAUTION: Do not pull on the air deflector rubber pleat. Failure to follow this instruction will result in damage to the component.

NOTE:

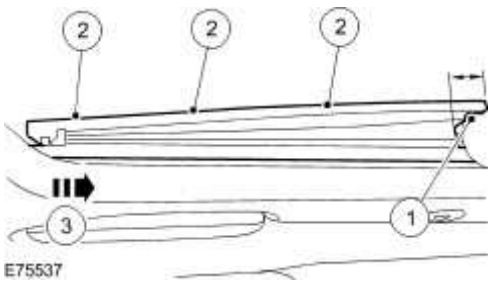
Right-hand shown, left-hand similar.

Detach the air deflector.

1) Detach the rear of the air deflector.

2) Detach the air deflector upper retainer.

3) Swing the front of the air deflector inwards towards the rear of the vehicle.

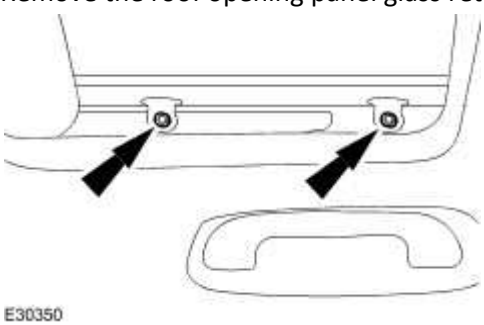


All vehicles

3 . **NOTE:**

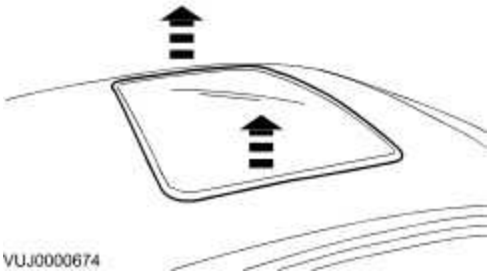
Left-hand shown, right-hand similar.

Remove the roof opening panel glass retaining screws.



4 . **CAUTION: Do not operate the roof opening panel when the roof opening glass is removed.**

Remove the roof opening panel glass.

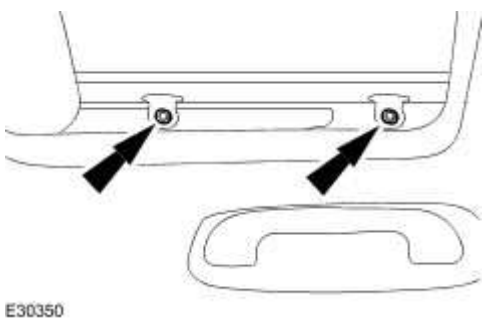


Installation

All vehicles

1 . To install, reverse the removal procedure.

Tighten to 4 Nm.

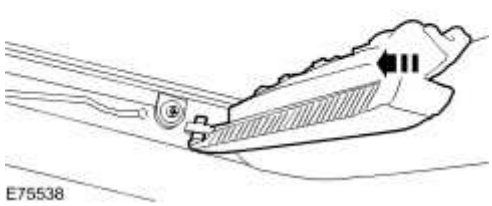


Long wheelbase

2 . **NOTE:**

Right-hand shown, left-hand similar.

Reposition the air deflector to the roof opening panel runner.



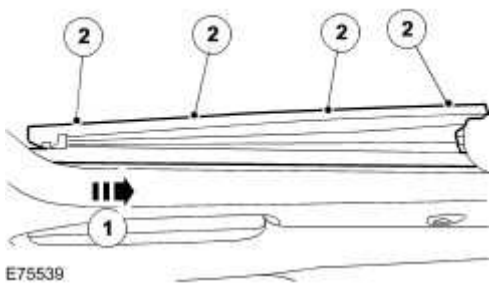
3 . **NOTE:**

Right-hand shown, left-hand similar.

Install the air deflector.

1) Make sure the air deflector is fully seated to the rear retaining clip.

2) Attach the air deflector upper retainer.

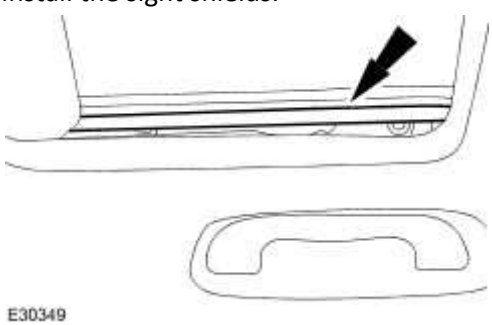


Short wheelbase

4 . **NOTE:**

Left-hand shown, right-hand similar.

Install the sight shields.



All vehicles

5 . Align the roof opening panel glass.
For additional information, refer to Roof Opening Panel Glass (76.82.05)

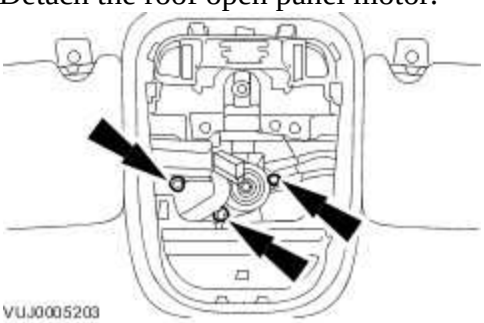
Roof Opening Panel Motor (86.76.01)

Removal

1 . **NOTE:**
Make sure the roof opening panel is in the closed position.

Remove the overhead console. <<501-12>>

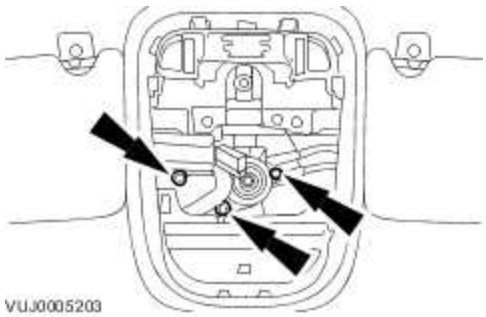
2 . Detach the roof open panel motor.



3 . Remove the roof opening panel motor.

Installation

1 . To install, reverse the removal procedure.
- Tighten to 3 Nm.



VUJ0005203

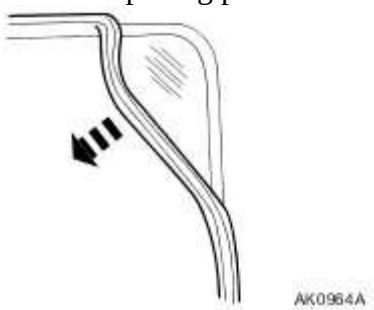
Roof Opening Panel Weatherstrip (76.82.15)

Removal

1
· **CAUTION: Do not operate the roof opening panel when the roof opening panel glass is removed.**

Remove the roof opening panel glass.
For additional information, refer to Roof Opening Panel Glass (76.82.05)

2 . Remove the roof opening panel weatherstrip.

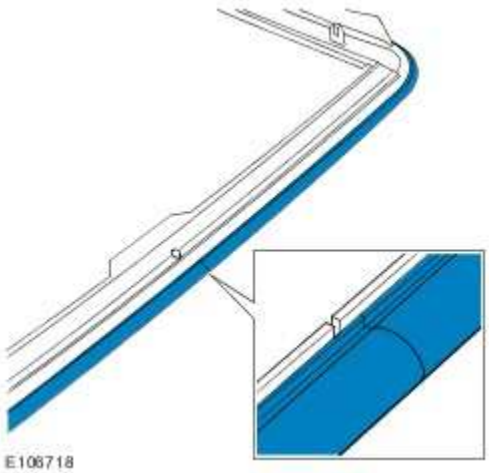


Installation

1 **NOTE:**
· Make sure that this component is installed to the noted removal position.

To install, reverse the removal procedure.

- Position the roof opening glass seal seam in the center of the rear facing side of the roof opening panel glass.



E106718

Trough Assembly (76.82.58)

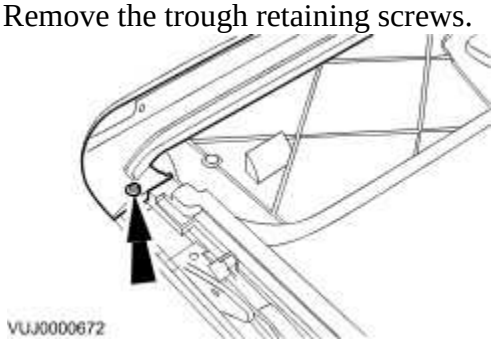
Removal

1. **CAUTION: Do not operate the roof opening panel when the roof opening glass is removed.**

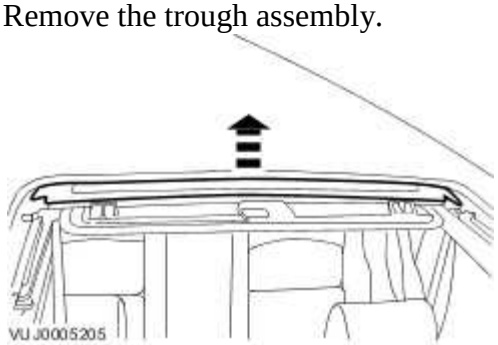
   Remove the roof opening panel glass.
   For additional information, refer to

2. **NOTE:**
   Right-shown, left-hand similar.

   Remove the trough retaining screws.



3. Remove the trough assembly.

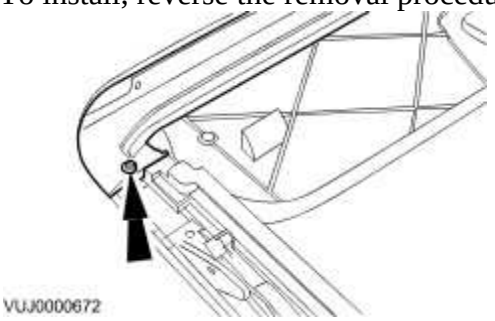


Installation

1. **CAUTION: Do not overtighten the trough assembly screws.**

   NOTE:
   Make sure the trough assembly is correctly seated in the guide clip.

To install, reverse the removal procedure.



Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front bumper retaining bolts	23	17	-
Rear bumper retaining bolts	17	13	-
Rear bumper cover retaining bolts	6	-	53

Bumpers

The vehicle is fitted with a chassis mounted aluminium beam and is covered by a one piece color co-ordinated front bumper cover. the fitment of the front fog lights is standard, which are mounted via brackets to the bumper covers. Inserts, side marker lamps/reflectors, and a dorchester grey splitter vane are fitted as standard. The parking aid sensors are mounted in the bumper cover and are fitted if the vehicle is equipped with a parking aid system. Headlamp washers are optional.

The rear bumper beam is of aluminium construction and is covered by a one piece color co-ordinated rear bumper cover. Inserts and side marker lamps/reflectors are fitted as standard. The parking aid sensors are mounted in the bumper cover and are fitted if the vehicle is equipped with a parking aid system.

Front Bumper (76.22.08)

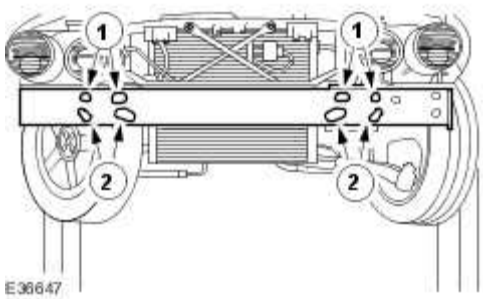
Removal

1 Remove the front bumper cover.
. For additional information, refer to Front Bumper Cover - VIN Range: G00442->H18679 (76.22.78)

2 . Remove the front bumper.

1) Remove the retaining bolts.

2) Remove and discard the retaining rivets.

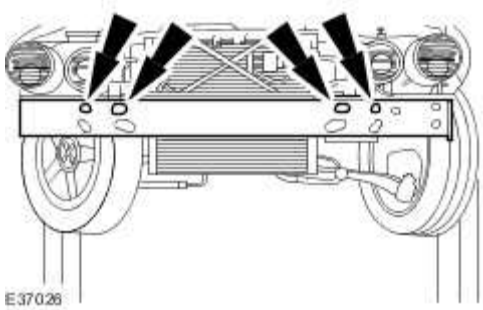


Installation

1 . **NOTE:**

The front bumper lower retaining rivets do not need to be fitted.

Tighten to 23 Nm.



Front Bumper Cover - VIN Range: G00442->H18679 (76.22.78)

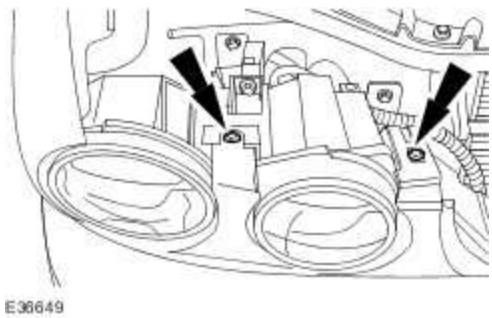
Removal

All vehicles

1 . Remove the radiator grille. <<501-08>>

2 . Remove the side marker lamps. <<417-01>>

3 . Detach the front bumper cover retaining clips.

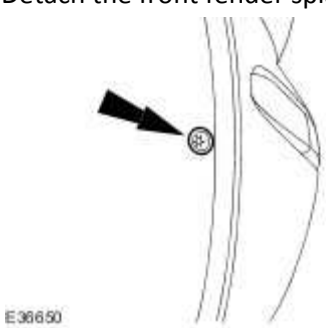


4 . Remove the radiator splash shield. <<501-02>>

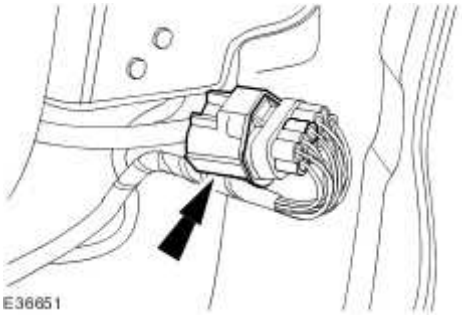
5 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the front fender splash shield.

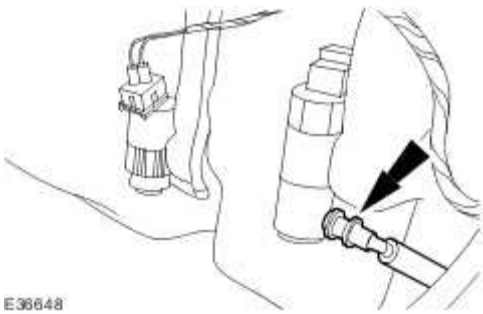


6 . Disconnect the lighting electrical connector.



Vehicles with headlamp washers

7 . Detach the headlamp washer hose from the reservoir.



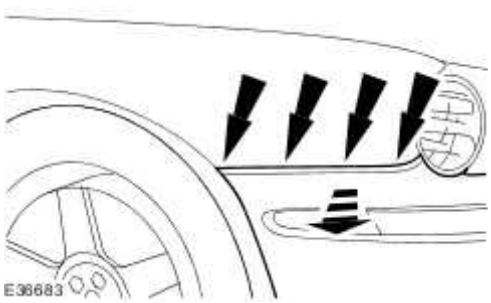
All vehicles

8 . **NOTE:**

Right-hand shown, left-hand similar.

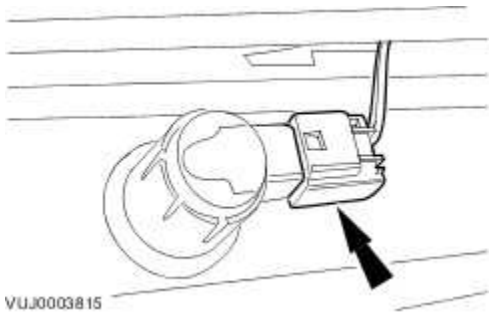
Remove the front bumper cover.

- Detach the front bumper cover from the retaining clips.



Vehicles with parking aid

9 . Disconnect the parking aid sensor electrical connectors.



Installation

All vehicles

1 . To install, reverse the removal procedure.

Vehicles with parking aid

2 . Carry out the following procedure if a new bumper cover or a new parking aid sensor holder is to be fitted.

WARNING: 3M VHB surface cleaner is highly flammable. Do not smoke or carry lighted tobacco or open flame of any type. Highly flammable vapors are always present and may ignite. Failure to follow these instructions may result in personal injury.

WARNING: 3M VHB surface cleaner is harmful. Avoid contact with the eyes. Avoid ingestion or inhalation. Avoid contact with the skin. If the cleaner contacts the eyes, flush the eyes with cold water for at least 15 minutes and seek immediate medical attention. If taken internally do not induce vomiting, seek immediate medical attention. If the vapors are inhaled, remove the person to fresh air. If the signs/symptoms of inhalation persist, seek medical attention. If the cleaner contacts the skin, immediately flush the skin with large amounts of water. Remove contaminated clothing. If the irritation persists seek medical attention. Failure to follow these instructions may result in personal injury.

3 **NOTE:**

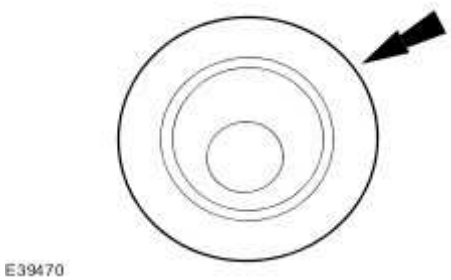
.

New parking aid sensor holders should be painted before assembly. Do not paint the bonding surface.

NOTE:

Wipe in one direction only.

Wipe the bonding surface of the parking aid sensor holder with 3M VHB surface cleaner.



E39470

4 **NOTE:**

.

New bumper covers should be painted before assembly. Do not paint the bonding surface.

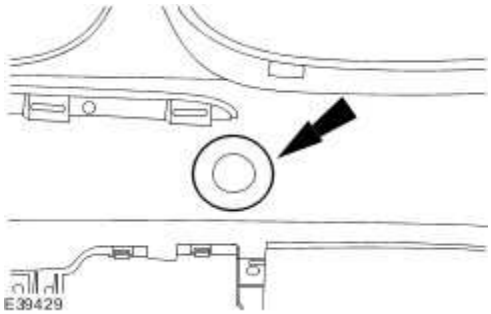
NOTE:

Wipe in one direction only.

NOTE:

Front bumper cover shown, rear similar.

Wipe the area around the front bumper cover holder aperture with 3M VHB surface cleaner.



WARNING: 3M adhesive DP8005 is highly flammable. Do not smoke or carry lighted tobacco or open flame of any type. Highly flammable vapors are always present and may ignite. Failure to follow these instructions may result in personal injury.

WARNING: 3M adhesive DP8005 is harmful. Avoid contact with the eyes. Avoid ingestion or inhalation. Avoid contact with the skin. If the adhesive contacts the eyes, flush the eyes with cold water for at least 15 minutes and seek immediate medical attention. If taken internally do not induce vomiting, drink two glasses of water and seek immediate medical attention. If the adhesive vapors are inhaled, remove the person to fresh air. If the signs/symptoms of inhalation persist, seek medical attention. If the adhesive contacts the skin, immediately flush the skin with large amounts of water. Remove contaminated clothing. If the irritation persists seek medical attention. Failure to follow these instructions may result in personal injury.

5. **CAUTION: 3M adhesive DP8005 must only be applied using a 3M EPX applicator and an orange 10:1 ratio applicator nozzle.**

Make sure the applicator nozzle is correctly aligned on to the EPX applicator.

6. **CAUTION: 3M adhesive DP8005 has a work life of three minutes. Do not apply the adhesive to more than one parking aid sensor holder at a time.**

NOTE:

Make sure the adhesive is correctly mixed.

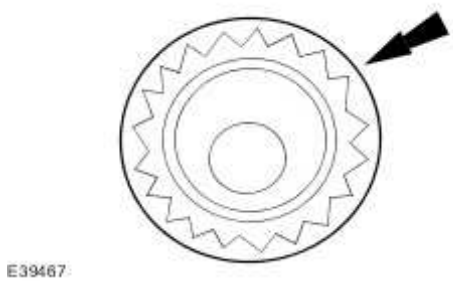
NOTE:

Apply enough adhesive to fill the joint.

NOTE:

Apply adhesive to one surface only.

Apply the adhesive to the parking aid sensor holder bonding surface.



E39467

7. **NOTE:**

Excess adhesive should be removed from the painted surface within ten minutes of application.

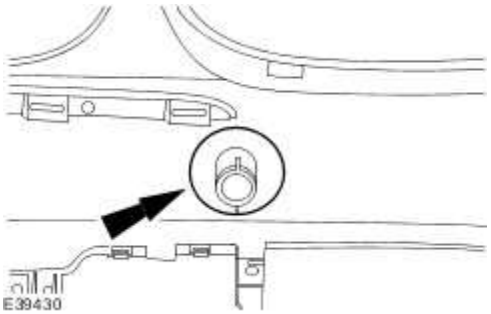
NOTE:

Using a suitable tool, remove excess adhesive.

Fit the parking aid sensor holder immediately.

- Apply pressure to the parking aid sensor holder until the adhesive sets.

- Secure the parking aid sensor holder to the bumper with a suitable adhesive tape.



8 **NOTE:**

.

Allow the adhesive to cure for 24 hours at room temperature before fitting the parking aid sensor.

To install, reverse the removal procedure.

Front Bumper Cover - VIN Range: H18680->H99999 (76.22.78)

Removal

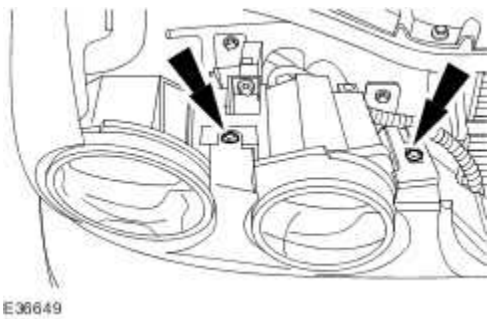
All vehicles

1 . Remove the radiator grille.
For additional information, refer to Radiator Grille (76.55.03)

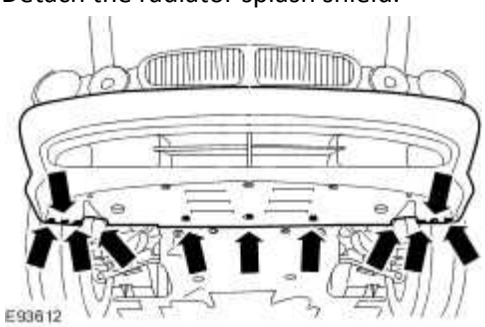
2 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the front bumper cover retaining clips.



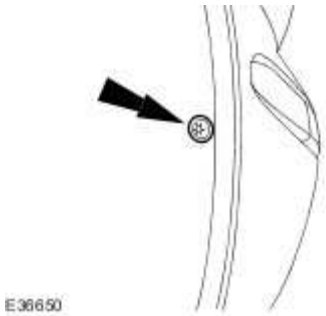
3 . Detach the radiator splash shield.



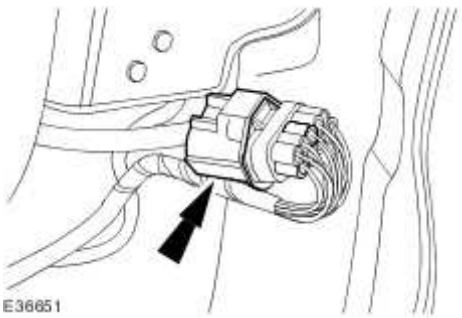
4 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the front fender splash shield.

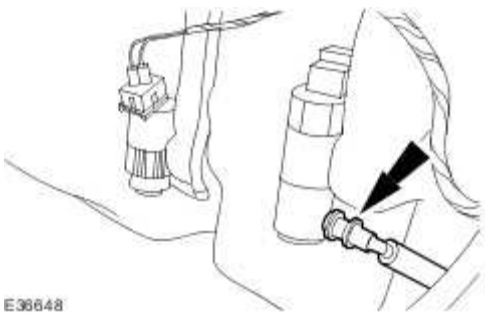


5 . Disconnect the lighting electrical connector.



Vehicles with headlamp washers

6 . Detach the headlamp washer hose from the reservoir.



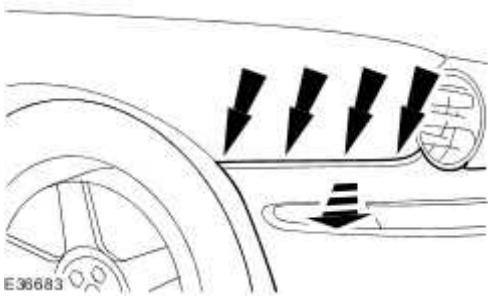
All vehicles

7 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the front bumper cover.

- Detach the front bumper cover from the retaining clips.



Installation

All vehicles

1 . To install, reverse the removal procedure.

Vehicles with parking aid

2 . Carry out the following procedure if a new bumper cover or a new parking aid sensor holder is to be fitted.

WARNING: 3M VHB surface cleaner is highly flammable. Do not smoke or carry lighted tobacco or open flame of any type. Highly flammable vapors are always present and may ignite. Failure to follow these instructions may result in personal injury.

WARNING: 3M VHB surface cleaner is harmful. Avoid contact with the eyes. Avoid ingestion or inhalation. Avoid contact with the skin. If the cleaner contacts the eyes, flush the eyes with cold water for at least 15 minutes and seek immediate medical attention. If taken internally do not induce vomiting, seek immediate medical attention. If the vapors are inhaled, remove the person to fresh air. If the signs/symptoms of inhalation persist, seek medical attention. If the cleaner contacts the skin, immediately flush the skin with large amounts of water. Remove contaminated clothing. If the irritation persists seek medical attention. Failure to follow these instructions may result in personal injury.

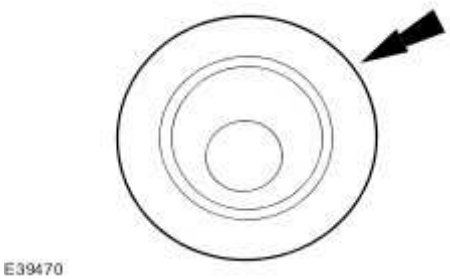
3 **NOTE:**

· New parking aid sensor holders should be painted before assembly. Do not paint the bonding surface.

NOTE:

Wipe in one direction only.

Wipe the bonding surface of the parking aid sensor holder with 3M VHB surface cleaner.



4 **NOTE:**

·

New bumper covers should be painted before assembly. Do not paint the bonding surface.

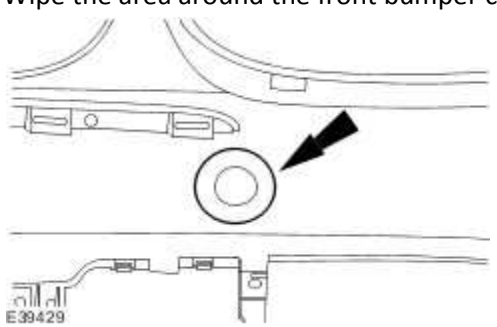
NOTE:

Wipe in one direction only.

NOTE:

Front bumper cover shown, rear similar.

Wipe the area around the front bumper cover holder aperture with 3M VHB surface cleaner.

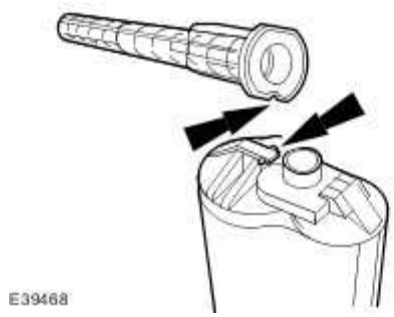


WARNING: 3M adhesive DP8005 is highly flammable. Do not smoke or carry lighted tobacco or open flame of any type. Highly flammable vapors are always present and may ignite. Failure to follow these instructions may result in personal injury.

WARNING: 3M adhesive DP8005 is harmful. Avoid contact with the eyes. Avoid ingestion or inhalation. Avoid contact with the skin. If the adhesive contacts the eyes, flush the eyes with cold water for at least 15 minutes and seek immediate medical attention. If taken internally do not induce vomiting, drink two glasses of water and seek immediate medical attention. If the adhesive vapors are inhaled, remove the person to fresh air. If the signs/symptoms of inhalation persist, seek medical attention. If the adhesive contacts the skin, immediately flush the skin with large amounts of water. Remove contaminated clothing. If the irritation persists seek medical attention. Failure to follow these instructions may result in personal injury.

5. **CAUTION: 3M adhesive DP8005 must only be applied using a 3M EPX applicator and an orange 10:1 ratio applicator nozzle.**

Make sure the applicator nozzle is correctly aligned on to the EPX applicator.



6. **CAUTION: 3M adhesive DP8005 has a work life of three minutes. Do not apply the adhesive to more than one parking aid sensor holder at a time.**

NOTE:

Make sure the adhesive is correctly mixed.

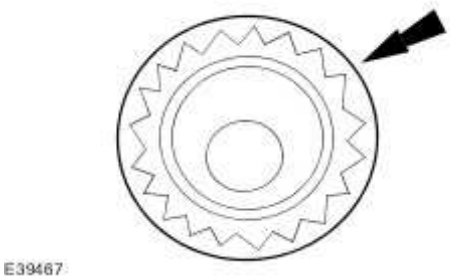
NOTE:

Apply enough adhesive to fill the joint.

NOTE:

Apply adhesive to one surface only.

Apply the adhesive to the parking aid sensor holder bonding surface.



7 **NOTE:**

.

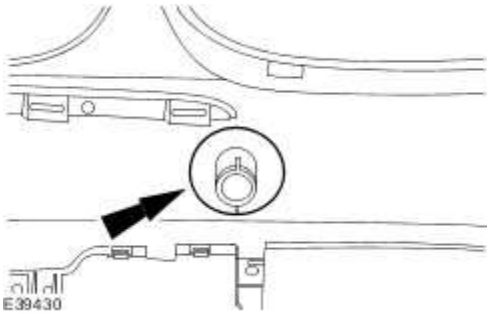
Excess adhesive should be removed from the painted surface within ten minutes of application.

NOTE:

Using a suitable tool, remove excess adhesive.

Fit the parking aid sensor holder immediately.

- Apply pressure to the parking aid sensor holder until the adhesive sets.
- Secure the parking aid sensor holder to the bumper with a suitable adhesive tape.



8 **NOTE:**

.

Allow the adhesive to cure for 24 hours at room temperature before fitting the parking aid sensor.

To install, reverse the removal procedure.

Front Bumper Cover Insert (76.22.73)

Removal

All vehicles

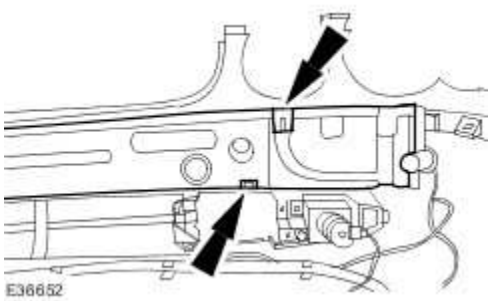
1 . Remove the front bumper cover.
For additional information, refer to

Vehicles with headlamp washers

2 . Remove the headlamp washer lower jet from the upper housing cup.

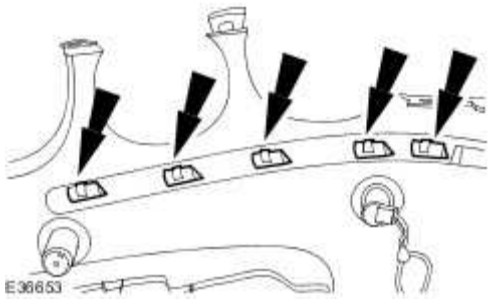
All vehicles

3 . Remove the front bumper cover insulation foam.



4 . Remove the bumper cover insert.

- Remove the retaining clips.



Installation

1 . To install, reverse the removal procedure.

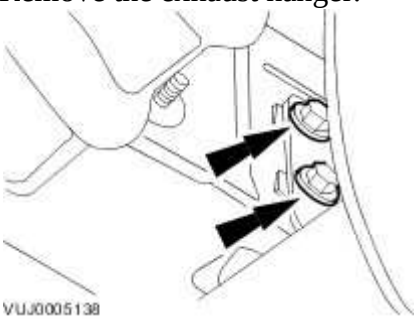
Rear Bumper (76.22.27)

Removal

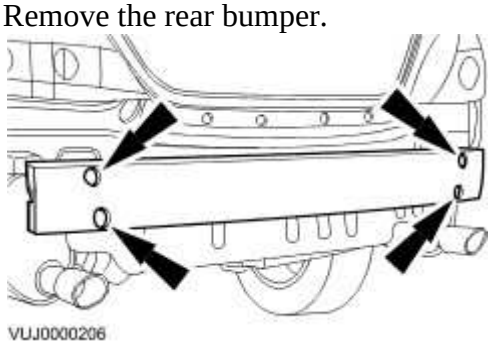
1 . Remove the rear bumper cover.
For additional information, refer to

2 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the exhaust hanger.

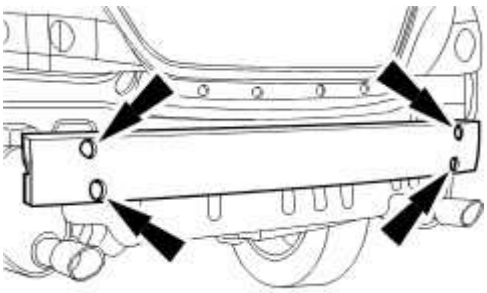


3 . Remove the rear bumper.



Installation

1 . To install, reverse the removal procedure.
Tighten to 17 Nm.



VUJ0000206

Rear Bumper Cover - VIN Range: G00442->H18679 (76.22.74)

Removal

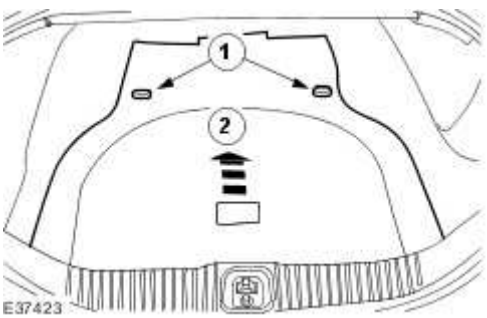
1 . Raise and support the vehicle. <<100-02>>

2 . Remove the side marker lamps. <<417-01>>

3 . Remove the luggage compartment floor covering.

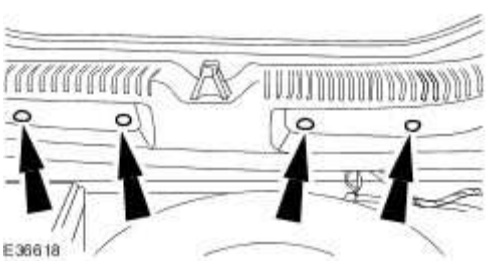
1) Remove the luggage compartment floor covering securing screws.

2) Remove the luggage compartment floor covering.



4 . Remove the luggage compartment side trim panel.

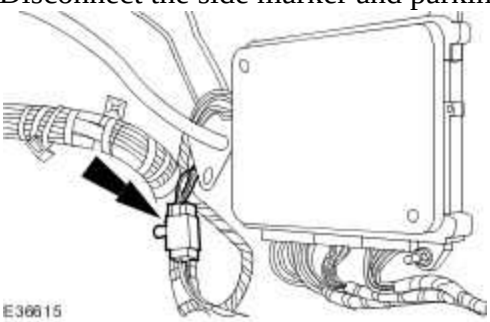
5 . Remove the rear luggage compartment trim retaining screws.



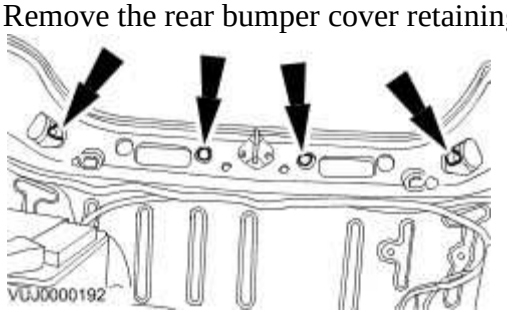
6 . Remove the rear luggage compartment trim.

- Remove the rear luggage compartment trim retaining clips.

7 . Disconnect the side marker and parking aid electrical connector.



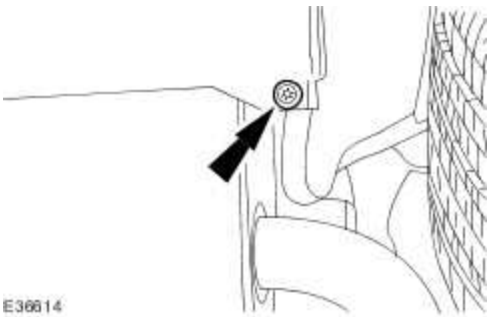
8 . Remove the rear bumper cover retaining bolts.



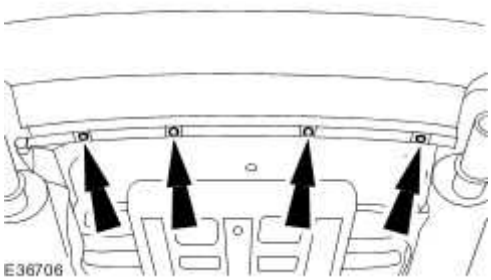
9 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the rear fender splash shield retaining screw.



10 . Remove the bumper cover lower retaining screws.

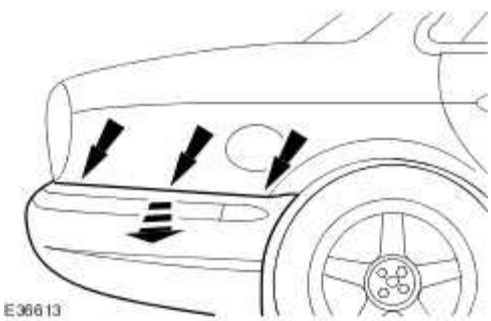


11 . **NOTE:**

Left-hand shown, right-hand similar.

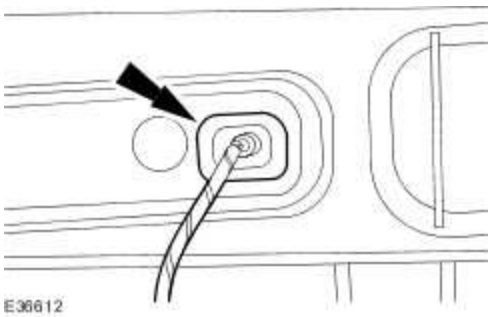
Detach the rear bumper cover.

- Detach the bumper cover from the retaining clips.



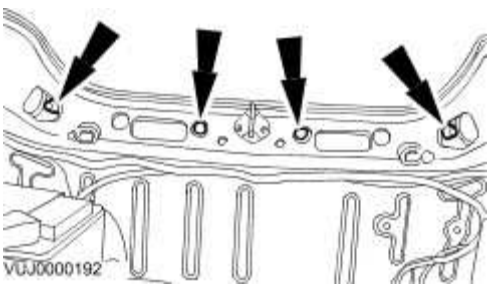
12 . Remove the rear bumper.

- Detach the wiring harness grommet from the rear quarter panel.



Installation

1 . To install, reverse the removal procedure.
- Tighten to 6 Nm.



Rear Bumper Cover - VIN Range: H18680->H99999 (76.22.74)

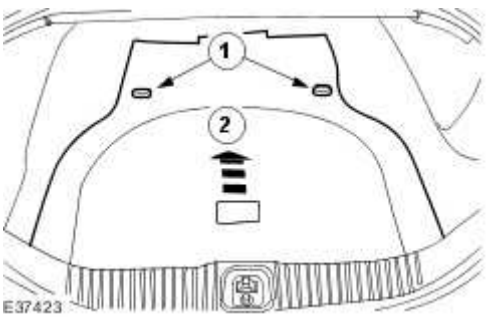
Removal

1 . Raise and support the vehicle.
For additional information, refer to Lifting

2 . Remove the luggage compartment floor covering.

1) Remove the luggage compartment floor covering securing screws.

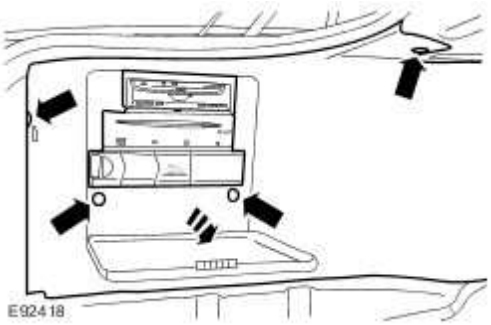
2) Remove the luggage compartment floor covering.



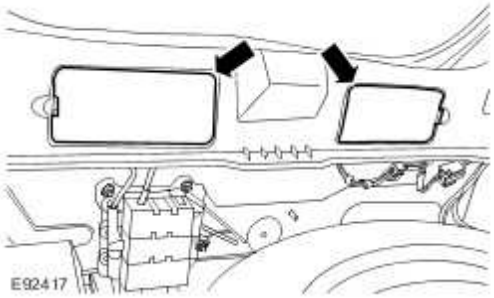
3 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the luggage compartment side trim panel.

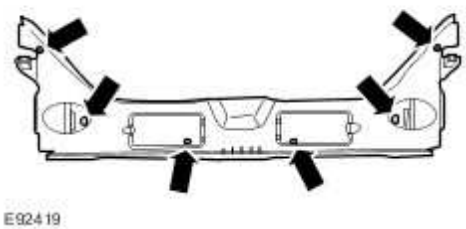


4 . Remove the rear luggage compartment trim panel covers.

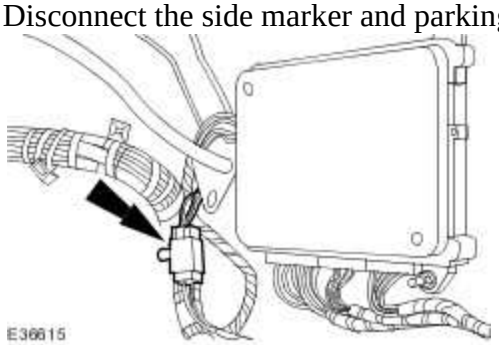


5 . Remove the rear luggage compartment trim.

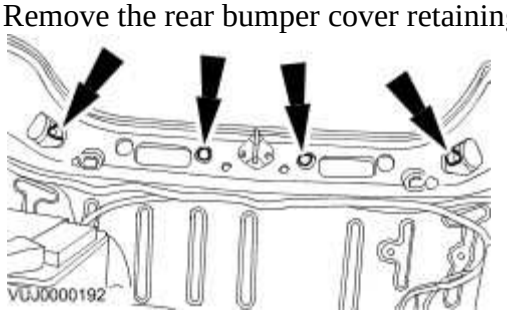
- Remove the rear luggage compartment trim retaining clips.



6 . Disconnect the side marker and parking aid electrical connector.



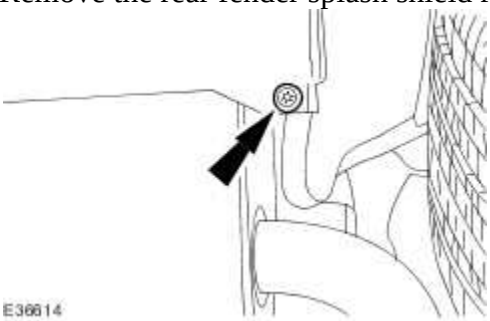
7 . Remove the rear bumper cover retaining bolts.



8 . **NOTE:**

Left-hand shown, right-hand similar.

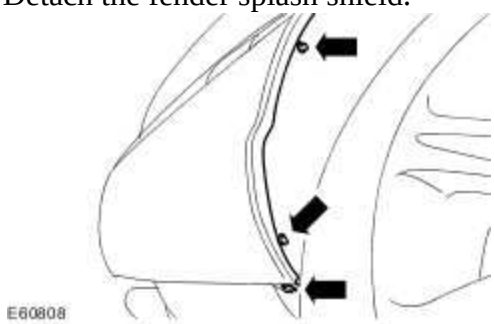
Remove the rear fender splash shield retaining screw.



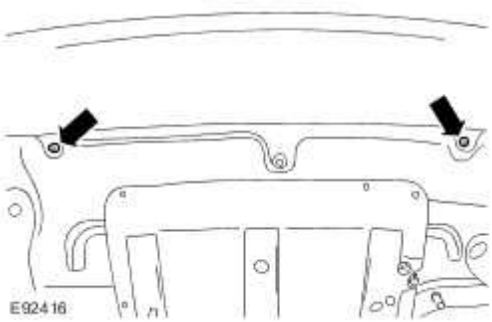
9 . **NOTE:**

Right-hand shown, left-hand similar.

Detach the fender splash shield.



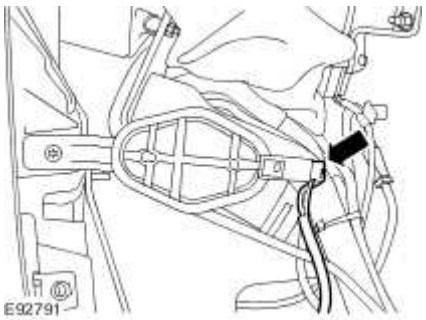
10 . Remove the bumper cover lower retaining screws.



11 . **NOTE:**

Right-hand shown, left-hand similar.

Disconnect the tire pressure monitoring system rear antenna electrical connector.

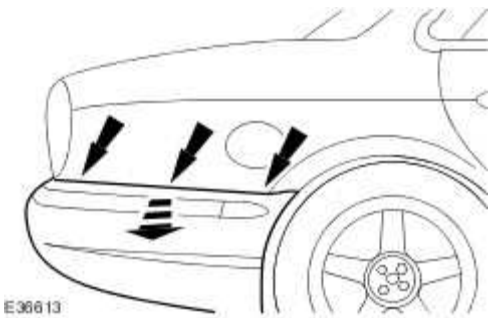


12 . **NOTE:**

Left-hand shown, right-hand similar.

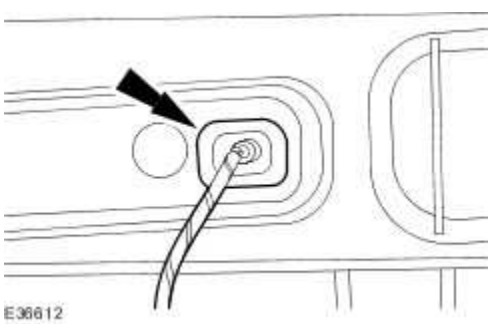
Detach the rear bumper cover.

- Detach the bumper cover from the retaining clips.



13 . Remove the rear bumper.

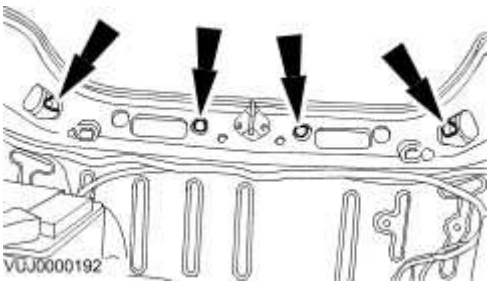
- Detach the wiring harness grommet from the rear quarter panel.



Installation

1 . To install, reverse the removal procedure.

- Tighten to 6 Nm.

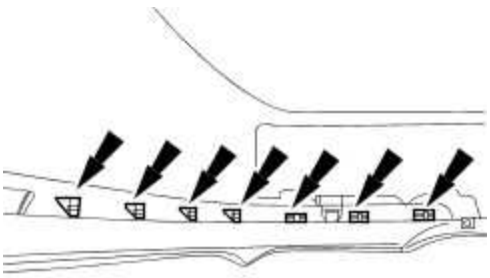

VUJ0000192

Rear Bumper Cover Insert (76.22.75)

Removal

1 . Remove the rear bumper cover.
For additional information, refer to Rear Bumper Cover - VIN Range: G00442->H18679 (76.22.74)

2 . Remove the bumper cover insert.
- Remove the bumper cover insert retaining clips.



Installation

1 . To install, reverse the removal procedure.

Specifications

Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front safety belt retractor retaining bolt	35	26	-
Front safety belt buckle retaining bolt	35	26	-
Front safety belt shoulder height adjuster retaining bolts	25	18	-
Front safety belt retractor to height adjuster retaining nut	35	26	-
Front safety belt retractor webbing guide retaining bolts	9	-	80
Front safety belt anchor to seat frame retaining bolt	35	26	-
Rear center safety belt retractor retaining bolt	35	26	-
Rear center safety belt upper mounting bracket retaining bolt	35	26	-
Rear safety belt retractor retaining bolt	35	26	-
Rear safety belt upper mounting bracket retaining bolt	35	26	-
Rear safety belt buckle retaining nut	35	26	-
Rear outer safety belt anchor to floor retaining bolt	35	26	-
Rear center safety belt anchor to floor retaining bolt	35	26	-

Safety Belt System

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag occupant restraints system (ORS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instructions may result in personal injury.

WARNING: Never probe the connectors on the air bag module or pretensioners. Doing so may result in deployment. Failure to follow this instructions may result in personal injury.

WARNING: All safety belt assemblies including retractors, buckles, child safety seat tether brackets and attaching hardware should be inspected after any collision. New safety belt assemblies should be fitted unless a qualified technician finds that the assemblies show no damage and operate correctly. New safety belt assemblies should also be fitted where safety belt assemblies not in use during a collision, are inspected and damage or incorrect operation is noted. Failure to follow these instructions may result in personal injury.

CAUTION: Electronic modules are sensitive to static electrical charges. If exposed to these charges, damage may result.

NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

VUJ0002037

WARNING: All vehicles fitted with the passenger air bag from the factory have a WARNING sticker attached to the instrument panel, PROHIBITING the use of rear

facing child seats in the front seating position. Failure to follow this instruction may result in personal injury.

NOTE:

The front seat belts, which incorporate the seat belt retractors and pretensioners are supplied as an assembly and not serviceable components.

The safety belt system fitted to the vehicle utilizes the conventional lap and diagonal three point fixing. The front and rear safety belts use a conventional static type buckle which is attached to the seat frame of each front seat and directly to the floor pan underneath the rear seats.

The front safety belt buckles and rear safety belt retractors incorporate pretensioners.

Each front safety belt buckle is fitted with a switch, which is connected through a wiring harness to a warning indicator which is housed within the instrument cluster. 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. 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 NOT be reused, NEW safety belts MUST be installed.

Seat Belt Warning Reminder

The seat belt warning reminder will allow the seat belt warning lamp constantly to illuminate if either or both of the front occupants are unbuckled. If only the driver is present the seat belt warning reminder will pertain only to the driver and extinguish when the driver seat buckle becomes fastened. If the front passenger is present also, the warning will pertain to both front occupants and the warning will extinguish when both the driver and front passenger seat belt buckles become fastened. The passenger seat weight sensor will be used to determine whether a front passenger is present or not.

European Beltminder

The beltminder function is an incremental warning to seat belt warning reminder. Under the conditions where a front occupant is present and unbelted or becomes unbelted and the vehicle is moving above 16 km/h (10 mile/h) then an incremental warning of an intermittent tone will start or resume accompanied by the seat belt warning lamp flashing. The intermittent tone and flashing lamp will last for 10 seconds and repeat every 30 seconds for 5 minutes. The incremental warnings will stop when conditions are satisfied such that all occupants seated in the front of the vehicle have their seat buckles fastened or if the vehicle is halted.

Beltminder Disconnection Procedure.

1 . Make sure the front passenger seat is unoccupied. Steps 2 - 5 must be completed within 60 seconds.

2 . Turn on the ignition to the RUN position (do not start the engine).

3 . Buckle the driver seat belt buckle until the seat belt warning lamp extinguishes.

4 . Unbuckle the drivers seat belt buckle until the seat belt warning lamp illuminates.

5 . Repeat 3 and 4 a further eight times.

6 . Upon the action that will result in the driver seat belt buckle being unbuckled for the ninth time, the cluster will exhibit a single chime. The single chime is acknowledgment that the beltminder feature has been disabled.

The beltminder feature will be disabled until the aforementioned process (steps 1 - 6 are repeated). Upon repeating the process, the beltminder feature will be reactivated.

Emergency Locking Retractor (ELR)

The retractors in all seat positions feature ELR. During any period of sudden deceleration, or under torsional 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 in all passenger seat positions. The safety belt webbing on these are clearly marked with a label to show their operating feature. The ALR feature is initiated by pulling all of the webbing from the retractor with the buckle fastened, when the webbing is then released as it retracts the retractor locks allowing travel only back into the retractor preventing the safety belt from introducing slack, and making any child seat it may be restraining more secure. The ALR mode of the retractor is disengaged by allowing the unfastened webbing to fully retract on to the reel.

Safety Belt System

Inspection and Verification

1 . Verify the customer concern by operating the safety belt.

2 . Visually inspect for obvious signs of mechanical and electrical damage.

Visual Inspection Chart

Mechanical	Electrical
Loose webbing	Warning indicator bulb
Damaged/frayed webbing	
Safety belt retractor	

1 . If the fault is not visually evident determine the symptom(s) and proceed to the Symptom Chart.

Normal Mode - Occupant Restraint System inoperative

Possible Source(s):

- Broken tooth on retractor sensor gear.
- Loose webbing.

Action(s) to take:

- REFER to the Functional Test in this section.

Automatic Locking Retraction System (ALR)
Inoperative.

Possible Source(s):

- Broken tooth on retractor sensor gear.
- Loose webbing.

Action(s) to take:

- REFER to the Functional Test in this section.

Poor Retraction

 **WARNING: In the event of an accident in which the air bags have been deployed, the front safety belts that were in use and the rear whether in use or not at the time of the accident must be removed and NEW safety belts MUST be installed. Failure to follow this instruction will result in personal injury and component failure.**

If a safety belt does not retract correctly, check that the anchor covers and trim bezels are correctly installed and not rubbing against the safety belt webbing. Where necessary, check the safety belt webbing is not rubbing at one end of the retractor cover slot and if so, correct by loosening the retaining bolt, aligning the retractor to centralize the safety belt webbing and retighten the bolt.

The vehicle is equipped with two front and three rear inertia reel safety belts. These safety belts are "dual sensitive" which means that they have:

- a vehicle motion sensor, which locks the safety belt webbing under braking, cornering, on steep hills and in adverse camber conditions.
- a webbing motion sensor, which locks when the safety belt webbing is quickly extracted.

Both systems should be fully operational and can be checked by the tests below:

Vehicle Motion Sensor Test

Either of the following two procedures may be used to check correct operation of the vehicle motion sensor. Both methods require two people but note that people of larger than normal should not be asked to conduct these tests. This is to avoid the possibility of a fully unrolled safety belt webbing being mistaken for a correctly locked safety belt retractor.

Test Method 1 (braking)

 **WARNING: It is important that during this test, the wearer allows the safety belt to provide the restraint, the wearer should not attempt to anticipate the sudden deceleration and the driver should not brace themselves against the steering wheel. However, both the driver and the passenger must prepare themselves for the possibility that the safety belt will not lock. The passenger should hold their hands in front of him, just clear of the instrument panel or front seat backrest. Depending on which belt is being tested. Failure to follow these procedures will result in personal injury.**

- Select for this test a quiet or private stretch of road. Make sure that the road is clear and that full visibility is maintained at all times.
- Both driver and passenger should adopt normal, comfortable seating position. Both occupants should wear the safety belts and the safety belt webbing must be correctly adjusted, with no slack.
- Proceed at a speed of approximately 10 km/h (6 miles/hour), do not exceed 10 km/h (6 miles/hour) for this test.

- Apply the foot brake sharply to stop the vehicle. If the vehicle motion sensitive lock mechanism is operating correctly, the safety belt webbing will lock and restrain the wearer.
- Conduct the test twice in each front and rear passenger seat position.
- Any safety belt retractor which does not restrain the wearer during this test must not be reused. A NEW safety belt must be installed.

Test Method 2 (Turning circle)

This method requires a flat open area of private road, sufficient for the vehicle to be driven in a continuous circle on full lock.

- The driver should wear the safety belt provided and the belt webbing must be correctly adjusted, with no slack.
- The passenger should occupy a rear seat with the safety belt correctly adjusted.
- Start the engine and, with the steering on full right-hand lock, drive the vehicle in a continuous circle at 16 km/h (10 miles/hour), do not exceed 16 km/h (10 miles/hour).
- When the speed is stable, the passenger should attempt to slowly extract the safety belt webbing from each safety belt retractor in turn. If the vehicle motion sensitive lock mechanism is operating correctly, it will not be possible to extract the webbing.
- Any safety belt retractor from which it is possible to extract the webbing during this test must not be used. A NEW safety belt must be installed.

Safety Belt Webbing Sensor Test

With the vehicle stationary and on level ground take firm hold of the safety belt webbing (on the tongue side of the upper safety belt anchor) and pull out quickly. The retractor should lock within 0.25 metre (10 inches), preventing further webbing payout. Any safety belt retractor from which it is possible to extract further webbing must not be used. A new safety belt must be installed.

Component Test

Service installation of Safety belts

It is possible that the safety belt assemblies installed in service may have been damaged during handling or installation to the vehicle. The damage is contained within the inner workings of the retractor and is therefore, not visible. However, the damage usually causes the retractor to stick or jam. The damage can only occur before installation is completed and is usually in one of the following ways:

- The safety belt webbing is allowed to retract onto the spindle until it jams the locking mechanism in a way that cannot occur when the safety belt is installed in the car. The safety belt webbing prevents the correct locking action and if the safety belt webbing is snatched or jerked out of the retractor, the loads are not taken on this high strength locking mechanism.

- The webbing is snatch loaded by attempted fast extraction or manual testing with the safety belt held in the hand. This can result in deceleration which are much higher than those occurring in accident situations and there is a risk of damage to the mechanism.

When handling safety belt assemblies, adopt the following procedures:

 **WARNING: If the following procedures are not successful, reject the safety belt assembly. Do not try to jerk or snatch the webbing out of the retractor as this may cause damage. Failure to follow these procedures could and may cause damage or personal injury.**

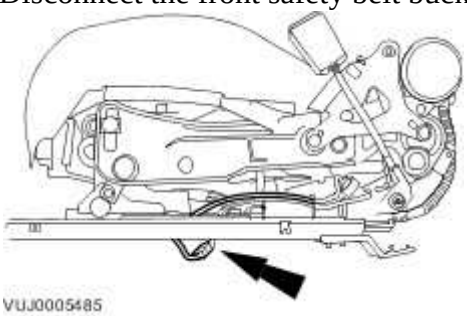
- If the safety belt webbing retracts and will not extract under low webbing tension, install the retractor onto its mounting in the car , which will set it at its correct angle, and the safety belt webbing should extract easily.
- If it does not, feed 5-10 mm (3/16 - 3/8 inch) more safety belt webbing onto the spindle (rotate the spindle using finger pressure if necessary) and the safety belt webbing should then extract.

Front Safety Belt Buckle (76.73.49)

Removal

1 . Remove the front seat. For additional information, refer to <<501-10>>.

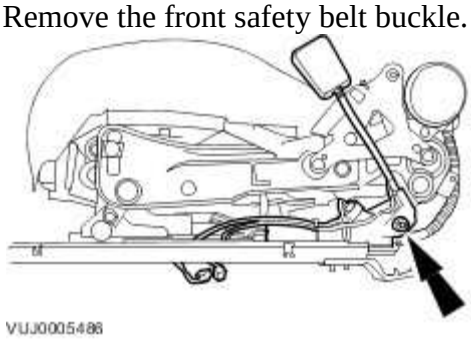
2 . Disconnect the front safety belt buckle electrical connector.



3 **NOTE:**

· The front safety belt buckle retaining bolt is part of the safety belt buckle and should not be separated.

Remove the front safety belt buckle.



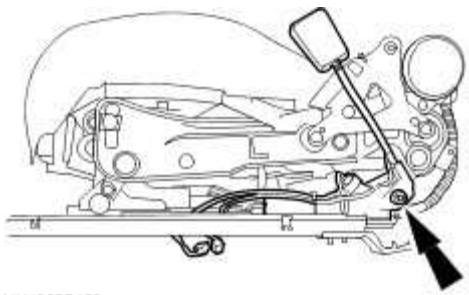
Installation

1

· **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

To install, reverse the removal procedure.

- Tighten to 35 Nm.



VUJ0005486

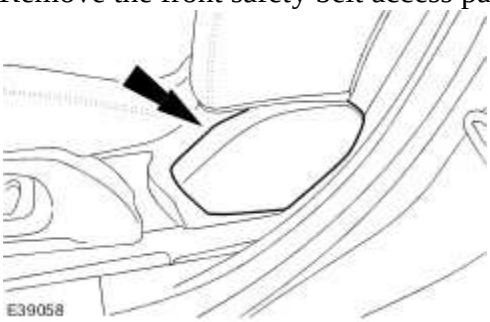
Front Safety Belt Retractor (76.73.10)

Removal

1 . Remove the B-pillar trim panel. For additional information, refer to <<501-05>>

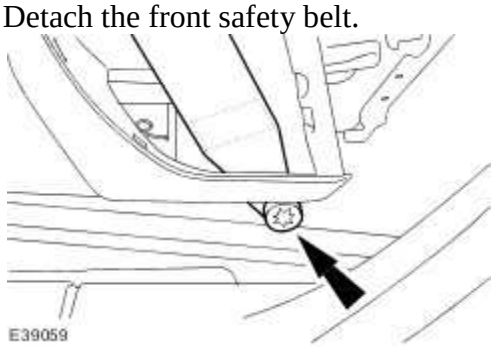
2 . **NOTE:**
Left-hand shown, right-hand similar.

Remove the front safety belt access panel.

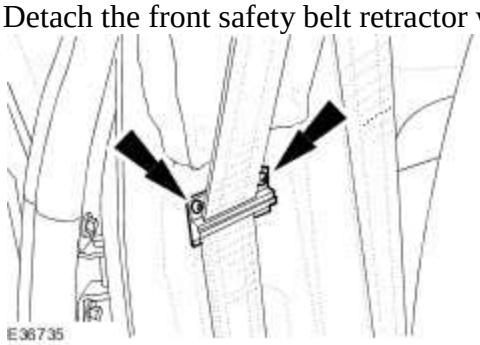


3 . **NOTE:**
Left-hand shown, right-hand similar.

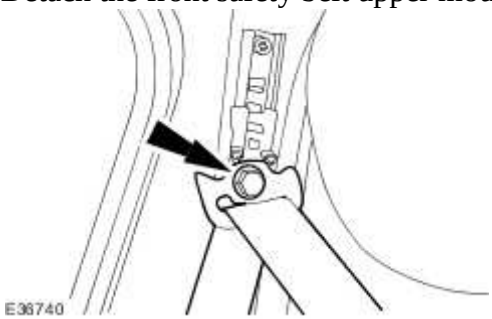
Detach the front safety belt.



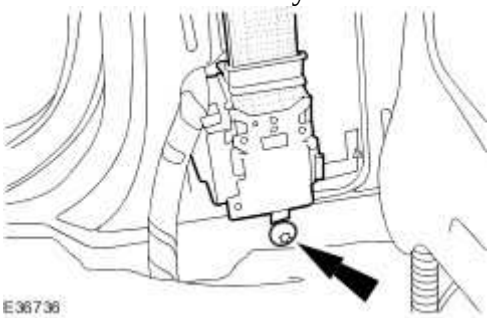
4 . Detach the front safety belt retractor webbing guide.



5 . Detach the front safety belt upper mounting bracket.



6 . Remove the front safety belt retractor.

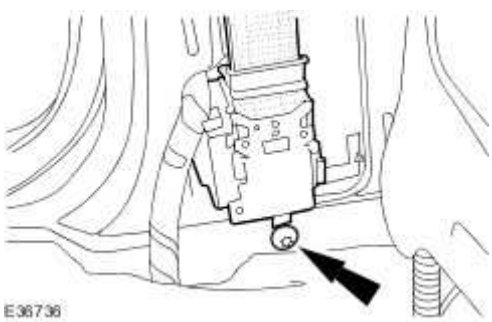


Installation

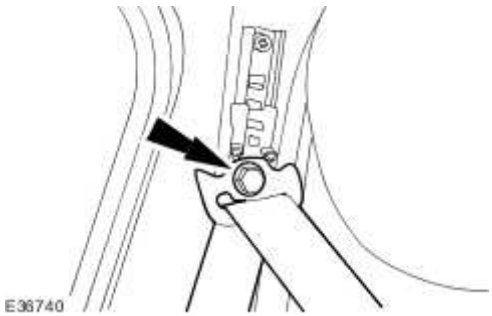
1 . **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

To install, reverse the removal procedure.

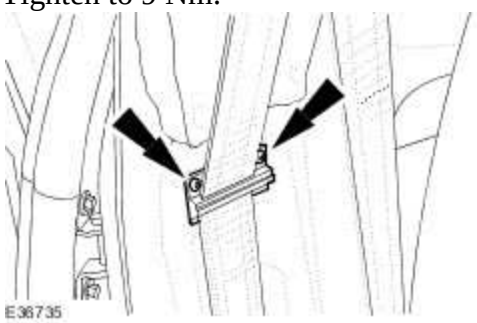
Tighten to 35 Nm.



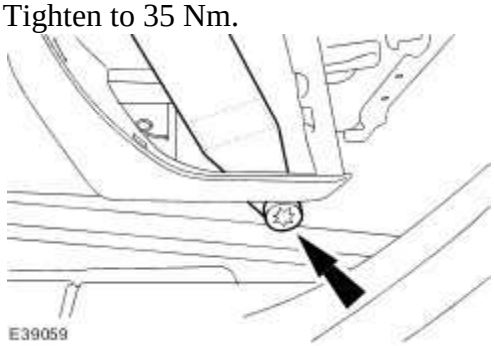
2 . Tighten to 35 Nm.



3 . Tighten to 9 Nm.



4 . Tighten to 35 Nm.



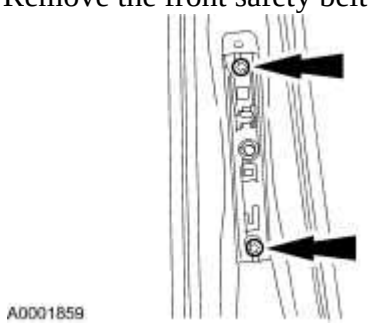
Front Safety Belt Shoulder Height Adjuster (76.73.12)

Removal

1 . Remove the B-pillar trim panel. For additional information, refer to <<501-05>>.

2 . Detach the front safety belt upper mounting bracket.

3 . Remove the front safety belt shoulder height adjuster.

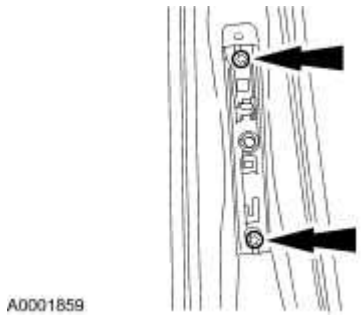


Installation

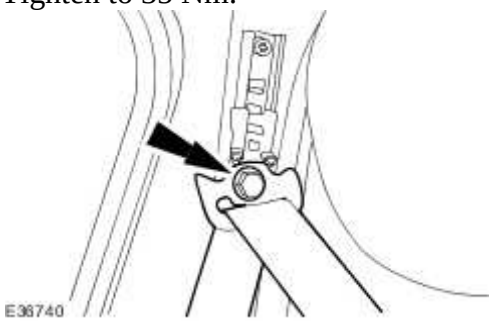
1 . **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

To install, reverse the removal procedure.

- Tighten to 25 Nm.



2 . Tighten to 35 Nm.



Rear Center Safety Belt Retractor (76.73.20)

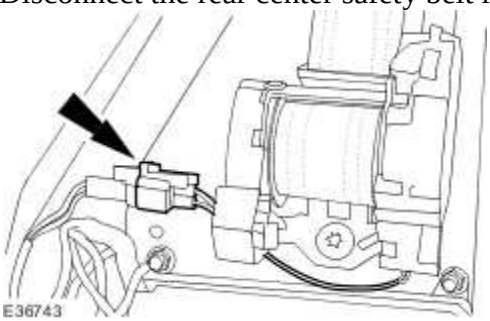
Removal

1 . **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

Disconnect the battery ground cable. <<414-01>>

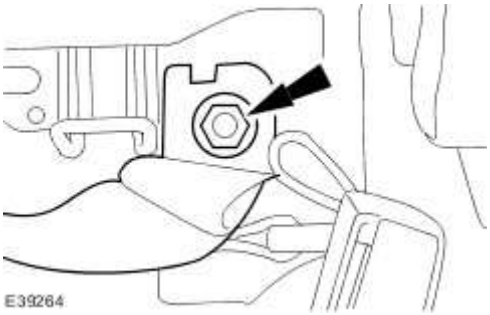
2 . Remove the rear parcel shelf. <<501-05>>

3 . Disconnect the rear center safety belt retractor electrical connector.

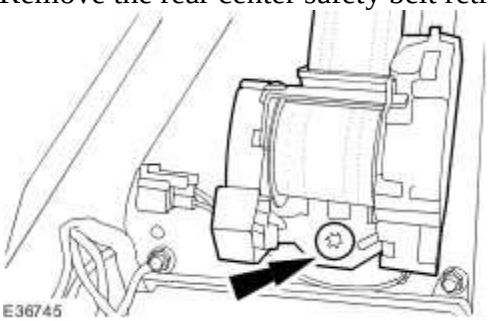


4 . Detach the rear center safety belt upper mounting bracket.

5 . Detach the rear center safety belt.



6 . Remove the rear center safety belt retractor.

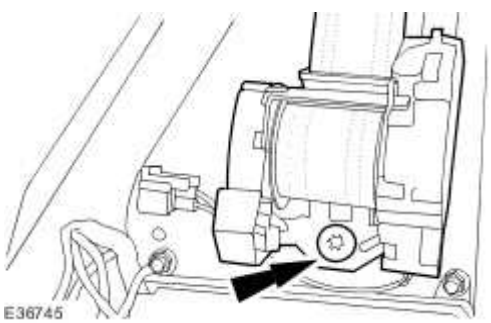


Installation

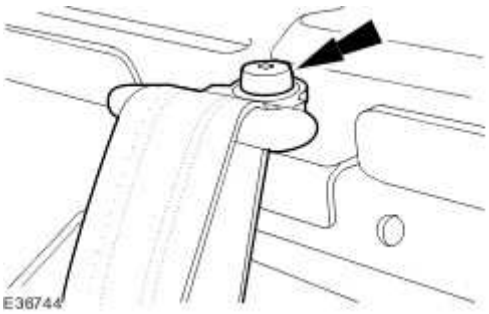
1 . **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

To install, reverse the removal procedure.

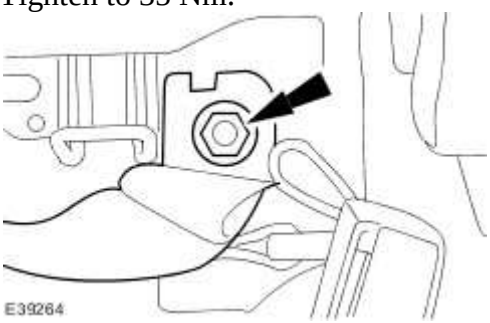
Tighten to 35 Nm.



2 . Tighten to 35 Nm.



3 . Tighten to 35 Nm.



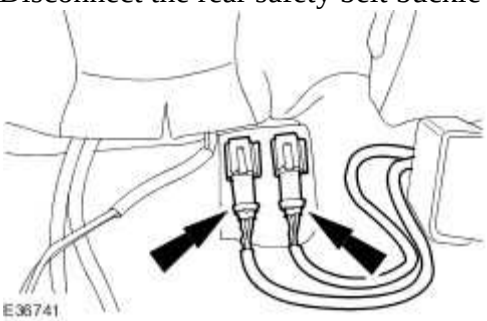
Rear Safety Belt Buckle (76.73.50)

Removal

1 . Remove the rear seat cushion. <<501-10>>

2 . **NOTE:**
Double rear safety belt buckle shown, single similar.

Disconnect the rear safety belt buckle electrical connectors.



3 . **NOTE:**
Double rear safety belt buckle shown, single similar.

Remove the rear safety belt buckle.

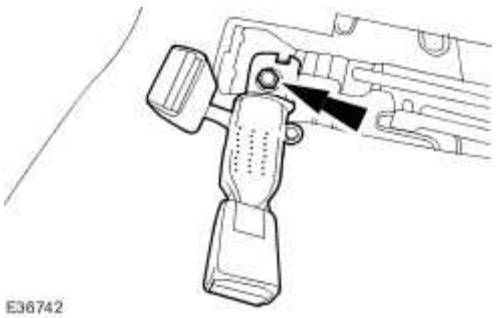
Installation

1 . **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

NOTE:
Double rear safety belt buckle shown, single similar.

To install, reverse the removal procedure.

- Tighten to 35 Nm.



Rear Safety Belt Retractor (76.73.18)

Removal

1 . **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

Disconnect the battery ground cable. <<414-01>>

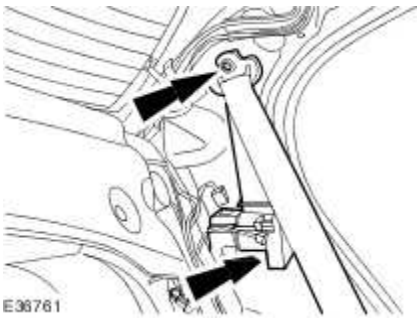
2 . Remove the rear seat backrest. <<501-10>>

3 . Remove the upper C-pillar interior trim panel. <<501-05>>

4 . Detach the rear safety belt.

5 . Disconnect the rear safety belt retractor electrical connectors.

6 . Remove the rear safety belt retractor.

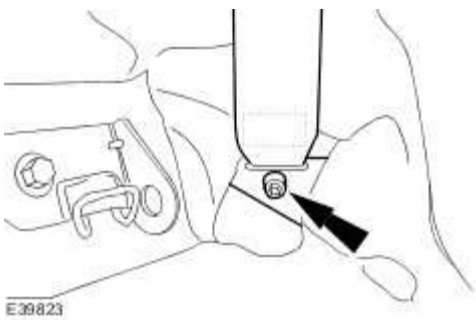


Installation

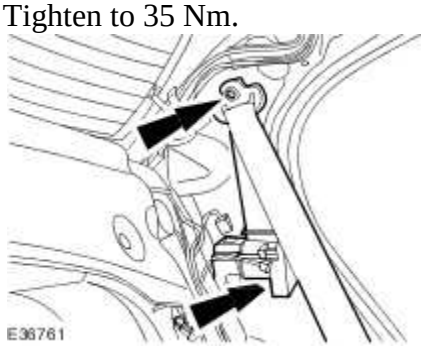
1
· **CAUTION: Make sure all retaining bolts and retaining nuts are hand started and hand tightened prior to final tightening. Failure to follow this instruction may result in component damage.**

To install, reverse the removal procedure.

Tighten to 35 Nm.



2 . Tighten to 35 Nm.



Specifications

Torque Specifications

Description	Nm	Lb/Ft	Lb/In
Passenger Air Bag Module Retaining Nuts	12	9	—
Passenger Air Bag Module Retaining Bolts	9	—	80
Restraints Control Module (RCM) Retaining Nuts	12	9	—
Seat Position Sensor Retaining Bolt	5	—	44
Side Air Curtain Module Inflator Retaining Bolts	8	—	71
Side Air Curtain Module Tether Straps Retaining bolts	9	—	80
Side Air Bag Module Retaining Nuts	7	—	62
Side Impact Sensor Retaining Bolt	12	9	—
Crash Sensor Retaining bolt	12	9	—
Driver Air Bag Module Retaining Screws	7	—	62
Clockspring retaining screws	5	—	44
Seat belt anchor retaining bolts M10 and M12	35	26	—
Front seat belt retractor retaining bolts	40	30	—

Air Bag Disposal

Deployed Air Bag

1.

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

Deployed air bag modules are to be disposed of as special waste and must comply with local environmental requirements, if in doubt, contact Authority for disposal requirements.

2. **NOTE:**

   The storage, transportation, disposal, and/or recycling of air bag module components must be carried out in accordance with all applicable federal, state and local regulations including, but not limited to, those governing building and fire codes, environmental protection, occupational health and safety, and transportation.

Modules removed and deployed by Jaguar service are to be returned to the importer for disposal.

Undeployed Air Bag — Inoperative

1.

WARNING: Carry a live air bag module with the air bag and trim cover or deployment door pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: All inoperative air bag modules have been placed on the Mandatory Return List. All discolored or damaged air bag modules must be treated the same as any inoperative live air bag being returned. Failure to follow this instruction may result in personal injury.

Remove the inoperative driver air bag module or passenger air bag module. For additional information see or in this section.

Undeployed Air Bag — Scrapped Vehicle

1.

 **WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.**

 **WARNING: Carry a live air bag module with the air bag and trim cover or deployment door pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.**

 **WARNING: Remote deployment is to be carried out outdoors with all personnel at least 6.1 meters (20 feet) away to ensure personal safety. Due to the loud report which occurs when the air bag is deployed, hearing protection is required. Failure to follow this instruction may result in personal injury.**

 **WARNING: Do not place the driver or passenger air bag module with the trim cover or deployment door facing down, as the forces of the deploying air bag can cause it to ricochet and cause personal injury. Failure to follow this instruction may result in personal injury.**

Equipment required: Universal deployment tool-Part N° 418-S135 and 12V Battery.

2. The deployment procedure should be carried out outdoors away from other personnel.

3. Remove any loose debris from around air bag. Make sure that no flammable liquids are present.

4. Disconnect the battery ground and positive cables.

5. Disconnect the relevant air bag module electrical connector.

6. Connect the appropriate adaptor lead to the restraint device.

7. Connect the deployment lead to the adaptor lead. Pass wire of the deployment tool through window, close all doors, leave window with lead for deployment tool open.

8.

 **WARNING: Before proceeding, make sure precautions have been taken to warn personnel of a possible loud noise upon activation. Do not allow anybody to approach closer to restraint device than six meters. Failure to follow this instruction may result in personal injury.**

Move as far from restraint device as possible and connect the tool clips to a 12V vehicle battery.

9.

 **WARNING: Do not handle the deployed device immediately after activation - it may be hot. Allow the unit to cool for at least 20 minutes. Cooling modules should be continuously monitored to make sure heat does not create a fire with spilled liquids or other debris. Failure to follow this instruction may result in personal injury.**

Deploy the module by depressing both switches on the tool. If activation does not occur, disconnect battery from tool and seek advise from Jaguar Engineering and wait for further instructions.

10. Repeat procedure for all air bags in vehicle.

11. The vehicle is now to be scrapped in the normal manner with modules installed.

Disposal of live air bag modules for driver air bag module, passenger air bag module and side air bag module, using tyres

1. Equipment required: Deployment tool 418-S135, Battery (12V), Safety goggles to BS2092 grade 2, Rubber gloves to PrEN 374 class 2, Ear protectors that have been measured to BS.EN 24869, Particulate respirator to EN 149 grade FFP2S.

2. The deployment procedure should be carried out outdoors, away from other personnel.

3. Stack four scrap tyres, securing together with heavy gauge wire or cable. While

disconnected from any electrical power source, connect deployment harness and place air bag adaptor portion under tyre stack, ready for connection to air bag.

4.

 **WARNING: Power must not be connected during this step. Failure to follow this instruction may result in personal injury.**

 **CAUTION: Make sure the connector is not in contact with the inflator or it will be damaged during the test.**

Connect air bag to air bag connector, make sure the locking sleeve is fully engaged. Position the air bag with the cover facing upwards.

5. Make sure battery connections of deployment harness are ten meters away from the tyre stack

6. Remove any loose parts from around the air bag. Make sure that no flammable liquids are present.

7.

 **WARNING: Before proceeding, make sure precautions have been taken to warn personnel of a possible loud noise upon activation. Do not allow anybody to approach closer to restraint device than six meters. Failure to follow this instruction may result in personal injury.**

Move as far from restraint device as possible and connect the tool clips to a 12V vehicle battery.

8.

 **WARNING: Do not handle the deployed device immediately after activation - it may be hot. Allow the unit to cool for at least 20 minutes. Cooling modules should be continuously monitored to make sure heat does not create a fire with spilled liquids or other debris. Failure to follow this instruction may result in personal injury.**

Deploy the module by depressing both switches on the tool. If activation does not occur, disconnect battery from tool and seek advise from Jaguar Engineering and wait for further instructions.

9. Allow the air bag to cool for at least 20 minutes. Cooling modules should be continuously

monitored to make sure heat does not generate a fire with spilled liquids or other debris.

10. Remove the air bag from the tyre stack and seal in a plastic bag, ready for disposal.

11. In the event of any problems or queries arising from this procedure, contact Jaguar Engineering.

Disposal of side curtain air bag module using tyres

1. Equipment required: Deployment tool 418-S135, Battery (12V), Safety goggles to BS2092 grade 2, Rubber gloves to PrEN 374 class 2, Ear protectors that have been measured to BS.EN 24869, Particulate respirator to EN 149 grade FFP2S.

2. The deployment procedure should be carried out outdoors, away from other personnel.

3.

 **WARNING: Make sure that the tyre stack is stable before and after deployment. Failure to follow this instruction my result in personal injury.**

Stack scrap tyres of a sufficient height to mask the side curtain air bag module, securing together with heavy gauge wire or cable. While disconnected from any electrical power source, connect deployment harness and place air bag adaptor portion under tyre stack, ready for connection to air bag.

4.

 **WARNING: Power must not be connected during this step. Failure to follow this instruction may result in personal injury.**

 **CAUTION: Make sure the connector is not in contact with the inflator or it will be damaged during the test.**

Connect air bag to air bag connector, make sure the locking sleeve is fully engaged. Position the air bag into the tyres with the inflator canister at the lowest point.

5. Make sure battery connections of deployment harness are ten meters away from the tyre stack

6. Remove any loose parts from around the air bag. Make sure that no flammable liquids are present.

7.

 **WARNING: Before proceeding, make sure precautions have been taken to warn personnel of a possible loud noise upon activation. Do not allow anybody to approach closer to restraint device than six meters. Failure to follow this instruction may result in personal injury.**

Move as far from restraint device as possible and connect the tool clips to a 12V vehicle battery.

8.

 **WARNING: Do not handle the deployed device immediately after activation - it may be hot. Allow the unit to cool for at least 20 minutes. Cooling modules should be continuously monitored to make sure heat does not create a fire with spilled liquids or other debris. Failure to follow this instruction may result in personal injury.**

Deploy the module by depressing both switches on the tool. If activation does not occur, disconnect battery from tool and seek advise from Jaguar Engineering and wait for further instructions.

9. Allow the air bag to cool for at least 20 minutes. Cooling modules should be continuously monitored to make sure heat does not generate a fire with spilled liquids or other debris.

10. Remove the air bag from the tyre stack and seal in a plastic bag, ready for disposal.

11. In the event of any problems or queries arising from this procedure, contact Jaguar Engineering.

Air Bag Supplemental Restraint System (SRS)

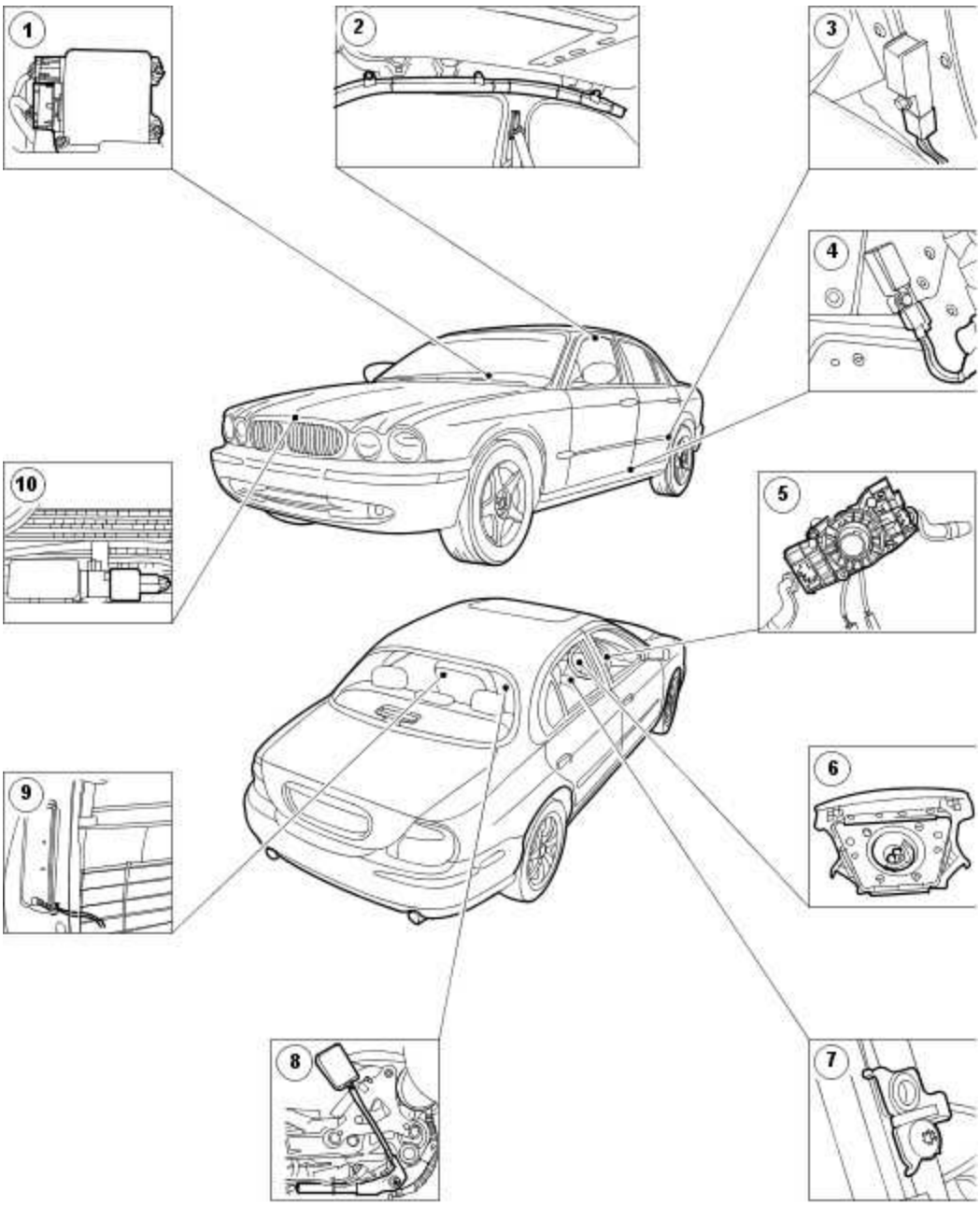
WARNING: All pyrotechnic devices are dangerous. Before performing any procedures on any pyrotechnic device, read all information contained within the Standard Workshop Practices section of this manual.

For additional information, refer to Driver Air Bag Module (501-20B)
For additional information, refer to Passenger Air Bag Module (501-20B)
For additional information, refer to Side Air Bag Module (501-20B)
For additional information, refer to Side Air Curtain Module (501-20B)

The air bag supplemental restraint system (SRS) is designed to provide increased collision protection for vehicle occupants in addition to that provided by the three-point safety belt system. Safety belt use is necessary to obtain the best occupant protection and to receive the full advantages of the SRS.

The air bag supplemental restraint system (SRS) components are shown in the following illustrations.

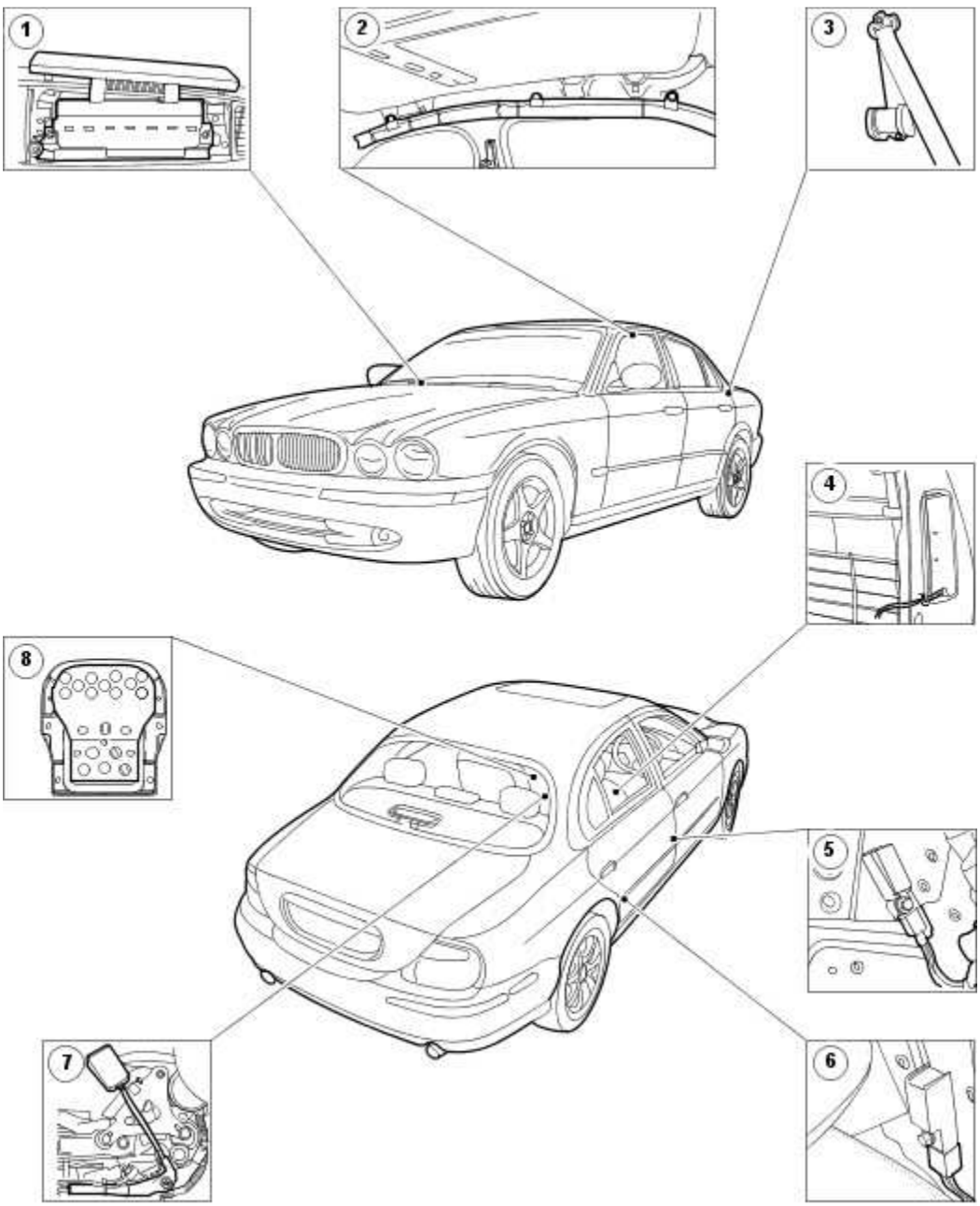
Air Bag Supplemental Restraint System (SRS) Components



Item	Part Number	Description
1	—	Restraints control module (RCM)
2	—	Side air curtain module
3	—	C-Pillar side impact sensor
4	—	B-Pillar side impact sensor
5	—	Clockspring
6	—	Driver air bag module
7	—	Driver seat position sensor
8	—	Safety belt pretensioner
9	—	Side airbag module

10	—	Front crash sensor

Air Bag Supplemental Restraint System (SRS) Components



E36996

Item	Part Number	Description
1	—	Passenger air bag module
2	—	Side air curtain module
3	—	Rear safety belt retractor and pretensioner

4	—	Side airbag module
5	—	B-Pillar side impact sensor
6	—	C-Pillar side impact sensor
7	—	Front safety belt pretensioner
8	—	Front passenger seat occupant classification sensor

Sensors

 **WARNING: Prior to the removal of any SRS sensors and before disconnecting any SRS sensor electrical connectors, the battery ground cable must be disconnected and a period of one minute allowed to elapse.**

NOTE:

The SRS sensors do not contain any serviceable components.

The SRS consists of the following sensors:

Occupant Position Sensors

The four sensors are strategically placed to detect the presence and movement of the passenger front seat occupant.

The occupant position sensor system uses ultrasound at an operating frequency of 40 kilohertz to monitor the passenger front seat occupant. The SRS uses four ultrasonic sensors, one in the A-pillar, one at the top of the instrument panel console and two in the headliner. The sensors determine the presence and position of the passenger front seat occupant with respect to the passenger air bag deployment door. The sensors determine passenger air bag module deployment decisions by classifying occupants as either 'in position' or 'out of position' according to the predetermined 'keep out zone'. The sensors are part of a system that is sophisticated enough to be unaffected by body extremities (hands and feet) and respond only to head or body movements.

Front Crash Sensor

The crash sensor is attached to the body behind the radiator grille. The restraints control module (RCM) processes the crash data sent by the crash sensor against stored data, and deploys the front air bags and pretensioners.

Side Impact Sensors

The side impact sensors are mounted at the base of the B-pillars and C-pillars to facilitate lateral impact sensing. In the event of a side impact, the RCM processes the crash data against the stored data. The RCM will deploy the side air bag module and side air curtain module on the side the deployment request was initiated.

Seat Position Sensor

The seat position sensor is located on the driver seat track. The seat position sensor determines the position of the driver seat, which is then communicated to the RCM. If the driver seat is in the forward position, the driver air bag module second stage is disabled.

Front Passenger Seat Occupant Classification Sensor

NOTE:

The front seat occupant classification sensor is serviced as a calibrated assembly.

Individual components of the front seat passenger weight sensing system are not serviceable. The system must be replaced as a complete unit and due to its sophistication, each replacement system requires calibration. To avoid the need to provide calibration equipment to each dealer, a pre-calibrated service kit is available. The following components are combined and calibrated during manufacture to form the front seat passenger weight sensing system:

- Passenger seat cushion
- Silicone filled bladder
- Weight sensing control module
- Pressure sensor

The weight sensing control module is mounted under the passenger front seat. The silicone filled bladder is integrated into the seat cushion and the pressure sensor, which is attached to the bladder, is mounted under the seat.

The silicone filled bladder responds to weight changes on the passenger front seat. The pressure sensor responds to these pressure changes and provides an appropriate signal to the weight sensing control module. The weight sensing control module processes the input signal received from the pressure sensor and makes it available to the RCM via the controller area network (CAN). In addition, the weight sensing control module performs self-diagnostic functions on the system, with any malfunctions being notified to the RCM accordingly.

The front seat passenger weight sensing system responds to the occupancy of the passenger front seat in accordance with the following:

- Passenger front seat status 'EMPTY' — Passenger air bag status 'OFF' — Passenger Air Bag Deactivation (PAD) indicator 'OFF'
- Passenger front seat status 'OCCUPIED' (small occupant) — Passenger air bag status 'OFF' — PAD indicator 'ON'
- Passenger front seat status 'OCCUPIED' (large occupant) — Passenger air bag status 'ON' — PAD indicator 'OFF'. PAD indicator 'ON' if the occupant position sensor detects an occupant out of position

The SRS via the RCM, monitors and processes data from the front seat passenger weight sensing system and several other sensors before making a deployment decision. Malfunction of the sensing system or associated circuits will cause the SRS indicator to illuminate.

Front Safety Belt Buckle Sensors

The safety belt buckle sensor is a 'hall effect' type sensor which provides an output signal in response to the magnetic field disturbance caused by the insertion of the safety belt tongue into the buckle. The output signal from the sensor is used by the RCM to determine whether the front seat occupants are correctly restrained. It is used in conjunction with other components of the SRS to ensure that air bag module and safety belt pretensioner deployment only occurs where necessary. For additional information, refer to Safety Belt System (501-20A)
Malfunction of the sensor or associated circuits will cause the SRS indicator to illuminate.

Modules

 **WARNING: Prior to the removal of any SRS module and before disconnecting any SRS module electrical connectors, the battery ground cable must be disconnected and a period of one minute allowed to elapse.**

NOTE:

The SRS modules do not contain any serviceable components.

The SRS consists of the following modules:

Restraints Control Module (RCM)

The RCM is mounted on the top of the drive shaft tunnel below the instrument panel console. It identifies crash severity, the direction of impact and makes decisions on deployment of air bag modules and safety belt pretensioners. It also provides firing signals to all air bag modules and safety belt pretensioners.

The RCM controls air bag deployment decisions by using signals from its internal accelerometer and the following:

- Crash sensor
- Side impact sensors
- Occupant position sensors
- Front safety belt buckle sensor
- Seat position sensor
- Front passenger seat occupant classification system

Internally, the RCM has two areas that determine which elements of the SRS are to be deployed:

- Crash severity evaluation — This area evaluates crash severity by using data from the RCM internal accelerometer, the front crash sensor and the safety belt buckle sensor. Based on this data, the RCM decides which level of air bag module deployment is required and forwards the information to the second area, the deployment handler.

- Deployment handler — The status of the seat track position sensor, occupant position sensors, front passenger seat occupant classification sensor and safety belt buckle sensors are examined before a decision is made about which restraints should finally be deployed. For instance, if the occupant position sensors and front passenger seat occupant classification sensor indicate that the front passenger seat is empty, then no restraint deployment will take place on the passenger side, even if full deployment takes place on the driver side.

Data from the side crash sensors is used by the RCM in conjunction with acceleration data from the RCM internal accelerometer to make a deployment decision. The RCM processes the acceleration data and subject to an impact being of high enough severity, decides whether the side air bag module should be deployed. The decision is forwarded to the deployment handler (within the RCM) which responds appropriately. For example, in the case that the front passenger seat occupant classification sensor calculates that the seat is empty, or occupied by a small person, the front or passenger side air bag module will be disabled.

On board testing of the air bag modules, front safety belt pretensioner firing circuits, warning indicator circuits and module status (the crash and side impact sensors perform basic self-tests) is performed by the RCM together with the storing of fault codes.

The RCM drives the SRS indicator on the instrument pack. If the warning lamp fails, a fault code is recorded and a warning tone is sounded. It also provides a temporary back-up power supply to operate the air bag modules in the event that in crash conditions, the battery supply is lost. In the event of a crash, it records certain data which can be accessed via the diagnostic connector.

Driver Air Bag Module

NOTE:

Variation in the driver air bag module deployment is determined by the timing of the first and second stage ignition signals. This facilitates adaptation of the stiffness and timing of the air bag module to optimize occupant protection.

The driver air bag module is controlled by the RCM which chooses between first or second stage deployment, depending on the occupant position and the crash severity. To reduce the risk of an air bag module induced injury to a driver that is positioned close to the steering wheel, the air bag module deploys radially. It has a non-azide propellant that reduces particulates and effluents. It consists of a two stage inflator with separate chambers for the two inflation stages, each being independently activated by the RCM. It has two electrical connectors that are color coded to the respective connector on the inflator.

Passenger Air Bag Module

NOTE:

Variation in the passenger air bag module deployment is determined by the timing of the first and second stage ignition signals. This facilitates adaptation of the stiffness and timing of the air bag module to optimize occupant protection.

The passenger air bag module is controlled by the RCM which chooses between first or

second stage deployment, depending on the occupant status and the crash severity. It consists of a two stage inflator with two air bag electrical connectors to accommodate the two stage inflation.

The heated gas inflator consists of a high-pressure mix of clean air and hydrogen gas, triggered by two separate ignition squibs. It produces a controlled generation of clean gas to rapidly fill the air bag. It is classified as a stored flammable gas (not as an explosive) and as such, has less restrictive storage and transportation requirements. It produces a very clean burn and almost no particulates and is almost free of any toxins, making disposal or recycling much easier.

Side Air Bag Module

NOTE:

In the event of a side impact that is sufficient to deploy the side air bag system, it will be necessary to replace the complete seat. The side air bag module does not contain any serviceable components.

The side air bag module is mounted in the outboard bolster of each front seat and uses compressed gas to inflate. It provides protection for the thorax (the part of the trunk between the neck and the abdomen). In an air bag deployment situation, it deploys through the stitch seam in the side bolster. To ensure the air bag always emerges at the same point, a chute is attached to the inside of the trim cover and wrapped around the air bag module.

Side Air Curtain Module

NOTE:

In the event of a side impact that is sufficient to deploy the side air curtain module, it will be necessary to replace the headliner, A-pillar and C-pillar trim panels and the B-pillar upper trim panel will require thorough examination for visible damage or deformation before it can be used again on the vehicle.

NOTE:

The side air curtain module does not contain any serviceable components.

The side air curtain modules are located under the headliner between the A and C-pillar and deploy at the same time as the corresponding side air bag module. If the passenger air bag module is deactivated the corresponding side air bag module is also deactivated, however the side air curtain module will still deploy to afford protection to any corresponding rear occupant. When deployed, the side air curtain extends down to approximately shoulder height to protect both the front and rear occupants heads. Both the front and rear of the side air curtain modules are retained to the A and C-pillar respectively by tethers.

Pretensioners

 **WARNING: Prior to the removal of any SRS pretensioners and before**

disconnecting any SRS pretensioer electrical connectors, the battery ground cable must be disconnected and a period of one minute allowed to elapse.

NOTE:
The SRS pretensioners do not contain any serviceable components.

The SRS consists of the following pretensioners:

Safety Belt Buckle Pretensioners

The front safety belt buckle and pretensioners are seat mounted and incorporate a safety buckle switch. In the event of a front impact the RCM will deploy the pretensioners provided the safety belt buckles are fastened. The safety belt buckle pretensioners have a lower deployment threshold than that required by the air bags. Hence it is possible during a minor collision, which exceeds the deployment threshold, that only the safety belt buckle pretensioners will deploy. The RCM receives information on the status of the safety belt buckles from a switch contained in the buckle. For additional information, refer to Safety Belt System (501-20A)

Rear Safety Belt Pretensioners

Each rear safety belt incorporates a pretensioner device. In the event of low/high speed frontal impact, these provide additional occupant protection by removing any excess slack from the safety belts. Safety belt pretensioners activate when a frontal impact of sufficient force occurs. Under such an impact, the RCM installed on the transmission tunnel sends a firing signal to each pretensioner. Receipt of this signal by each pretensioner directly triggers a pyrotechnic igniter unit. The seat belt retractors and pretensioners are not serviceable components and dismantling must not be attempted as active pretensioning components contain a solid, flammable material. For additional information, refer to Safety Belt System (501-20A)

Indicators

 **WARNING: Prior to the removal of any SRS Indicators and before disconnecting any SRS indicator electrical connectors, the battery ground cable must be disconnected and a period of one minute allowed to elapse.**

NOTE:
The SRS indicators do not contain any serviceable components.

The SRS consists of the following indicators:

SRS Indicator

The SRS indicator is located in the instrument cluster and is driven by the RCM. Malfunction of SRS components or associated circuits will cause the SRS indicator to illuminate. If the warning lamp fails, a fault code is recorded and a warning tone is sounded.

Passenger Air Bag Module Deactivation (PAD) Indicator

The passenger air bag deployment door has a built in lens that displays the passenger air bag module deactivated symbol. The symbol is backlit by the PAD indicator, which is attached to the instrument panel. The illumination of the symbol informs the front seat occupants whether or not the passenger air bag module has been deactivated by the occupancy sensing system.

Clockspring

 **WARNING: Prior to the removal of the SRS clockspring and before disconnecting any SRS clockspring electrical connectors, the battery ground cable must be disconnected and a period of one minute allowed to elapse.**

NOTE:

The SRS clockspring does not contain any serviceable components.

The clockspring is designed to carry signals between the RCM and the driver air bag module. The clockspring is fitted to the steering column, and consists of fixed and moving parts connected by a coiled tape with integral conducting tracks. The tape is able to 'wind up' and 'unwind' as the steering wheel (to which the moving part is attached) is turned, maintaining electrical contact at all times between the RCM and the driver air bag module.

Air Bag Supplemental Restraint System (SRS)

Principles of Operation

For a detailed description of the Air Bag Supplemental Restraint System (SRS), refer to the relevant Description and Operation sections in the workshop manual.
Air Bag Supplemental Restraint System (SRS)

Inspection and Verification

 **WARNING: TO AVOID ACCIDENTAL DEPLOYMENT AND POSSIBLE PERSONAL INJURY, THE BACKUP POWER SUPPLY MUST BE DEPLETED BEFORE REPAIRING OR REPLACING ANY AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS) COMPONENTS. TO DEPLETE THE BACKUP POWER SUPPLY ENERGY, DISCONNECT THE BATTERY GROUND CABLE AND WAIT ONE MINUTE. FAILURE TO FOLLOW THIS INSTRUCTION MAY RESULT IN PERSONAL INJURY.**

NOTE:

Given the legal implications of a restraints system failure, harness repairs to airbag module circuits are not acceptable. Where the text refers to "REPAIR the circuit", this will normally mean the replacement of a harness.

If the Jaguar approved diagnostic system is not available, use a scan tool to extract DTCs and follow the pinpoint diagnostics in this section.

1 . Verify the customer concern by operating the system.

2 . Confirm the function of the warning lamp (if the warning lamp is inoperative, system faults will be signalled by an audible chime).

3 . Visually inspect for obvious signs of damage and system integrity.

Electrical
• Fuses/Relays • Damaged, Loose or Corroded Connector(s) • Damage to Wiring Loom/Incorrect Location, Stretched or Taught

4 . If an obvious cause for an observed or reported concern is found, correct the cause before

proceeding to the next step.

5 . If the cause is not visually evident, check for Diagnostic Trouble Codes (DTCs) and refer to the DTC Index.

Symptom Chart

Warning Lamp Flash/Audible Tone	DTC	Symptom	Possible Cause	Action
Unlit	N/A	No communication with RCM	• Data link connector (DLC) fault • RCM supply circuits - open circuit, short circuit to ground, short circuit to power • SCP circuit - open circuit, short circuit to ground, short circuit to power	Refer to the electrical circuit diagrams and check DLC, RCM, and SCP circuits for short, open circuit
Unlit	N/A	Air bag warning lamp inoperative	• Warning lamp circuit - short circuit to ground • Warning lamp failure	Refer to electrical circuit diagrams, notes and check restraint control module, power circuit for fault, for additional information, GO to Pinpoint Test G1043827p1.
Unlit	DTC B2477	No communication with RCM	• Module software option content not programmed or incorrectly programmed	The module can be configured using the new module procedure. Check and configure as required

DTC Index

Supplemental Restraint System

CAUTION: When probing connectors to take measurements in the course of the

pinpoint tests, use the adaptor kit, part number 3548-1358-00

NOTE:

If the control module/component is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual (section B1.2), or determine if any prior approval program is in operation, prior to the installation of a new module/component.

NOTE:

When performing voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places and with a current calibration certificate. When testing resistance, always take the resistance of the DMM leads into account.

NOTE:

Check and rectify basic faults before beginning diagnostic routines that involve pinpoint tests.

NOTE:

Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.

NOTE:

If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.

Reading restraints flash codes

Self-check

Turn the ignition switch to the **ON** position

- Warning light **ON** solid for 6 seconds
- Warning light **OFF**

Fault on system

Turn the ignition switch to the **ON** position.

Warning light **ON** solid for 6 seconds

Warning light **OFF** for 2 seconds

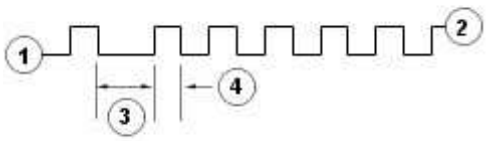
Warning light flashes the appropriate number of times for the fault logged (see table)

Warning light **OFF** for 2 seconds

The sequence is repeated 5 times

Warning light **ON** until the ignition is turned **OFF**

Example:- Flash code 16 would be shown as lamp **ON** for one occurrence of 0.5 second then lamp **OFF** for one second, then six occurrences of lamp **ON** for 0.5 seconds each (1-6).



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- 1. Lamp **OFF**
- 2. Lamp **ON**
- 3. Time between first digit and second digit (1 second)
- 4. Time **ON** of each flash of the second digit (0.5 second)

Priority

Priority is not assigned to any of the flash codes. They are displayed depending on which code is identified first. If multiple faults are present only one will be flashed. That fault will need to be rectified before the next code will be made available.

If the driver warning lamp is inoperative and a fault occurs, an audible chime will be sounded 90 seconds after the ignition is turned **ON**.

Warning Lamp Flash/Audible Tone	DTC	Description	Possible Causes	Action
Lamp fault code = 13	B1231	Longitudinal Acceleration Threshold Exceeded	• Restraint control module, crash data memory full	Suspect restraint control module, fault. Check and install as required, refer to the new module installation note at the top of the DTC Index
Continuous lamp	B1317	Battery Voltage High	• Restraint control module, power supply voltage - high (above 15 V +/- 8%) • Battery voltage is regulated by engine control	Refer to electrical circuit diagrams, notes and check restraint control module, power circuit for fault

			module	
Continuous lamp	B1318	Battery Voltage Low	• Restraint control module, power supply voltage - low (below 10.4 V +/- 8%)	Refer to electrical circuit diagrams, notes and check restraint control module, power and ground circuit for fault
Lamp fault code = 12	B1342	ECU Fault	• Restraint control module, internal fault	Suspect restraint control module, fault. Check and install as required, refer to the new module installation note at the top of the DTC Index
Tone sounds if fault present	B1869	Lamp Air Bag Warning Indicator Circuit Open	• Restraint control module, instrument cluster airbag warning indicator circuit - short to ground or open circuit	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check instrument cluster airbag warning indicator circuit for short to ground or open circuit, for additional information, GO to Pinpoint Test G1043827p2.
Tone sounds if fault present	B1870	Lamp Air Bag Warning Indicator Circuit Short To Power	• Restraint control module, instrument cluster airbag warning indicator circuit - short to power	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check instrument cluster airbag warning indicator circuit for short to power, for additional information, GO to Pinpoint Test G1043827p2.
Lamp fault code = 18	B1884	PAD Warning Lamp Circuit Failure	• Restraint control module, passenger airbag deactivation indicator circuit - open circuit or	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check

			short to ground	passenger airbag deactivation indicator circuit for open circuit or short to ground, for additional information, GO to Pinpoint Test G1043827p5.
Lamp fault code = 18	B1890	PAD Warning Lamp Circuit Short To Power	• Restraint control module, passenger airbag deactivation indicator circuit - short to power	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check passenger airbag deactivation indicator circuit for short to power, for additional information, GO to Pinpoint Test G1043827p5.
Lamp fault code = 53	B1891	Air Bag Tone Warning Indicator Circuit Short to Power	• Restraint control module, instrument cluster seat belt audible warning circuit - short to power	Refer to electrical circuit diagrams, notes and check instrument cluster seat belt audible warning circuit for short to power, for additional information, GO to Pinpoint Test G1043827p25.
Lamp fault code = 53	B1892	Air Bag Tone Warning Indicator Circuit Failure	• Restraint control module, instrument cluster seat belt audible warning circuit - short to ground or open circuit	Refer to electrical circuit diagrams, notes and check instrument cluster seat belt audible warning circuit for short to ground or open circuit, for additional information, GO to Pinpoint Test G1043827p25.
Lamp fault code = 14	B1921	Air Bag Diagnostic Monitor Ground Circuit Open	• Restraint control module, faulty or insecure module	Refer to electrical circuit diagrams, notes and check restraint control module for fitment (module grounds through fixings)
Lamp fault code = 16	B2290	Occupant Classification System fault (front	• Restraint control module reports, occupancy sensing module,	Refer to electrical circuit diagrams, notes and check occupancy sensing module, passenger weight

		passenger)	passenger weight pressure sensor - circuit fault	pressure sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p3. GO to Pinpoint Test G1043827p4.
Lamp fault code = 17	B2291	Occupant Position System fault, (front passenger)	• Restraint control module reports, occupancy sensing module, passenger position sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check occupancy sensing module, passenger position sensor's for circuit fault
Lamp fault code = 33	B2292	Restraint System - Seatbelt Pretensioner fault	• Restraint control module, driver seatbelt pretensioner - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check driver seatbelt pretensioner for circuit fault, for additional information, GO to Pinpoint Test G1043827p12.
Lamp fault code = 34	B2292	Restraint System - Seatbelt Pretensioner fault	• Restraint control module, passenger seatbelt pretensioner - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check passenger seatbelt pretensioner for circuit fault, for additional information, GO to Pinpoint Test G1043827p13.
Lamp fault code = 35	B2292	Restraint System - Seatbelt Pretensioner fault	• Restraint control module, driver side rear seatbelt pretensioner -	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer

			circuit fault	to electrical circuit diagrams, notes and check driver side rear seatbelt pretensioner for circuit fault, for additional information, GO to Pinpoint Test G1043827p14.
Lamp fault code = 36	B2292	Restraint System - Seatbelt Pretensioner fault	• Restraint control module, center rear seatbelt pretensioner - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check center rear seatbelt pretensioner for circuit fault, for additional information, GO to Pinpoint Test G1043827p16.
Lamp fault code = 37	B2292	Restraint System - Seatbelt Pretensioner fault	• Restraint control module, passenger rear seatbelt pretensioner - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check passenger rear seatbelt pretensioner for circuit fault, for additional information, GO to Pinpoint Test G1043827p15.
Lamp fault code = 19	B2293	Restraint System - Airbag fault	• Restraint control module, driver airbag module - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, driver airbag module for circuit fault, for additional information, GO to Pinpoint Test G1043827p6.
Lamp fault code = 21	B2293	Restraint System - Airbag	• Restraint control module,	Carry out any pinpoint tests associated with this

		fault	passenger airbag module - circuit fault	DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger airbag module for circuit fault, for additional information, GO to Pinpoint Test G1043827p7.
Lamp fault code = 24	B2294	Restraint System - Curtain fault	• Restraint control module, driver side curtain airbag - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, driver side curtain airbag for circuit fault, for additional information, GO to Pinpoint Test G1043827p10.
Lamp fault code = 25	B2294	Restraint System - Curtain fault	• Restraint control module, passenger side curtain airbag - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger side curtain airbag for circuit fault, for additional information, GO to Pinpoint Test G1043827p11.
Lamp fault code = 22	B2295	Restraint System - Side Airbag fault	• Restraint control module, driver side airbag igniter - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, driver side airbag igniter for circuit fault, for additional information, GO to Pinpoint Test

				G1043827p8.
Lamp fault code = 23	B2295	Restraint System - Side Airbag fault	• Restraint control module, passenger side airbag igniter - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger side airbag igniter for circuit fault, for additional information, GO to Pinpoint Test G1043827p9.
Lamp fault code = 42	B2296	Restraint System - Impact sensor fault	• Restraint control module, front crash sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, front crash sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p17.
Lamp fault code = 43	B2296	Restraint System - Impact sensor fault	• Restraint control module, driver side crash sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, driver side crash sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p18.
Lamp fault code = 44	B2296	Restraint System - Impact sensor fault	• Restraint control module, passenger side crash sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger side crash

				sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p19.
Lamp fault code = 45	B2296	Restraint System - Impact sensor fault	• Restraint control module, driver side rear crash sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, driver side rear crash sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p20.
Lamp fault code = 46	B2296	Restraint System - Impact sensor fault	• Restraint control module, passenger side rear crash sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger side rear crash sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p21.
Lamp fault code = 51	B2434	Drivers Seat Belt Buckle Switch Circuit Short to Ground	• Restraint control module, drivers seat belt switch circuit - short to ground	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, drivers seat belt switch circuit for short to ground, for additional information, GO to Pinpoint Test G1043827p23.
Lamp fault code = 51	B2435	Drivers Seat Belt Buckle Switch Resistance out of range	• Restraint control module, drivers seat belt switch -	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer

			circuit fault	to electrical circuit diagrams, notes and check restraint control module, drivers seat belt switch for circuit fault, for additional information, GO to Pinpoint Test G1043827p23.
Lamp fault code = 52	B2438	Passengers Seat Belt Buckle Switch Circuit Short to Ground	• Restraint control module, passenger seat belt switch circuit - short to ground	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger seat belt switch circuit for short to ground, for additional information, GO to Pinpoint Test G1043827p24.
Lamp fault code = 52	B2439	Passengers Seat Belt Buckle Switch Resistance out of range	• Restraint control module, passenger seat belt switch circuit - fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger seat belt switch circuit for fault, for additional information, GO to Pinpoint Test G1043827p24.
Continuous lamp	B2477	Module Configuration Failure (unconfigured, incorrect, or rejected)	• Restraint control module - configuration fault	The module can be configured using the new module procedure. Check and configure as required
Lamp fault code = 51	B2691	Seat Belt Buckle Switch Circuit Fault, Front Driver's side	• Restraint control module, driver seat belt switch circuit - open circuit or short to power	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module,

				driver seat belt switch circuit for open circuit or short to power, for additional information, GO to Pinpoint Test G1043827p23.
Lamp fault code = 52	B2692	Front Passenger Seat Belt Buckle Switch Circuit Fault	• Restraint control module, passenger seat belt switch circuit - open circuit or short to power	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger seat belt switch circuit for open circuit or short to power, for additional information, GO to Pinpoint Test G1043827p24.
Lamp fault code = 16	B2909	Belt Tension Sensor Fault	• Passenger seat weight sensing module, passenger seat belt tension sensor - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check Passenger seat weight sensing module, passenger seat belt tension sensor for circuit fault, for additional information, GO to Pinpoint Test G1043827p4. for additional information, GO to Pinpoint Test G1043827p3.
Lamp fault code = 15	C1414	Incorrect Module Design Level	• Restraint control module, incorrect module	Restraint control module, incorrect module - check for correct part number
Lamp fault code = 49	C1947	Driver Seat Track Position Switch Circuit Short to Ground	• Restraint control module, driver seat track position switch circuit - short to	Refer to electrical circuit diagrams, notes and check restraint control module, driver seat track position switch circuit for short to

			power or ground	power or ground, for additional information on vehicles with passenger seat position switch installed carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system, for additional information, GO to Pinpoint Test G1043827p22. For early vehicles without passenger seat position switch installed GO to Pinpoint Test G1043827p26.
Lamp fault code = 49	C1948	Driver Seat Track Position Switch Circuit Resistance out of range	• Restraint control module, driver seat track position switch - circuit fault	Refer to electrical circuit diagrams, notes and check restraint control module, driver seat track position switch for circuit fault, for additional information on vehicles with passenger seat position switch installed carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system, for additional information, GO to Pinpoint Test G1043827p22. For early vehicles without passenger seat position switch installed GO to Pinpoint Test G1043827p26.
Lamp fault code = 49	C1981	Driver Front Driver's Seat Track Position Switch Circuit Fault	• Restraint control module, driver seat track position switch circuit - short to power or open circuit	Refer to electrical circuit diagrams, notes and check restraint control module, driver seat track position switch circuit for short to power or open circuit, for additional information, GO to Pinpoint Test G1043827p22. For early vehicles without passenger seat position

				switch installed GO to Pinpoint Test G1043827p26.
Lamp fault code = 48	C2200	Front Passenger's Seat Track Position Switch Circuit Fault	• Restraint control module, passenger seat track position switch circuit - short to power or open circuit	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger seat track position switch circuit for short to power or open circuit
Lamp fault code = 48	C2202	Passenger's Seat Track Position Switch Circuit Short to Ground	• Restraint control module, passenger seat track position switch circuit - short to ground	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check restraint control module, passenger seat track position switch circuit for short to ground
Lamp fault code = 48	C2204	Passenger's Seat Track Position Switch Circuit Resistance out of range	• Restraint control module, passenger seat track position switch - circuit fault	Carry out any pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Refer to electrical circuit diagrams, notes and check Restraint control module, passenger seat track position switch for circuit fault

Pinpoint tests

PINPOINT TEST G1043827p1 : AIR BAG WARNING LAMP INOPERATIVE

G1043827t1 : CHECK THE WARNING LAMP CIRCUIT FOR SHORT TO GROUND

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the restraints control module electrical connector, CR86. 4. Disconnect the instrument cluster electrical connector, IP05. 5. Measure the resistance between CR86, pin 019 (YU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
CHECK the warning lamp LED, replace as necessary. If the LED is good, contact dealer technical support for advice on possible RCM failure.

PINPOINT TEST G1043827p2 : B1869, B1870: WARNING LAMP ON CONSTANTLY

G1043827t2 : CHECK THE WARNING LAMP CIRCUIT FOR SHORT TO POWER

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the restraints control module electrical connector, CR86. 4. Disconnect the instrument cluster electrical connector, IP05. 5. Reconnect the battery negative terminal. 6. Measure the voltage between IP05, pin 01 (YU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t3.

G1043827t3 : CHECK THE WARNING LAMP CIRCUIT FOR OPEN CIRCUIT

1. Measure the resistance between IP05, pin 01 (YU) and CR86, pin 19 (YU).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the open circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
CONTACT dealer technical support for advice on possible IC failure.

PINPOINT TEST G1043827p3 : DTC B2290, B2909: FLASH CODE 16: OCCUPANT CLASSIFICATION SENSOR (OCM)/PASSENGER WEIGHT SENSOR (PWS)/ BELT TENSION SENSOR MALFUNCTION

G1043827t4 : CHECK THE POWER SUPPLY TO THE OCM

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the OCM electrical connector, SP30. 4. Reconnect the battery negative terminal. 5. Turn the ignition switch to the **ON** position. 6. Measure the voltage between SP30, pin 22 (WU) and GROUND.

- **Is the voltage greater than 10 volts?**

-> Yes
GO to Pinpoint Test G1043827t5.

-> No
REPAIR the circuit between the OCM and battery. This circuit includes the primary junction box (fuse 29). For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

G1043827t5 : CHECK THE GROUND TO THE OCM

1. Turn the ignition switch to the **OFF** position. 2. Measure the resistance between SP30, pin 23 (BK) and GROUND.

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
CHECK the CAN circuits,
Communications Network GO to Pinpoint Test G1043827t6.

G1043827t6 : CHECK THE POWER SUPPLY TO THE PWS

1. Disconnect the PWS electrical connector, SP02. 2. Turn the ignition switch to the **ON** position. 3. Measure the voltage between SP02, pin G ®) and GROUND.

- **Is the voltage greater than 10 volts?**

-> Yes
REPAIR the circuit between SP02, pin G and SP30, pin 09 ®). For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t7.

G1043827t7 : CHECK THE PWS GROUND CIRCUIT FROM THE OCM FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Disconnect the OCM electrical connector, SP30. 3. Measure the resistance between SP02, pin D (BW) and SP30, pin 10.

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t8.

G1043827t8 : CHECK THE CAN + CIRCUIT BETWEEN THE OPM AND THE PWS FOR HIGH RESISTANCE

1. Measure the resistance between SP02, pin E (OY) and SP30, pin 12 (OY).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t9.

G1043827t9 : CHECK THE CAN - CIRCUIT BETWEEN THE OPM AND THE PWS FOR HIGH RESISTANCE

1. Measure the resistance between SP02, pin F (UY) and SP30, pin 11 (UY).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t10.

G1043827t10 : CHECK THE BELT TENSION SENSOR SIGNAL CIRCUIT TO THE PWS FOR HIGH RESISTANCE

1. Disconnect the belt tension sensor electrical connector, SP33. 2. Measure the resistance between SP33, pin 02 (B) and SP02, pin A (B).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t11.

G1043827t11 : CHECK THE BELT TENSION SENSOR SIGNAL CIRCUIT TO THE PWS FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SP33, pin 02 (B) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t12.

G1043827t12 : CHECK THE BELT TENSION SENSOR SIGNAL CIRCUIT TO THE PWS FOR SHORT TO POWER

1. Measure the voltage between SP33, pin 02 (B) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t13.

G1043827t13 : CHECK THE BELT TENSION SENSOR GROUND CIRCUIT TO THE PWS FOR HIGH RESISTANCE

1. Measure the resistance between SP33, pin 03 ®) and SP02, pin C ®).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t14.

G1043827t14 : CHECK THE BELT TENSION SENSOR GROUND CIRCUIT TO THE PWS FOR SHORT TO GROUND

1. Measure the resistance between SP33, pin 03 ®) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t15.

G1043827t15 : CHECK THE BELT TENSION SENSOR GROUND CIRCUIT TO THE PWS FOR SHORT TO POWER

1. Measure the voltage between SP33, pin 03 ®) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t16.

G1043827t16 : CHECK THE BELT TENSION SENSOR SUPPLY CIRCUIT TO THE PWS FOR HIGH RESISTANCE

1. Measure the resistance between SP33, pin 01 (Y) and SP02, pin B (Y).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t17.

G1043827t17 : CHECK THE BELT TENSION SENSOR SUPPLY CIRCUIT TO THE PWS FOR SHORT TO GROUND

1. Measure the resistance between SP33, pin 01 (Y) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t18.

G1043827t18 : CHECK THE BELT TENSION SENSOR SUPPLY CIRCUIT TO THE PWS FOR SHORT TO POWER

1. Measure the voltage between SP33, pin 01 (Y) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new belt tension sensor. CLEAR the DTC. Allow a self-test to complete. TEST the system for normal operation. if the fault reoccurs, contact dealer technical support for advice on possible weight sensor failure.

PINPOINT TEST G1043827p4 : DTC B2290, B2909: FLASH CODE 17: TRANSDUCER AND/OR CIRCUIT MALFUNCTION, OCM AND/OR CIRCUIT MALFUNCTION

G1043827t19 : CHECK THE A PILLAR TRANSDUCER CIRCUIT FOR SHORT CIRCUIT

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the OCM electrical connector, SP30. 4. Disconnect the A pillar transducer electrical connector, CR105. 5. Measure the resistance between SP30, pin 05 (BR) and SP30, pin 06 (GW).

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t20.

G1043827t20 : CHECK THE A PILLAR TRANSDUCER CAN - CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 05 (BR) and CR105, pin 01 (BR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t21.

G1043827t21 : CHECK THE A PILLAR TRANSDUCER CAN - CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 05 (BR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t22.

G1043827t22 : CHECK THE A PILLAR TRANSDUCER CAN - CIRCUIT FOR SHORT TO POWER

1. Reconnect the battery negative terminal. 2. Measure the voltage between SP30, pin 05 (BR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t23.

G1043827t23 : CHECK THE A PILLAR TRANSDUCER CAN + CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 06 (GW) and CR105, pin 02 (GW).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t24.

G1043827t24 : CHECK THE A PILLAR TRANSDUCER CAN + CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 06 (GW) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t25.

G1043827t25 : CHECK THE A PILLAR TRANSDUCER CAN + CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 06 (GW) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t26.

G1043827t26 : CHECK THE ROOF REAR OUTER TRANSDUCER CIRCUIT FOR SHORT CIRCUIT

1. Disconnect the roof rear outer transducer electrical connector, RF18. 2. Measure the resistance between SP30, pin 07 (BO) and SP30, pin 08 (GU).

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t27.

G1043827t27 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN - CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 07 (BO) and RF18, pin 01 (BO).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t28.

G1043827t28 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 07 (BO) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t29.

G1043827t29 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 07 (BO) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t30.

G1043827t30 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN + CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 08 (GU) and RF18, pin 02 (GU).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t31.

G1043827t31 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 08 (GU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t32.

G1043827t32 : CHECK THE ROOF REAR OUTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 08 (GU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t33.

G1043827t33 : CHECK THE ROOF REAR CENTER TRANSDUCER CIRCUIT FOR SHORT CIRCUIT

1. Disconnect the roof rear center transducer electrical connector, RF16. 2. Measure the resistance between SP30, pin 01 (BG) and SP30, pin 02 (OG).

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No

GO to Pinpoint Test G1043827t34.

G1043827t34 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 01 (BG) and RF16, pin 01 (BG).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t35.

G1043827t35 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 01 (BG) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t36.

G1043827t36 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 01 (BG) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t37.

G1043827t37 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 01 (BG) and RF16, pin 01 (BG).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t38.

G1043827t38 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 01 (BG) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t39.

G1043827t39 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 01 (BG) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t40.

G1043827t40 : CHECK THE LOWER STACK TRANSDUCER CIRCUIT FOR SHORT CIRCUIT

1. Disconnect the lower stack transducer electrical connector, CL06. 2. Measure the resistance between SP30, pin 03 (NW) and SP30, pin 04 (Y).

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t41.

G1043827t41 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 03 (NW) and CL06, pin 01 (NW).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t42.

G1043827t42 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 03 (NW) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t43.

G1043827t43 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN - CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 03 (NW) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t44.

G1043827t44 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP30, pin 01 (BG) and RF16, pin 01 (BG).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t45.

G1043827t45 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO GROUND

1. Measure the resistance between SP30, pin 01 (BG) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t46.

G1043827t46 : CHECK THE ROOF REAR CENTER TRANSDUCER CAN + CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP30, pin 01 (BG) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new occupant classification module
Driver Air Bag Module (76.73.39) CLEAR the DTC, allow a self-test to complete. TEST the system for normal operation. If the DTC reoccurs, contact dealer technical support for advice on possible transducer failure.

PINPOINT TEST G1043827p5 : DTC B1884, B1890: FLASH CODE 18: PASSENGER AIRBAG DEACTIVATION (PAD) WARNING LAMP CIRCUIT MALFUNCTION

G1043827t47 : CHECK THE PAD WARNING LAMP BULB FOR CONTINUITY

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the PAD lamp electrical connector, IP68. 4. Check for continuity between IP68, pins 01 (WU) and 03 (BR).

- **Is the circuit continuous?**

-> Yes
GO to Pinpoint Test G1043827t48.

-> No
INSTALL a new bulb. CLEAR the DTC. TEST the system for normal operation.

G1043827t48 : CHECK THE POWER SUPPLY TO THE PAD WARNING LAMP

1. Reconnect the battery negative terminal. 2. Turn the ignition switch to the **ON** position. 3. Measure the voltage between IP68, pin 01 (WU) and GROUND.

- **Is the voltage greater than 10 volts?**

-> Yes
REPAIR the circuit between the PAD warning lamp and battery. This circuit includes the primary junction box (fuse 29). For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t49.

G1043827t49 : CHECK THE POWER SUPPLY TO THE PAD WARNING LAMP FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR86. 4. Measure the resistance between IP68, pin 03 (BR) and CR86, pin 15 (BR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t50.

G1043827t50 : CHECK THE POWER SUPPLY TO THE PAD WARNING LAMP FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between IP68, pin 03 (BR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t51.

G1043827t51 : CHECK THE POWER SUPPLY TO THE PAD WARNING LAMP FOR SHORT TO POWER

1. Measure the voltage between IP68, pin 03 (BR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
Contact dealer technical support for advice on possible RCM failure.

PINPOINT TEST G1043827p6 : DTC B2293: FLASH CODE 19: DRIVER AIR BAG/CLOCKSPRING MALFUNCTION

G1043827t52 : CHECK THE DRIVER AIRBAG MODULE AND CIRCUIT USING SIMULATORS

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the driver airbag electrical connectors, SW11 and SW12. 4. Connect a simulator to each connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new driver air bag module,
Driver Air Bag Module (76.73.39) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t53.

G1043827t53 : CHECK THE DRIVER AIRBAG FIRST STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the clockspring electrical connector, SW08. 4. Measure the resistance between SW11, pin 01 (SB) and SW08, pin 10.

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t54.

G1043827t54 : CHECK THE DRIVER AIRBAG FIRST STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SW11, pin 01 (SB) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t55.

G1043827t55 : CHECK THE DRIVER AIRBAG FIRST STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO POWER

1. Measure the voltage between SW11, pin 01 (SB) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t56.

G1043827t56 : CHECK THE DRIVER AIRBAG FIRST STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between SW11, pin 02 (NR) and SW08, pin 09.

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t57.

G1043827t57 : CHECK THE DRIVER AIRBAG FIRST STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SW11, pin 02 (NR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t58.

G1043827t58 : CHECK THE DRIVER AIRBAG FIRST STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO POWER

1. Measure the voltage between SW11, pin 02 (NR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t59.

G1043827t59 : CHECK THE DRIVER AIRBAG SECOND STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between SW12, pin 01 (NB) and SW08, pin 02.

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t60.

G1043827t60 : CHECK THE DRIVER AIRBAG SECOND STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SW12, pin 01 (NB) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t61.

G1043827t61 : CHECK THE DRIVER AIRBAG SECOND STAGE SIGNAL CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO POWER

1. Measure the voltage between SW12, pin 01 (NB) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t62.

G1043827t62 : CHECK THE DRIVER AIRBAG SECOND STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe.
3. Measure the resistance between SW12, pin 02 (SW) and SW08, pin 01.

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t63.

G1043827t63 : CHECK THE DRIVER AIRBAG SECOND STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SW12, pin 02 (SW) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t64.

G1043827t64 : CHECK THE DRIVER AIRBAG SECOND STAGE RETURN CIRCUIT THROUGH THE CLOCKSPRING FOR SHORT TO POWER

1. Measure the voltage between SW12, pin 02 (SW) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
INSTALL a new clockspring.
Clockspring (86.65.92) CLEAR the DTC. TEST the system for normal operation.

-> No
Contact dealer technical support for advice on possible RCM failure.

PINPOINT TEST G1043827p7 : DTC B2293: FLASH CODE 21: PASSENGER AIR BAG MALFUNCTION

G1043827t65 : CHECK THE PASSENGER AIRBAG MODULE AND CIRCUIT USING SIMULATORS

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the passenger airbag electrical connectors, sp17 4. Connect a simulator to the connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new passenger air bag module,
Passenger Air Bag Module (76.73.37) CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger airbag harness. CLEAR the DTC. TEST the system for normal operation.

PINPOINT TEST G1043827p8 : DTC B2295: FLASH CODE 22: DRIVER SIDE AIRBAG MALFUNCTION

G1043827t66 : CHECK THE DRIVER SIDE AIRBAG MODULE AND CIRCUIT USING A SIMULATOR

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the driver side airbag electrical connector, SD17. 4. Connect a simulator to the connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new driver side airbag module,
Side Air Bag Module (76.73.47) CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver side airbag harness. CLEAR the DTC. TEST the system for normal operation.

PINPOINT TEST G1043827p9 : DTC B2295: FLASH CODE 23: PASSENGER SIDE AIRBAG MALFUNCTION

G1043827t67 : CHECK THE PASSENGER SIDE AIRBAG MODULE AND CIRCUIT USING A SIMULATOR

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the passenger side airbag electrical connector, SP17. 4. Connect a simulator to the connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new passenger side airbag module,
Side Air Bag Module (76.73.47) CLEAR the DTC. TEST the system for normal operation.

-> No

INSTALL a new passenger side airbag harness. CLEAR the DTC. TEST the system for normal operation.

PINPOINT TEST G1043827p10 : DTC B2295: FLASH CODE 24: DRIVER CURTAIN AIRBAG MALFUNCTION

G1043827t68 : CHECK THE DRIVER CURTAIN AIRBAG MODULE AND CIRCUIT USING A SIMULATOR

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the driver curtain airbag electrical connector, CR62. 4. Connect a simulator to the connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new driver curtain airbag module,
Side Air Curtain Module (76.73.64) CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver curtain airbag harness. CLEAR the DTC. TEST the system for normal operation.

PINPOINT TEST G1043827p11 : DTC B2295: FLASH CODE 25: PASSENGER CURTAIN AIRBAG MALFUNCTION

G1043827t69 : CHECK THE PASSENGER CURTAIN AIRBAG MODULE AND CIRCUIT USING A SIMULATOR

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the passenger curtain airbag electrical connector, CR33. 4. Connect a simulator to the connector. 5. Reconnect the battery negative terminal. 6. Turn the ignition switch to the **ON** position. 7. Allow the self-test to complete with the simulators installed.

- **Does the self-test pass?**

-> Yes
INSTALL a new passenger curtain airbag module,
Side Air Curtain Module (76.73.64) CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger curtain airbag harness. CLEAR the DTC. TEST the system for normal operation.

PINPOINT TEST G1043827p12 : DTC B2292: FLASH CODE 33: DRIVER SIDE SEAT BELT PRETENSIONER MALFUNCTION

G1043827t70 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the driver seat belt pretensioner electrical connector, SD19. 4. Disconnect the RCM electrical connector, CR87. 5. Measure the resistance between SD19, pin 02 (GR) and CR87, pin 31 (GR).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new driver side seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t71.

G1043827t71 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SD19, pin 02 (GR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t72.

G1043827t72 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SD19, pin 02 (GR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t73.

G1043827t73 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SD19, pin 01 (GU) and CR87, pin 32 (GU).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new driver side seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t74.

G1043827t74 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SD19, pin 01 (GU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR

the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t75.

G1043827t75 : CHECK THE DRIVER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SD19, pin 01 (GU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver side seat belt pretensioner,
Front Safety Belt Buckle (76.73.49)

PINPOINT TEST G1043827p13 : DTC B2292: FLASH CODE 34: PASSENGER SIDE SEAT BELT PRETENSIONER MALFUNCTION

G1043827t76 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the passenger seat belt pretensioner electrical connector, SP19. 4. Disconnect the RCM electrical connector, CR87. 5. Measure the resistance between SP19, pin 02 (WR) and CR87, pin 33 (WR).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new passenger side seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No

GO to Pinpoint Test G1043827t77.

G1043827t77 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SP19, pin 02 (WR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t78.

G1043827t78 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP19, pin 02 (WR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t79.

G1043827t79 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP19, pin 01 (WU) and CR87, pin 34 (WU).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new passenger side seat belt pretensioner harness. CLEAR the DTC. TEST the

system for normal operation.

-> No
GO to Pinpoint Test G1043827t80.

G1043827t80 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between SP19, pin 01 (WU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t81.

G1043827t81 : CHECK THE PASSENGER SIDE SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP19, pin 01 (WU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger side seat belt pretensioner,
Front Safety Belt Buckle (76.73.49)

PINPOINT TEST G1043827p14 : DTC B2292: FLASH CODE 35: DRIVER SIDE REAR SEAT BELT PRETENSIONER MALFUNCTION

G1043827t82 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the driver side rear seat belt pretensioner electrical connector, CR64. 4. Disconnect the RCM electrical connector, CR87. 5. Measure the resistance between CR64, pin 02 (Y) and CR87, pin 35 (Y).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new driver side rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t83.

G1043827t83 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR64, pin 02 (Y) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t84.

G1043827t84 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR64, pin 02 (Y) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR

the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t85.

G1043827t85 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between CR64, pin 01 (Y) and CR87, pin 36 (Y).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new driver side rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t86.

G1043827t86 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR64, pin 01 (Y) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t87.

G1043827t87 : CHECK THE DRIVER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR64, pin 01 (Y) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver side rear seat belt pretensioner,
Rear Safety Belt Buckle (76.73.50)

PINPOINT TEST G1043827p15 : DTC B2292: FLASH CODE 37: PASSENGER SIDE REAR SEAT BELT PRETENSIONER MALFUNCTION

G1043827t88 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the passenger side rear seat belt pretensioner electrical connector, CR66. 4. Disconnect the RCM electrical connector, CR87. 5. Measure the resistance between CR66, pin 02 (YU) and CR87, pin 37 (YU).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new passenger side rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t89.

G1043827t89 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR66, pin 02 (YU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR

the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t90.

G1043827t90 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR66, pin 02 (YU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t91.

G1043827t91 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between CR66, pin 01 (YU) and CR87, pin 38 (YU).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new passenger side rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t92.

G1043827t92 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR66, pin 01 (YU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t93.

G1043827t93 : CHECK THE PASSENGER SIDE REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR66, pin 01 (YU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger side rear seat belt pretensioner,
Rear Safety Belt Buckle (76.73.50)

PINPOINT TEST G1043827p16 : DTC B2294: FLASH CODE 36: CENTER REAR SEAT BELT PRETENSIONER MALFUNCTION

G1043827t94 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the center rear seat belt pretensioner electrical connector, CR65. 4. Disconnect the RCM electrical connector, CR87. 5. Measure the resistance between CR65, pin 02 (YR) and CR87, pin 39 (YR).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new center rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t95.

G1043827t95 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR65, pin 02 (YR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t96.

G1043827t96 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR65, pin 02 (YR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t97.

G1043827t97 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between CR65, pin 01 (YR) and CR87, pin 40 (YR).

- **Is the resistance greater than 5 ohms?**

-> Yes
INSTALL a new center rear seat belt pretensioner harness. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t98.

G1043827t98 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR65, pin 01 (YR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t99.

G1043827t99 : CHECK THE CENTER REAR SEAT BELT PRETENSIONER RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR65, pin 01 (YR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new center rear seat belt pretensioner,
Rear Safety Belt Buckle (76.73.50)

PINPOINT TEST G1043827p17 : DTC B2296: FLASH CODE 42: FRONT CRASH SENSOR CIRCUIT MALFUNCTION

G1043827t100 : CHECK THE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the front crash sensor electrical connector, EC50. 5. Measure the resistance between CR87, pin 20 (W) and EC50, pin 01 (W).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t101.

G1043827t101 : CHECK THE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 20 (W) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t102.

G1043827t102 : CHECK THE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 20 (W) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No

GO to Pinpoint Test G1043827t103.

G1043827t103 : CHECK THE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between CR87, pin 19 (N) and EC50, pin 02 (N).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t104.

G1043827t104 : CHECK THE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 19 (N) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t105.

G1043827t105 : CHECK THE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 19 (N) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No

INSTALL a new front crash sensor,
Crash Sensor (76.73.55)

PINPOINT TEST G1043827p18 : DTC B2296: FLASH CODE 43: DRIVER SIDE FRONT CRASH SENSOR CIRCUIT MALFUNCTION

G1043827t106 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the driver side front crash sensor electrical connector, CR60. 5. Measure the resistance between CR87, pin 27 (NG) and CR60, pin 02 (NG).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t107.

G1043827t107 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 27 (NG) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t108.

G1043827t108 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 27 (NG) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t109.

G1043827t109 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between CR87, pin 28 (WU) and CR60, pin 01 (WU).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t110.

G1043827t110 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 28 (WU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t111.

G1043827t111 : CHECK THE DRIVER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the resistance between CR87, pin 28 (WU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver side front crash sensor,
B-Pillar Side Impact Sensor (76.73.68)

PINPOINT TEST G1043827p19 : DTC B2296: FLASH CODE 44: PASSENGER SIDE FRONT CRASH SENSOR CIRCUIT

G1043827t112 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the passenger side front crash sensor electrical connector, CR35. 5. Measure the resistance between CR87, pin 29 (NR) and CR35, pin 02 (NR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t113.

G1043827t113 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 29 (NR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t114.

G1043827t114 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 29 (NR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t115.

G1043827t115 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between CR87, pin 30 (WR) and CR35, pin 01 (WR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t116.

G1043827t116 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 30 (WR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t117.

G1043827t117 : CHECK THE PASSENGER SIDE FRONT CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 30 (WR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger side front crash sensor,
B-Pillar Side Impact Sensor (76.73.68)

PINPOINT TEST G1043827p20 : DTC B2296: FLASH CODE 45: DRIVER SIDE REAR CRASH SENSOR CIRCUIT

G1043827t118 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the driver side rear crash sensor electrical connector, CR61. 5. Measure the resistance between CR87, pin 13 (BO) and CR61, pin 02 (BO).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t119.

G1043827t119 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 13 (BO) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t120.

G1043827t120 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 13 (BO) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR

the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t121.

G1043827t121 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between CR87, pin 14 (WU) and CR61, pin 01 (U).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t122.

G1043827t122 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 14 (WU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t123.

G1043827t123 : CHECK THE DRIVER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 14 (WU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver side rear crash sensor,
C-Pillar Side Impact Sensor (76.73.69)

PINPOINT TEST G1043827p21 : DTC 2296: FLASH CODE 46: PASSENGER SIDE REAR CRASH SENSOR CIRCUIT MALFUNCTION

G1043827t124 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the passenger side rear crash sensor electrical connector, CR51. 5. Measure the resistance between CR87, pin 15 (YR) and CR51, pin 02 (YR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t125.

G1043827t125 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 15 (YR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t126.

G1043827t126 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL POWER CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 15 (YR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t127.

G1043827t127 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Measure the resistance between CR87, pin 16 (O) and CR51, pin 01 (O).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t128.

G1043827t128 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 16 (O) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t129.

G1043827t129 : CHECK THE PASSENGER SIDE REAR CRASH SENSOR SIGNAL RETURN CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 16 (O) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger side rear crash sensor,
C-Pillar Side Impact Sensor (76.73.69)

PINPOINT TEST G1043827p22 : DTC C1947, C1948, C1981: FLASH CODE 49: DRIVER SEAT POSITION SWITCH MALFUNCTION (VEHICLES WITH PASSENGER SEAT POSITION SWITCH)

G1043827t130 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the driver seat position switch electrical connector, SD20. 5. Measure the resistance between CR87, pin 23 (UY) and SD20, pin 02 (UY).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t131.

G1043827t131 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 23 (UY) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t132.

G1043827t132 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 23 (UY) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t133.

G1043827t133 : CHECK THE DRIVER SEAT POSITION SWITCH GROUND CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between GROUND (B) and SD20, pin 01 (B).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver seat position switch.

PINPOINT TEST G1043827p23 : DTC B2434, B2435, B2691: FLASH CODE 51: DRIVER SEAT BELT BUCKLE SWITCH CIRCUIT MALFUNCTION

G1043827t136 : CHECK THE DRIVER SEAT BELT BUCKLE SWITCH CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the driver seat belt buckle switch electrical connector, SD19. 5. Measure the resistance between CR87, pin 25 (RW) and SD19, pin 03 (RW).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t137.

G1043827t137 : CHECK THE DRIVER SEAT BELT BUCKLE SWITCH CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 25 (RW) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t138.

G1043827t138 : CHECK THE DRIVER SEAT BELT BUCKLE SWITCH CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 25 (RW) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t139.

G1043827t139 : CHECK THE DRIVER SEAT BELT BUCKLE SWITCH GROUND CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SD19, pin 04 (BK) and GROUND.

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t140.

G1043827t140 : CHECK THE DRIVER SEAT BELT BUCKLE SWITCH GROUND CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SD19, pin 04 (BK) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver seat belt buckle switch,
Front Safety Belt Buckle (76.73.49)

PINPOINT TEST G1043827p24 : DTC B2438, B2439, B2692: FLASH CODE 52: PASSENGER SEAT BELT BUCKLE SWITCH CIRCUIT MALFUNCTION

G1043827t141 : CHECK THE PASSENGER SEAT BELT BUCKLE SWITCH CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the passenger seat belt buckle switch electrical connector, SP19. 5. Measure the resistance between CR87, pin 26 (RU) and SP19, pin 03 (RU).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t142.

G1043827t142 : CHECK THE PASSENGER SEAT BELT BUCKLE SWITCH CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 26 (RU) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t143.

G1043827t143 : CHECK THE PASSENGER SEAT BELT BUCKLE SWITCH CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR87, pin 26 (RU) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t144.

G1043827t144 : CHECK THE PASSENGER SEAT BELT BUCKLE SWITCH GROUND CIRCUIT FOR HIGH RESISTANCE

1. Measure the resistance between SP19, pin 04 (BK) and GROUND.

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t145.

G1043827t145 : CHECK THE PASSENGER SEAT BELT BUCKLE SWITCH GROUND CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between SP19, pin 04 (BK) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new passenger seat belt buckle switch,
Front Safety Belt Buckle (76.73.49)

PINPOINT TEST G1043827p25 : DTC B1891, B1892: FLASH CODE 53: AUDIBLE WARNING CIRCUIT MALFUNCTION

G1043827t146 : CHECK THE AUDIBLE WARNING CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR86. 4. Disconnect the instrument cluster electrical connector, IP05. 5. Measure the resistance between CR86, pin 22 (YR) and IP05, pin 08 (YR).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t147.

G1043827t147 : CHECK THE AUDIBLE WARNING CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR86, pin 22 (YR) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t148.

G1043827t148 : CHECK THE AUDIBLE WARNING CIRCUIT FOR SHORT TO POWER

1. Measure the voltage between CR86, pin 22 (YR) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
Contact dealer technical support for advice on possible RCM failure.

PINPOINT TEST G1043827p26 : DTC C1947, C1948, C1981: FLASH CODE 49: DRIVER SEAT POSITION SWITCH MALFUNCTION (VEHICLES WITHOUT PASSENGER SEAT POSITION SWITCH)

G1043827t134 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Disconnect the RCM electrical connector, CR87. 4. Disconnect the driver seat position switch electrical connector, SD20. 5. Measure the resistance between CR87, pin 23 (UY) and SD20, pin 02 (UY).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t135.

G1043827t135 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 23 (UY) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t149.

G1043827t149 : CHECK THE DRIVER SEAT POSITION SWITCH SIGNAL CIRCUIT FOR SHORT TO HIGH VOLTAGE

1. Measure the voltage between CR87, pin 23 (UY) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t150.

G1043827t150 : CHECK THE DRIVER SEAT POSITION SWITCH RETURN CIRCUIT FOR HIGH RESISTANCE

1. Disconnect the battery negative terminal. 2. Wait one minute for the system to become safe. 3. Measure the resistance between CR87, pin 24 (U) and SD20, pin 01 (U).

- **Is the resistance greater than 5 ohms?**

-> Yes
REPAIR the high resistance circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t151.

G1043827t151 : CHECK THE DRIVER SEAT POSITION SWITCH RETURN CIRCUIT FOR SHORT TO GROUND

1. Reconnect the battery negative terminal. 2. Measure the resistance between CR87, pin 24 (U) and GROUND.

- **Is the resistance less than 10,000 ohms?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
GO to Pinpoint Test G1043827t152.

G1043827t152 : CHECK THE DRIVER SEAT POSITION SWITCH RETURN CIRCUIT FOR SHORT TO HIGH VOLTAGE

1. Measure the voltage between CR87, pin 24 (U) and GROUND.

- **Is the voltage greater than 3 volts?**

-> Yes
REPAIR the short circuit. For additional information, refer to the wiring diagrams. CLEAR the DTC. TEST the system for normal operation.

-> No
INSTALL a new driver seat position switch.

B-Pillar Side Impact Sensor (76.73.68)

Removal

1 . **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplementary restraints system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

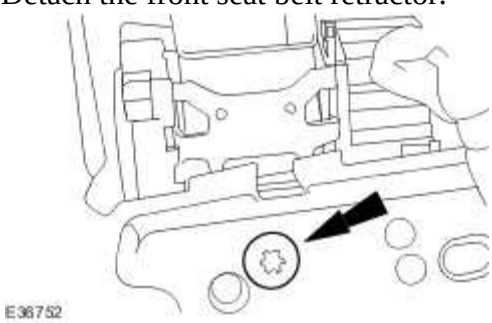
WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

Reposition the front seat to the maximum forward position.

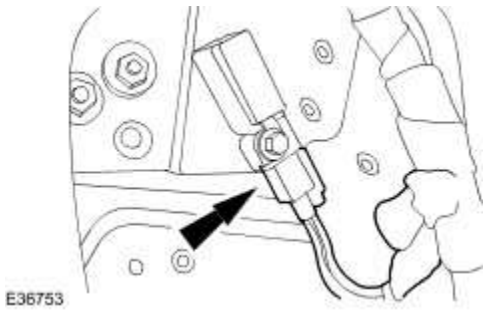
2 . Disconnect the battery ground cable. <<414-01>>

3 . Remove the B-pillar lower trim panel. <<501-05>>

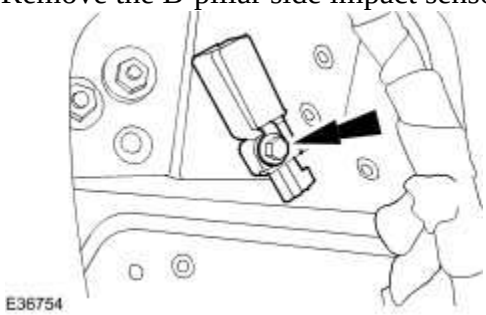
4 . Detach the front seat belt retractor.



5 . Disconnect the B-pillar side impact sensor electrical connector.



6 . Remove the B-pillar side impact sensor.



Installation

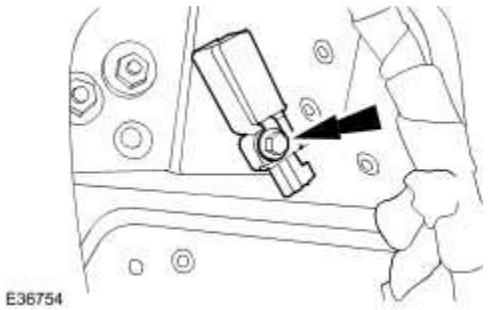
1 . **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

WARNING: Make sure the side impact sensor locating tangs are correctly located into the B-pillar. Failure to follow this instruction may result in personal injury.

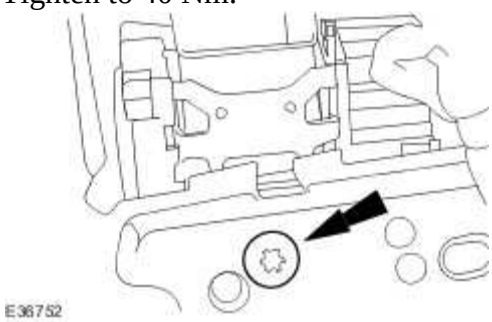
WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

To install, reverse the removal procedure.

- Tighten to 12 Nm.



2 . Tighten to 40 Nm.



Clockspring (86.65.92)

Removal

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment, which may result in personal injury. Failure to follow this instruction may result in personal injury.

WARNING: Air bag modules with discolored or damaged trim covers must be replaced, not repainted.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag supplemental restraint system (SRS) is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

CAUTION: Make sure the wheels are in the straight-ahead position. Failure to follow this instruction may result in damage to the component.

NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

1. **CAUTION: Make sure that special tool 211-326 is installed to the clockspring.**

   CAUTION: Failing to install the special tool to the clockspring may result in damage to the vehicle.

   CAUTION: Make sure that the road wheels are in the straight ahead position, failure to follow this instruction may result in damage to the vehicle.

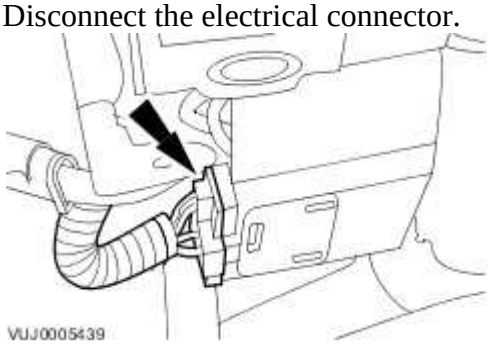
   Remove the steering wheel.
   For additional information, refer to Steering Wheel (57.60.01) .

2. Remove the steering column multifunction switch left-hand.
   For additional information, refer to Steering Column Multifunction Switch LH (86.65.78)

3. Remove the steering column multifunction switch right-hand.
   For additional information, refer to Steering Column Multifunction Switch RH (86.65.41)

4. **CAUTION: Make sure no damage is occured to the electrical connectors. Failure to follow this instruction may result in damage to the vehicle.**

   Disconnect the electrical connector.

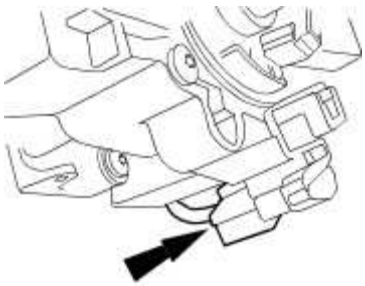


5
· **CAUTION: Make sure no damage is occured to the electrical connectors. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

For vehicles fitted with a heated steering wheel only.

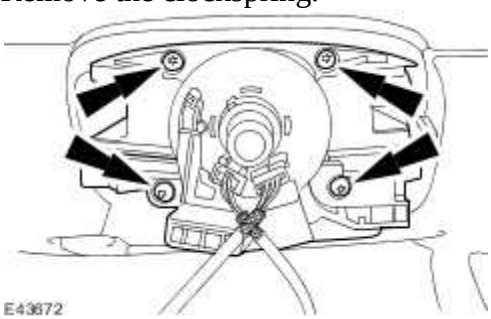
Disconnect the electrical connector.



E36757

6
· **CAUTION: Failing to install the special tool to the clockspring may result in damage to the vehicle.**

Remove the clockspring.



E43872

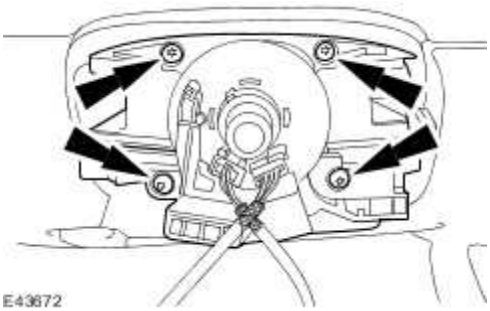
Installation

1
· **CAUTION: Make sure the locking tool is correctly installed to the clockspring. Failure to follow this instruction may result in damage to the component.**

CAUTION: Make sure the wheels are in the straight-ahead position. Failure to follow this instruction may result in damage to the component.

To install, reverse the removal procedure.

- Tighten to 5 Nm.



2. **CAUTION: Make sure that the arrow on the cassette is centered and pointing vertically prior to the steering wheel installation. On removal of the special tool, keep the clockspring cables taught to prevent the cassette moving from the set position. Failure to follow this instruction may result in damage to the component.**

Install the steering wheel.

C-Pillar Side Impact Sensor (76.73.69)

Removal

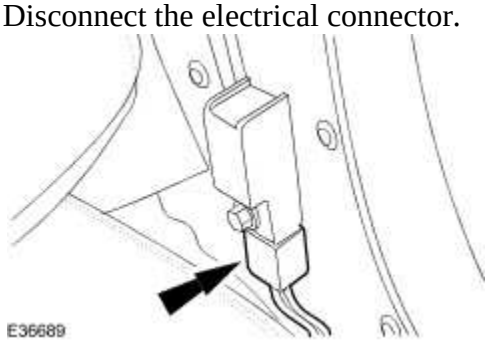
1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplementary restraints system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

   WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

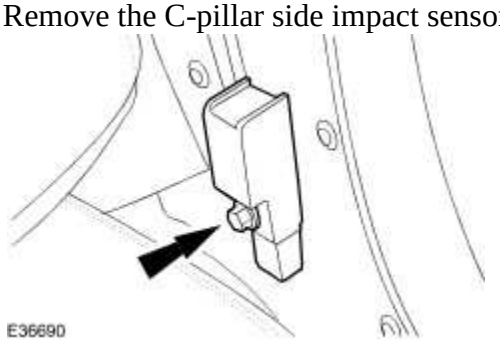
   Disconnect the battery ground cable. <<414-01>>

2. Remove the C-pillar lower trim. <<501-05>>

3. Disconnect the electrical connector.



4. Remove the C-pillar side impact sensor.



Installation

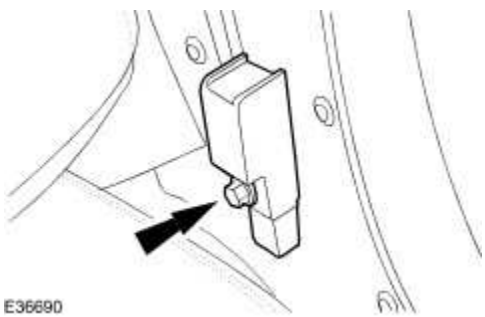
1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

WARNING: Make sure the side impact sensor locating tangs are correctly located into the C-pillar. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

To install, reverse the removal procedure.

- Tighten to 12 Nm.



Crash Sensor (76.73.55)

Removal

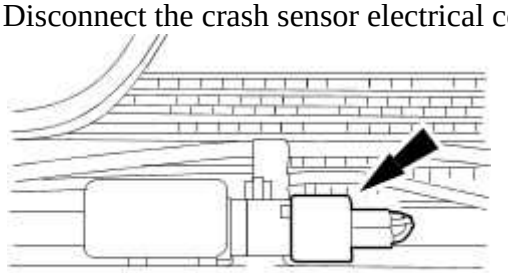
1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplementary restraints system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

   WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

   Disconnect the battery ground cable. <<414-01>>

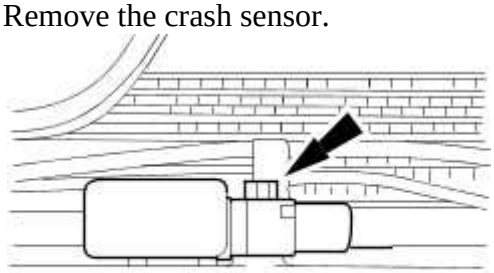
2. Remove the radiator opening panel. <<501-02>>

3. Disconnect the crash sensor electrical connector.



E36755

4. Remove the crash sensor.



E36756

Installation

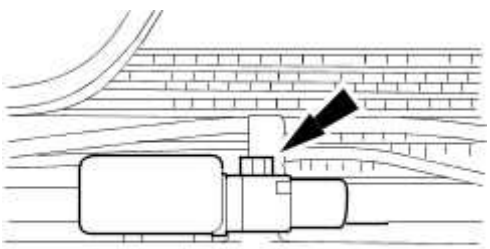
1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

WARNING: Make sure the crash sensor locating tangs are correctly located into the mounting bracket. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

To install, reverse the removal procedure.

- Tighten to 12 Nm.



E36756

Driver Air Bag Module (76.73.39)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the

battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE:

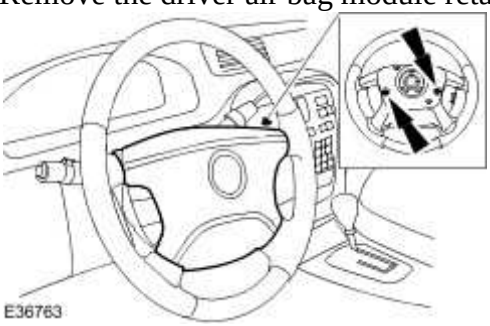
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Disconnect the battery ground cable. <<414-01>>

2 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the driver air bag module retaining bolts.

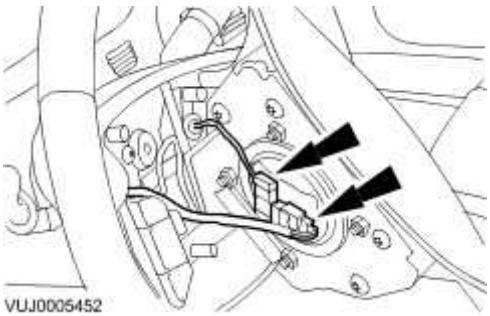


3 . Detach the driver air bag module.

4 . **NOTE:**

Note the correct routing of the driver airbag module electrical wiring harnesses.

Remove the driver air bag module.



Installation

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE:

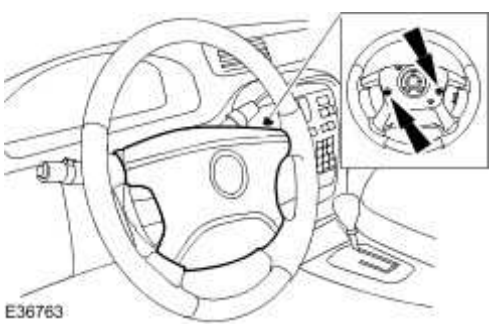
When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

NOTE:

Left-hand shown, right-hand similar.

To install, reverse the removal procedure.

- Tighten to 7 Nm.



Front Passenger Seat Occupant Classification Sensor (76.73.60)

Removal

WARNING: To avoid accidental deployment and possible personal injury, the back up power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) component. To deplete the back up power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

WARNING: The front passenger seat occupant classification sensor is available only as a service kit. No attempt should be made to replace individual components. Failure to follow this instruction may result in personal injury.

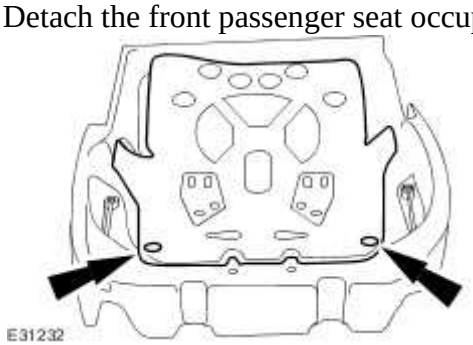
CAUTION: Electronic components in the seats are sensitive to impact. Handle seat with care or damage may result.

NOTE:

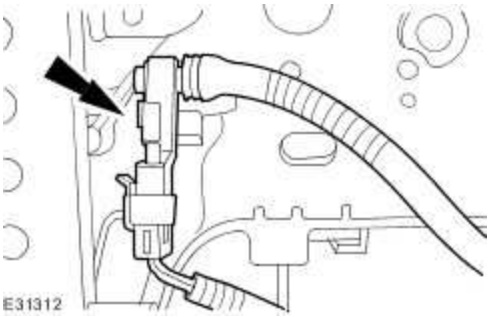
Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

1 . Remove the front seat cushion cover. <<501-10>>

2 . Detach the front passenger seat occupant classification sensor bladder.



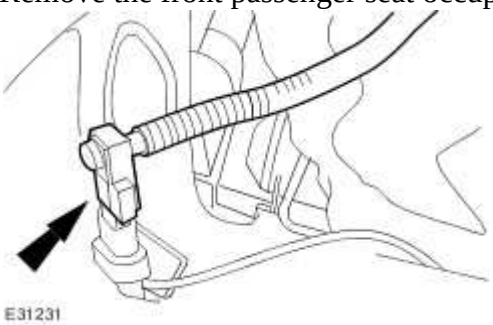
3 . Detach the front passenger seat occupant classification sensor transducer.



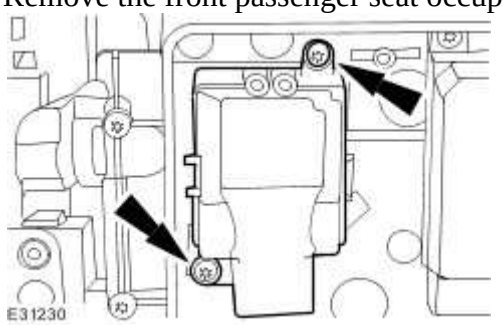
4 . **NOTE:**

Make sure the unused electrical connector is secured to the seat base.

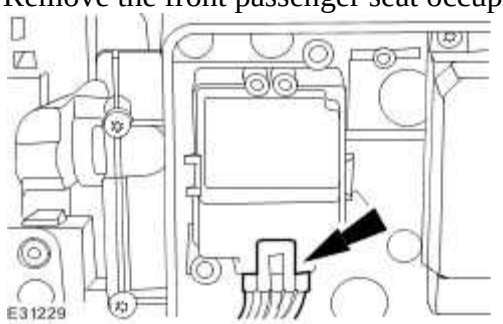
Remove the front passenger seat occupant classification sensor bladder.



5 . Remove the front passenger seat occupant classification sensor module shield.



6 . Remove the front passenger seat occupant classification sensor module.

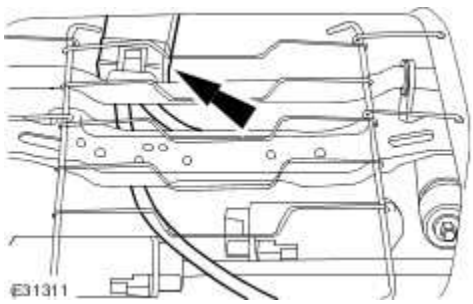


Installation

1 **NOTE:**

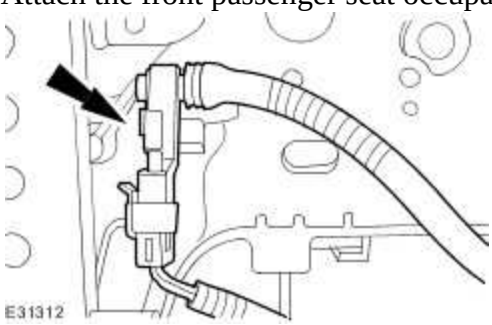
· The front passenger seat occupant classification sensor module must pass between the seat base and the first wire of the front seat suspension mat.

Reposition the front passenger seat occupant classification sensor module through the seat base.

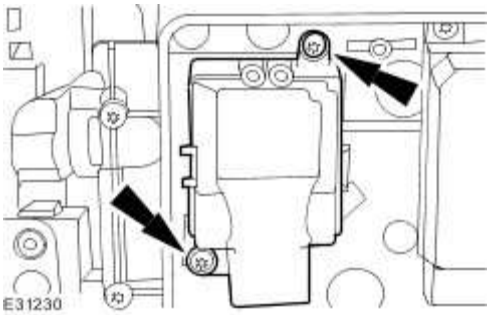


2 . Install the front passenger seat occupant classification sensor bladder.

3 . Attach the front passenger seat occupant classification sensor transducer.



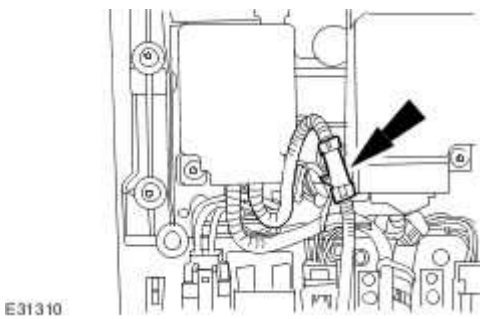
4 . Install the front passenger seat occupant classification sensor module and shield.



5. **CAUTION: Make sure the front passenger seat occupant classification sensor wiring harness is loose enough to allow for the seat height adjustment. Failure to follow this instruction may result in damage to the component.**

Connect the front passenger seat occupant classification sensor module electrical connector.

- Secure the front passenger seat occupant classification sensor wiring harness to the original seat wiring harness.



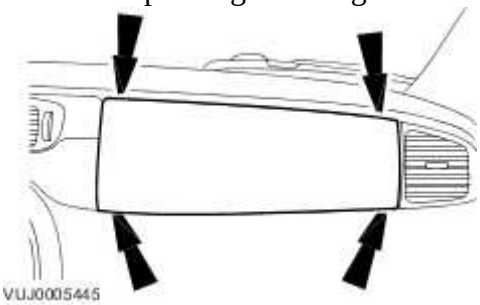
6 . Install the front seat cushion cover. <<501-10>>

7. Initialize the system. For additional information, refer to the Jaguar approved diagnostic system.

Passenger Air Bag Deactivation (PAD) Indicator (76.73.58)

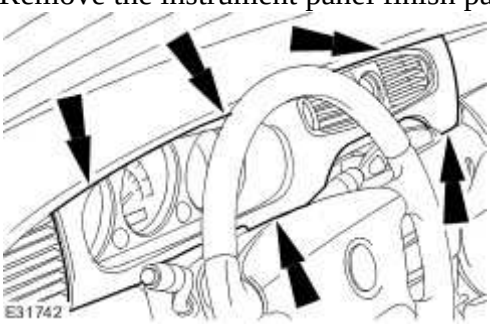
Removal

1 . Detach the passenger air bag module finish panel.



2 . Remove the floor console. <<501-12>>

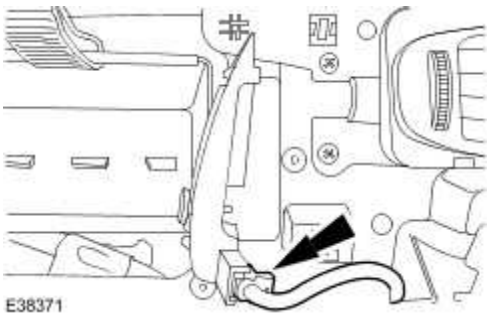
3 . Remove the instrument panel finish panel.



4 . Detach the passenger air bag deactivation (PAD) indicator.

5 . Remove the PAD indicator.

- Disconnect the electrical connector.



Installation

1 . To install, reverse the removal procedure.

Passenger Air Bag Module (76.73.37)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the

battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

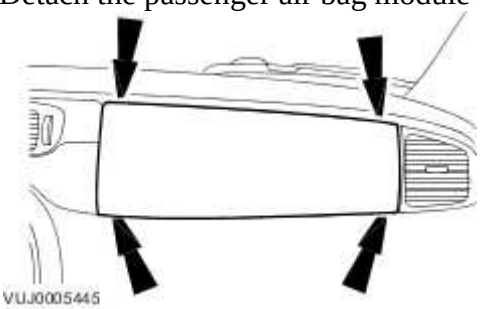
Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE:

When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

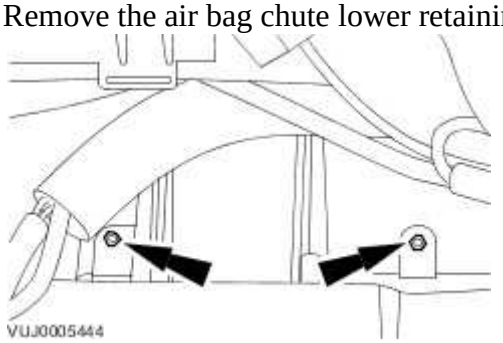
Disconnect the battery ground cable. <<414-01>>

2 . Detach the passenger air bag module finish panel.



3 . Remove the glove compartment assembly. <<501-12>>

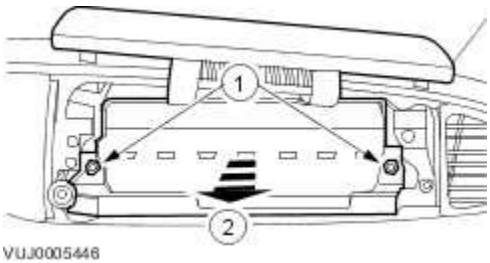
4 . Remove the air bag chute lower retaining bolts.



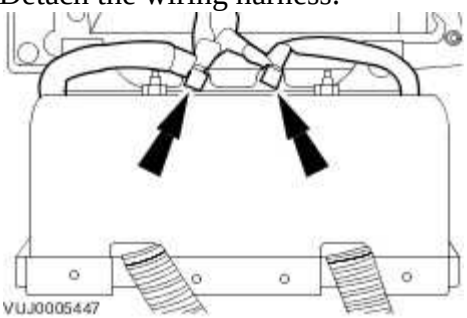
5 . Detach the air bag and chute assembly from the instrument panel.

1) Remove the air bag chute retaining bolts.

2) Detach the air bag and chute assembly from the instrument panel.



6 . Detach the wiring harness.

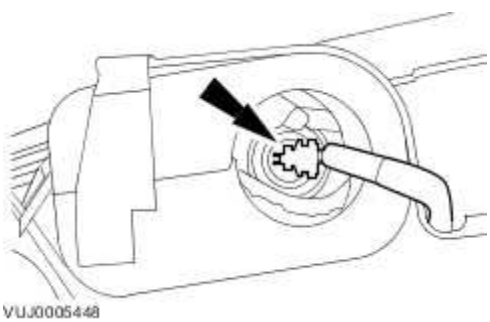


7 . **NOTE:**

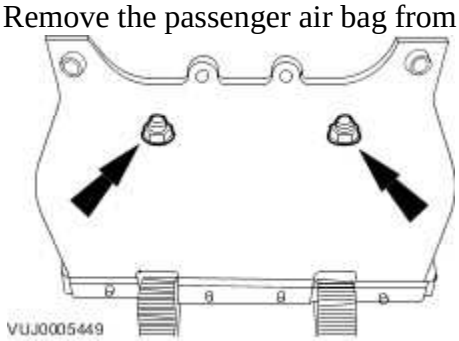
Right-hand shown, left-hand similar.

Remove the passenger air bag and chute assembly.

- Disconnect the passenger air bag electrical connectors.



8 . Remove the passenger air bag from the chute.



Installation

1. **WARNING: An RCM module only requires replacement if the system has incurred five separate deployments. At no time change an RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag SRS vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and deployment door pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

NOTE:

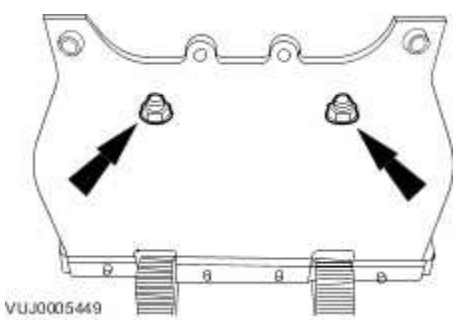
Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE:

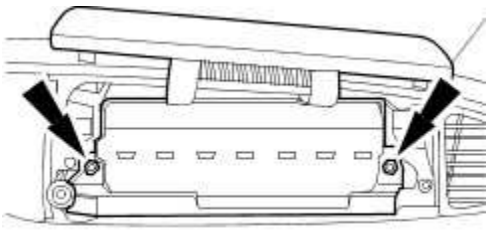
Make sure to tighten the retaining bolts to the correct specification.

To install, reverse the removal procedure.

- Tighten to 12 Nm.

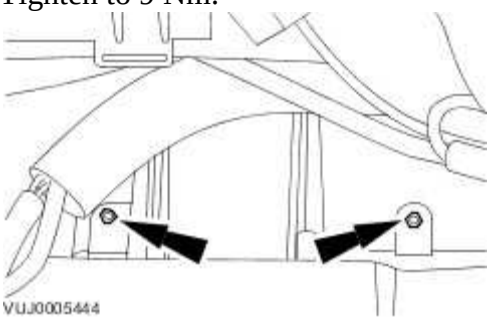


2 . Tighten to 9 Nm.



E30311

3 . Tighten to 9 Nm.



VUJ0005444

Restraints Control Module (RCM) (76.73.48)

Removal

1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.**

WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.

CAUTION: Electronic modules are sensitive to static electrical charges. If exposed to these charges, damage may result.

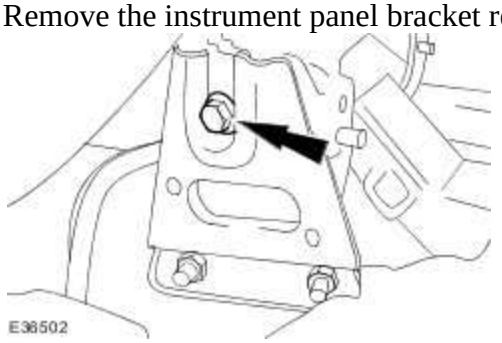
NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

Disconnect the battery ground cable.
For additional information, refer to Battery Ground Cable (86.15.19)

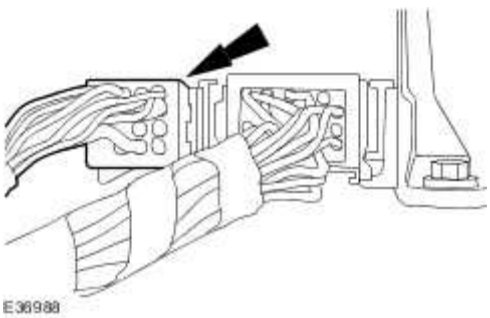
2. Remove the floor console.
For additional information, refer to Floor Console - Vehicles Without: Auxiliary Climate Control (76.25.01)
For additional information, refer to Floor Console - Vehicles With: Auxiliary Climate Control (76.25.01)

3 . Remove the instrument panel bracket retaining bolt.

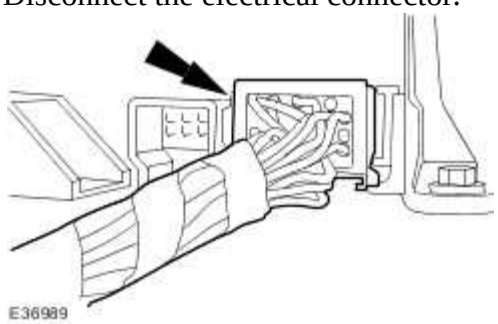


4 . Remove the instrument panel bracket retaining nuts.

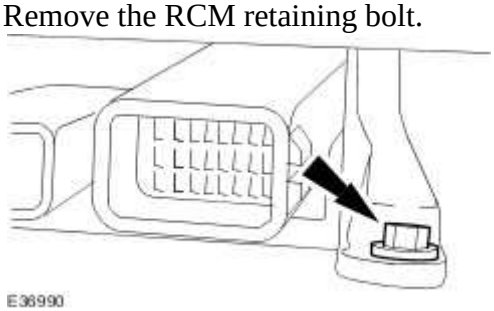
5 . Disconnect the electrical connector.



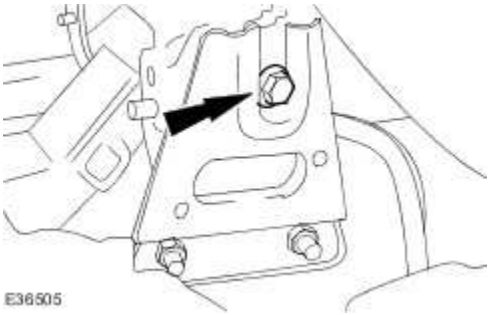
6 . Disconnect the electrical connector.



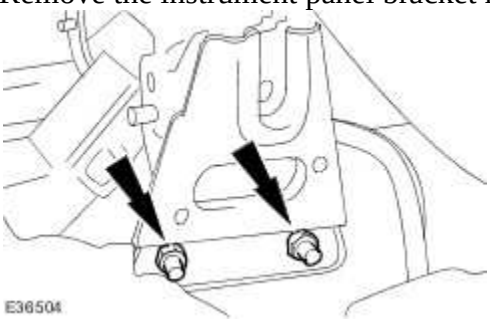
7 . Remove the RCM retaining bolt.



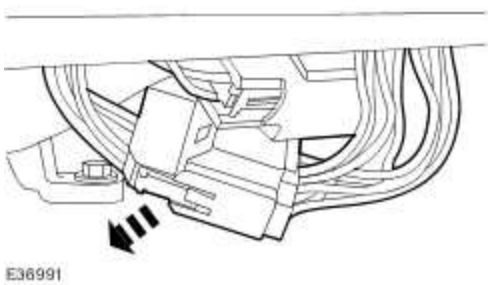
8 . Remove the instrument panel bracket retaining bolt.



9 . Remove the instrument panel bracket retaining nuts.



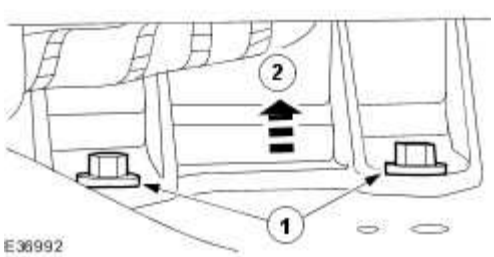
10 . Displace the multiplugs to gain access to the RCM retaining bolts.



11 . Remove the RCM.

1) Remove the RCM retaining bolts.

2) Remove the RCM.



Installation

1 . **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.**

WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.

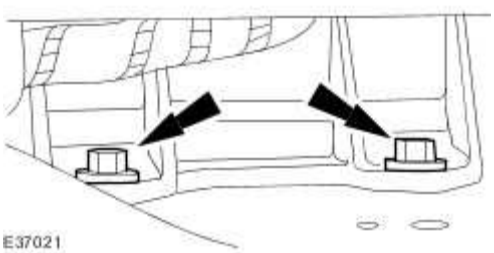
CAUTION: Electronic modules are sensitive to static electrical charges. If exposed to these charges, damage may result.

NOTE:

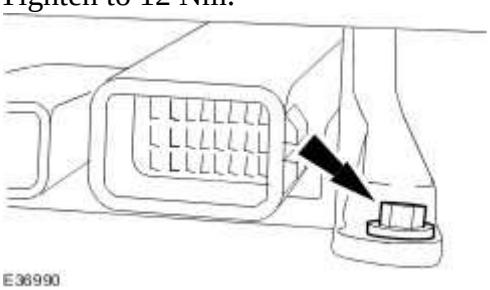
Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

To install, reverse the removal procedure.

- Tighten to 12 Nm.



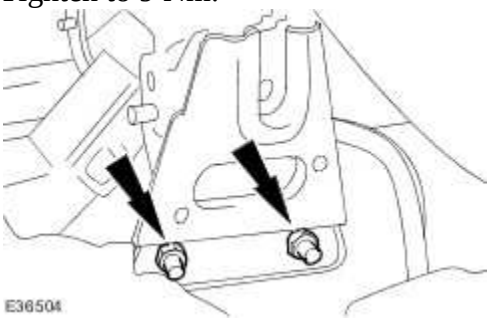
2 . Tighten to 12 Nm.



3 . **NOTE:**

Left-hand shown, right-hand similar.

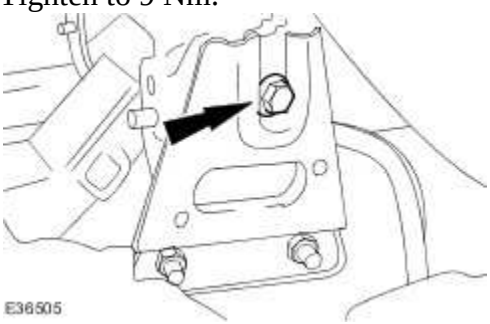
Tighten to 9 Nm.



4 . **NOTE:**

Left-hand shown, right-hand similar.

Tighten to 9 Nm.



Seat Position Sensor (76.73.62)

Removal

1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplementary restraints system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

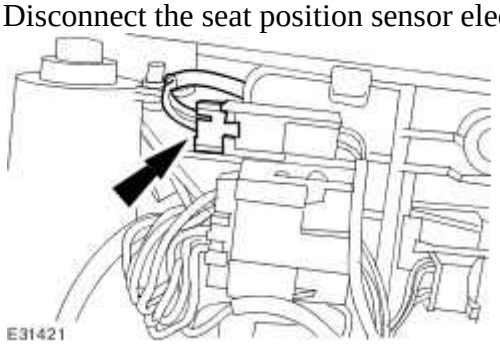
WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

NOTE:

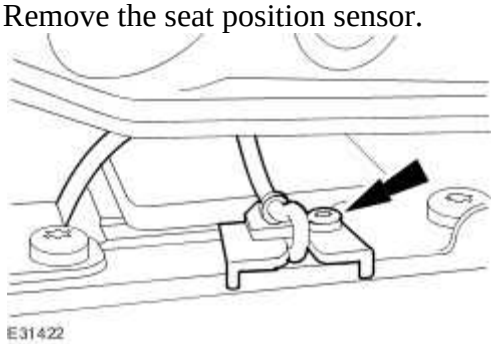
Make sure the driver seat is adjusted to its maximum height before removal.

Remove the driver seat. <<501-10>>

2 . Disconnect the seat position sensor electrical connector.



3 . Remove the seat position sensor.



Installation

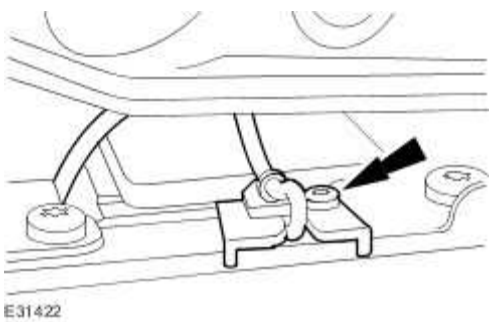
1. **WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait for one minute. Failure to follow this instruction may result in personal injury.**

WARNING: Never probe the electrical connectors of the air bag modules or any other SRS component. Failure to follow this instruction may result in personal injury.

WARNING: Make sure the sensor is correctly located into the seat track. Failure to follow this instruction may result in personal injury.

To install, reverse the removal procedure.

- Tighten to 5 Nm.



Side Air Bag Module (76.73.47)

Removal

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the

battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

NOTE:

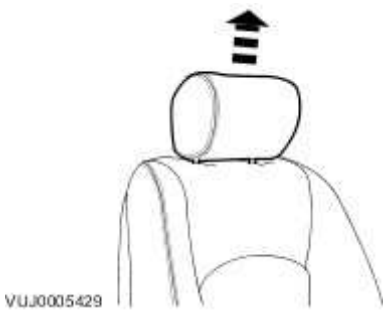
Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

NOTE:

When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars Ltd.

Remove the front seat. <<501-10>>

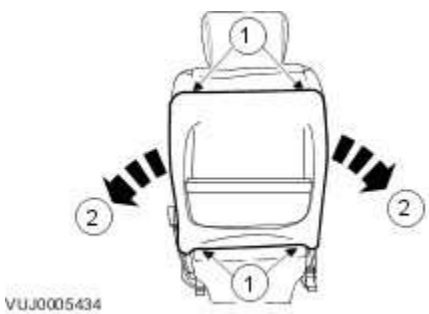
2 . Remove the head restraint.



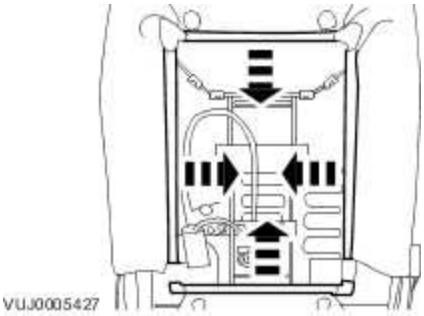
3 . Remove the front seat backrest trim panel.

1) Detach the front seat backrest trim panel retaining clips.

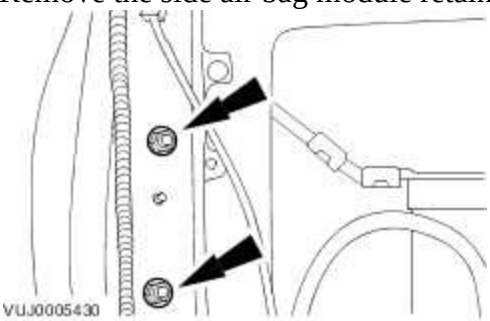
2) Remove the front seat backrest trim panel.



4 . Detach the seat backrest cover.



5 . Remove the side air bag module retaining nuts.



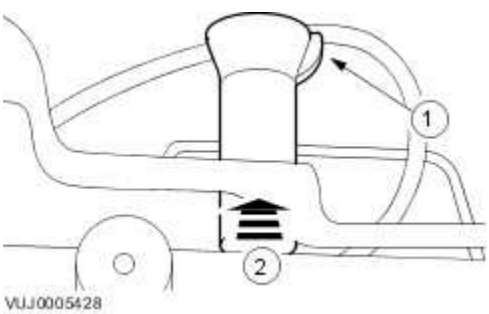
6 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the head restraint retaining post.

1) Release the retaining tang.

2) Remove the head restraint retaining post.



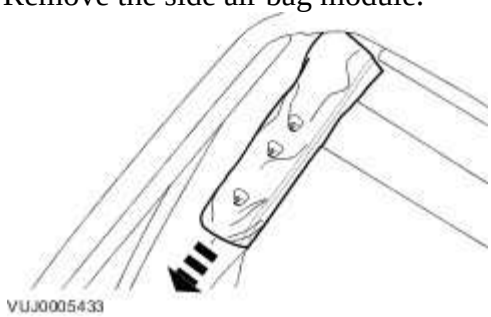
7 . Detach the seat backrest cover and cushion.

1) Reposition the seat backrest cover and cushion.

2) Detach the seat backrest cover and cushion.

8 . Disconnect the side air bag module electrical connector.

9 . Remove the side air bag module.



Installation

1 . **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

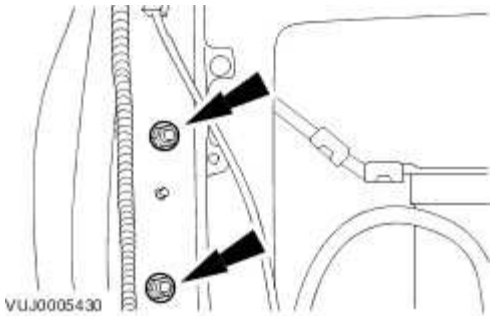
WARNING: Make sure the side air bag module is correctly aligned in the deployment chute and the chute is correctly aligned within the seat assembly. Failure to follow this instruction may result in personal injury.

NOTE:

Repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

To install, reverse the removal procedure.

- Tighten to 7 Nm.


VUJ0005430

Side Air Curtain Module (76.73.64)

Removal

1. **WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.**

WARNING: Carry a live side air curtain module with the air bag and trim cover pointed down. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Do not set a live air bag module down with the trim cover face down. Failure to follow this instruction may result in personal injury.

WARNING: After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterwards. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: Air bags modules with damaged trim covers must be replaced. Failure to follow this instruction may result in personal injury.

WARNING: Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag SRS is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation. If damaged, replace the sensor whether or not the air bag is deployed. Failure to follow this instruction may result in personal injury.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the

battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

WARNING: Only carry out a system test with the air bag modules fully installed. Failure to follow this instruction may result in personal injury.

NOTE:

Repair is made by replacement only.

Reposition the front seat backs to the maximum reclined position.

2 . Disconnect the battery ground cable.
For additional information, refer to Battery Disconnect and Connect

3 . Remove both A-pillar trim panels.
For additional information, refer to A-Pillar Trim Panel (76.13.31)

4 . Remove both B-pillar lower trim panels.
For additional information, refer to B-Pillar Lower Trim Panel (76.13.29)

5 . Remove both B-pillar upper trim panels.
For additional information, refer to B-Pillar Upper Trim Panel (76.13.28)

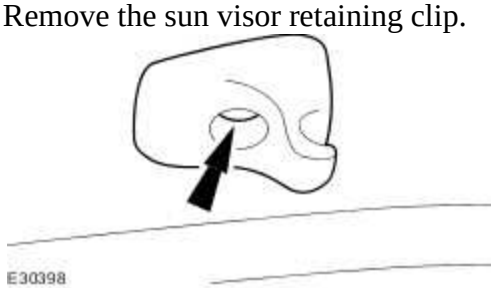
6 . Remove both C-pillar upper trims.
For additional information, refer to C-Pillar Upper Trim Panel

7 . Remove both sun visors.
For additional information, refer to Sun Visor (76.10.48)

8 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the sun visor retaining clip.

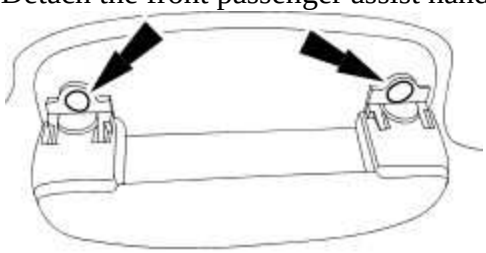


9 . Remove the overhead console.
For additional information, refer to Overhead Console (76.13.69)

10 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the front passenger assist handle retaining screw covers.

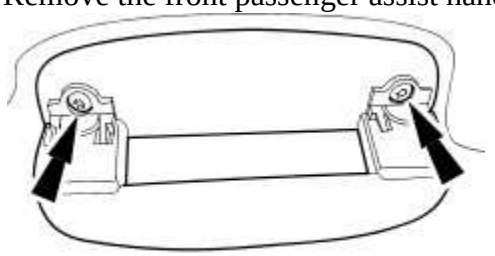


E38775

11 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the front passenger assist handle.

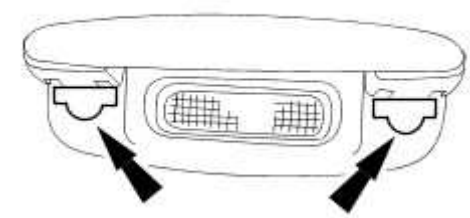


E38776

12 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the rear passenger assist handle retaining screw covers.

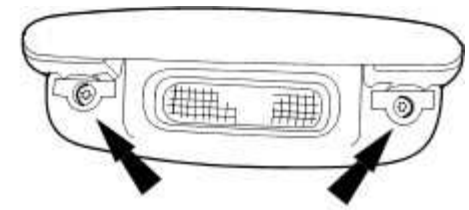


E38777

13 . **NOTE:**

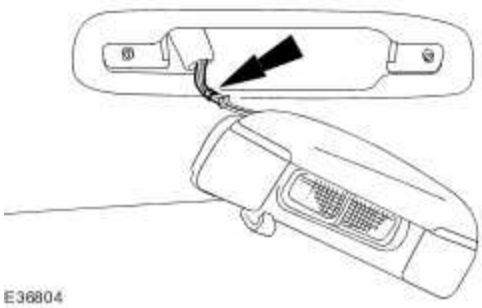
Left-hand shown, right-hand similar.

Detach the rear passenger assist handle.

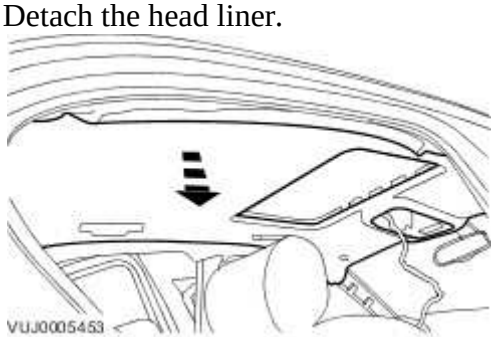


14 . Remove the rear passenger assist handle.

- Disconnect the electrical connector.



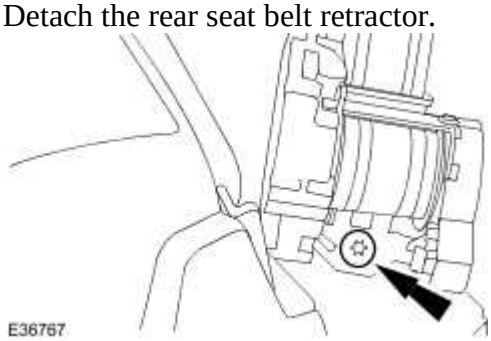
15 . Detach the head liner.



16 . **NOTE:**

Left-hand shown, right-hand similar.

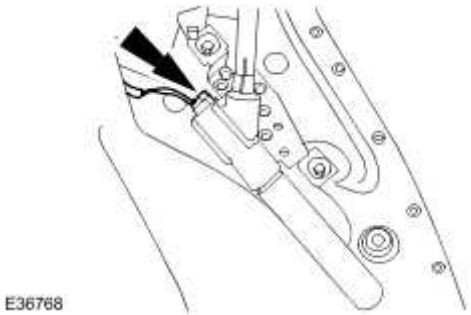
Detach the rear seat belt retractor.



17 . **NOTE:**

Left-hand shown, right-hand similar.

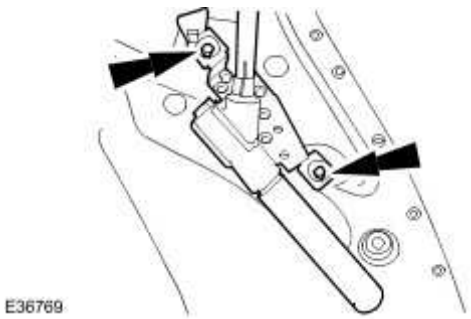
Disconnect the side air curtain module electrical connector.



18 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the side air curtain canister retaining bolts.



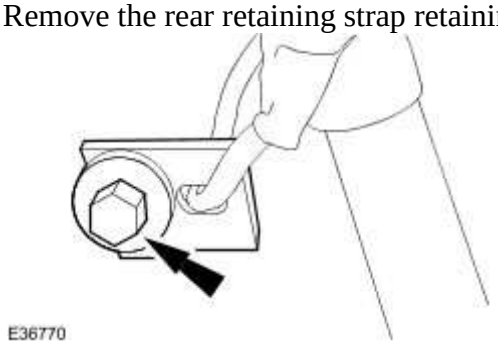
19 . **NOTE:**

Left-hand shown, right-hand similar.

NOTE:

Make sure the retaining strap routing is noted before removal.

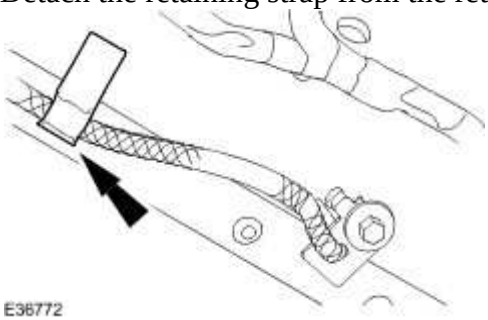
Remove the rear retaining strap retaining bolt.



20 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the retaining strap from the retaining clip.



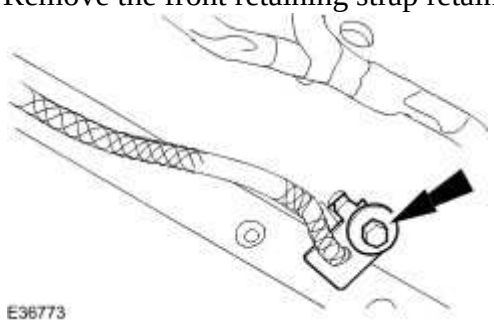
21 . **NOTE:**

Left-hand shown, right-hand similar.

NOTE:

Make sure the retaining strap routing is noted before removal.

Remove the front retaining strap retaining bolt.

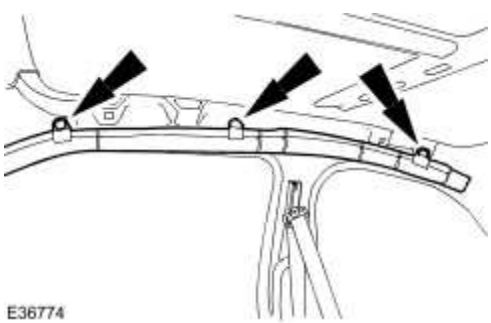


22 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the side air curtain module.

- Remove the side air curtain module retaining bolts.



Installation

1. **WARNING: A restraints control module (RCM) only requires replacement if the system has incurred five separate deployments. At no time change the RCM for less than five separate deployments.**

WARNING: Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.

WARNING: To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag SRS components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.

WARNING: Carry a live air bag module with the air bag and trim cover pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment. Failure to follow this instruction may result in personal injury.

WARNING: Never probe the connectors on the air bag module. Doing so may result in air bag deployment. Failure to follow this instruction may result in personal injury.

WARNING: New nylon thread forming inserts must be used ever time the screws are removed from the side air curtain. Failure to follow this instruction may result in personal injury.

WARNING: Only carry out a system test with the air bag modules fully installed. Failure to follow this instruction may result in personal injury.

NOTE:

Repair is made by replacement only.

NOTE:

When installing a new air bag module, a prepaid return postcard is provided with the replacement air bag module. The serial number for the new part and the vehicle identification number (VIN) must be recorded and sent to Jaguar Cars

Limited.

NOTE:

Once the side air curtain module retaining straps have been detached the side air curtain module must be replaced.

NOTE:

Make sure the side air curtain module is correctly located.

NOTE:

Ensure the fill tube between the canister and the side air curtain is not twisted.

NOTE:

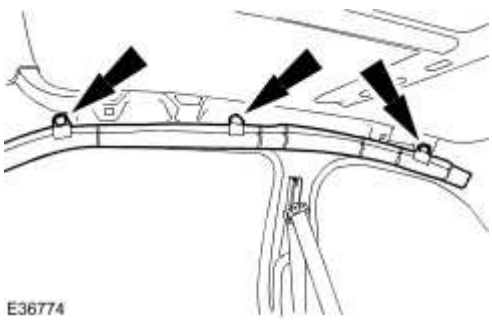
Make sure the tethers are correctly routed.

NOTE:

Left-hand shown, right-hand similar.

To install, reverse the removal procedure.

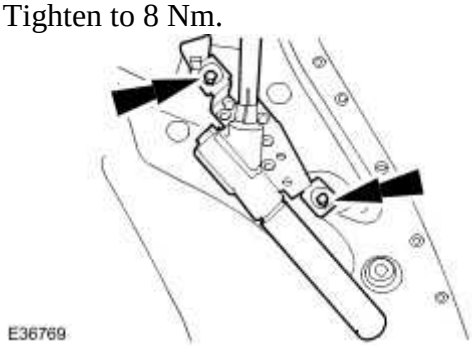
- Tighten to7 Nm.



2 . **NOTE:**

Left-hand shown, right-hand similar.

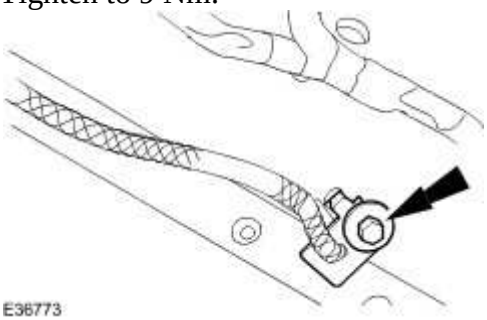
Tighten to 8 Nm.



3 . **NOTE:**

Left-hand shown, right-hand similar.

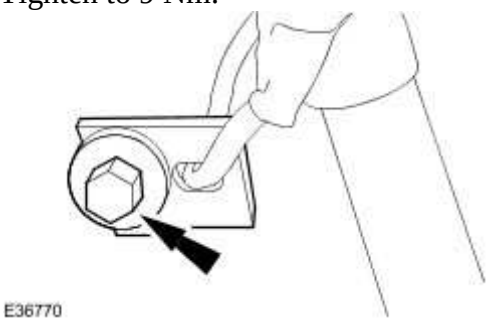
Tighten to 9 Nm.



4 . **NOTE:**

Left-hand shown, right-hand similar.

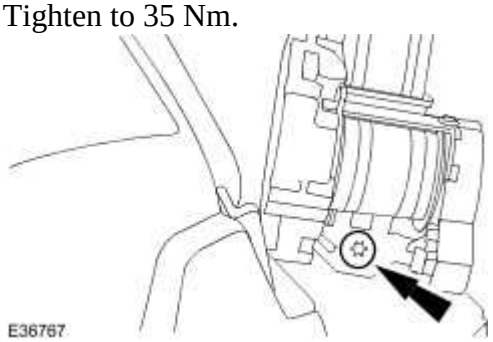
Tighten to 9 Nm.



5 . **NOTE:**

Left-hand shown, right-hand similar.

Tighten to 35 Nm.



502 : Frame and Mounting

502-00 : Uni-Body and Mounting System

Specifications

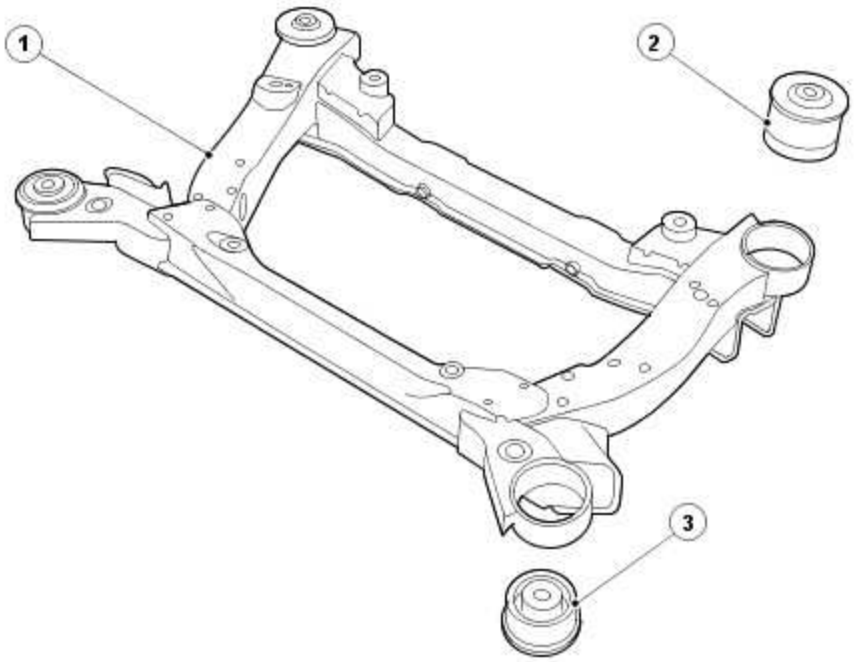
Specifications

Torque Specifications

Description	Nm	lb-ft	lb-in
Front lower arm to front subframe retaining nut and bolt	175	129	—
Rear lower arm to front subframe retaining nut and bolt	175	129	—
Engine mount lower retaining nut	63	46	—
Steering gear retaining bolts	100	74	—
Front air spring assembly retaining bolt	175	129	—
Front subframe to body front retaining bolt	A	—	—
Front subframe to body rear retaining bolt	115	85	—
Rear air spring assembly retaining bolt	133	98	—
Rear subframe reinforcement plate retaining bolts	48	35	—
Rear subframe to body retaining bolts	125	92	—
Front suspension stabilizer bar link retaining nut	43	32	—
Front suspension stabilizer bar link retaining nut and bolt	70	52	—
Exhaust manifold retaining nut (vehicles with 3.0L engine)	20	15	—
Dipstick tube retaining bolt (vehicles with 3.0L engine)	10	—	89
Wheel and tire retaining nuts	125	92	—
Rear suspension upper arm retaining nut and bolt	98	72	—
A = refer to the procedure for correct torque sequence	—	—	—

Frame Assembly

Front Subframe

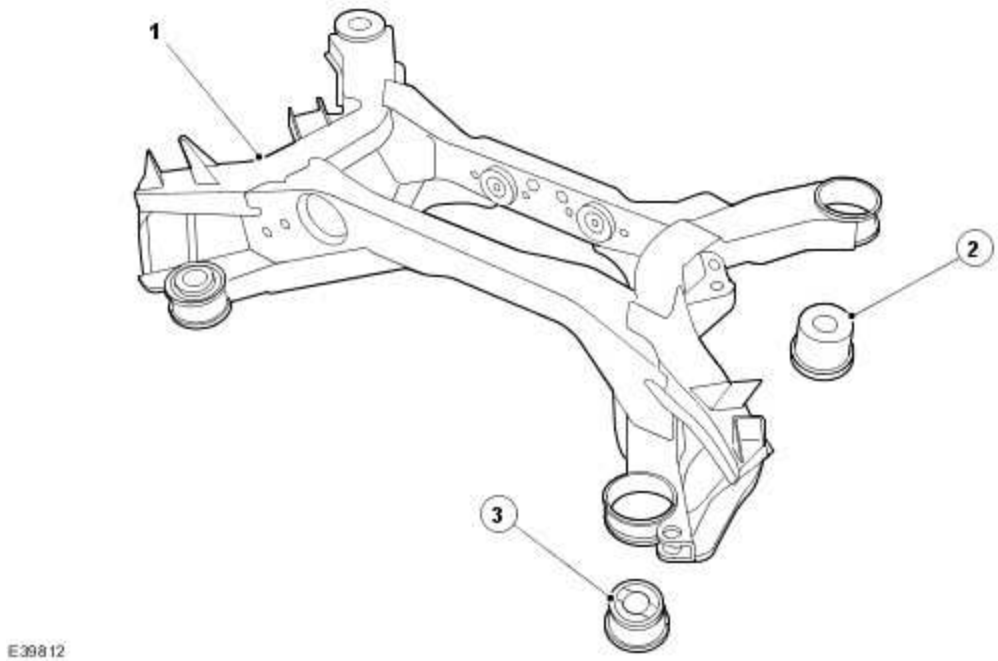


E39811

Item	Part Number	Description
1		Front subframe
2		Front subframe rear bushing
3		Front subframe front bushing

The front subframe is bolted to the body and aids in structural support. The subframe provides the mounting surface for the steering gear, the front suspension lower arms, the stabilizer bar and the engine mounts.

Rear Subframe



Item	Part Number	Description
1		Rear subframe
2		Rear subframe rear bushing
3		Rear subframe front bushing

The rear subframe is bolted to the body and aids in structural support. The subframe provides the mounting surface for the rear suspension components, the exhaust hanger insulators and the rear drive differential.

Front Subframe - 3.0L NA V6 - AJ27 (76.10.05)

Special Service Tools

Powertrain Assembly Jack
HTJ1200-02

Engine lifting Bracket
303-661

Engine Support Bracket
303-021

Subframe Alignment Bolt
502-007

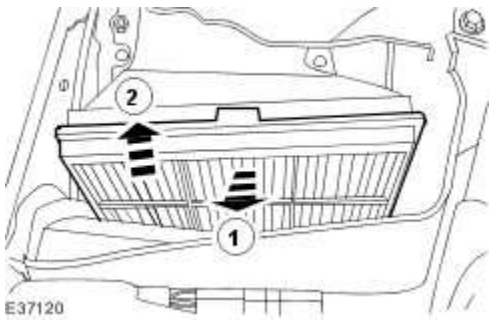
Removal

1 . Remove the cowl vent screen.
For additional information, refer to Cowl Vent Screen (76.10.01)

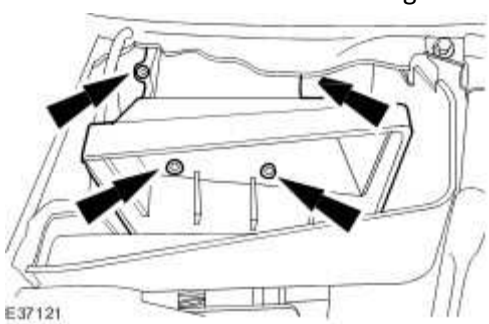
2 . Remove the cabin air filter.

1) Detach the cabin air filter.

2) Remove the cabin air filter.



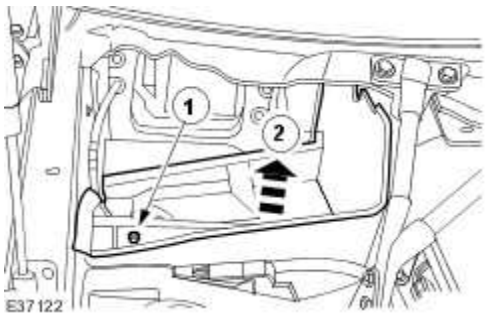
3 . Remove the cabin air filter housing.



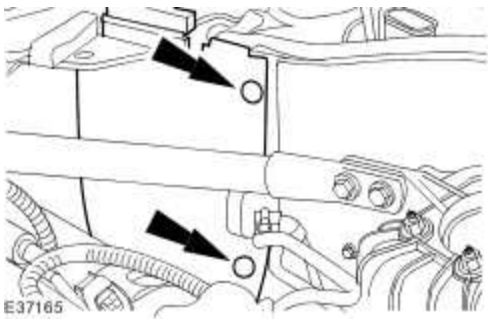
4 . Remove the right-hand engine compartment panel.

1) Remove the retaining bolt.

2) Remove the right-hand engine compartment panel.

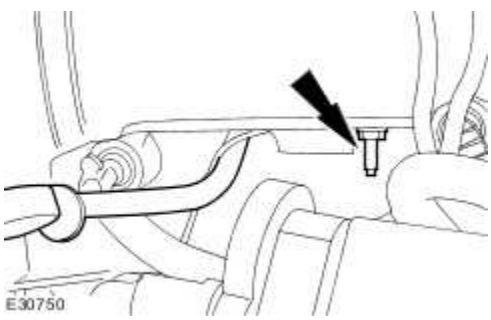


5 . Remove the left-hand engine compartment access panel.



6 . Detach the dipstick tube.

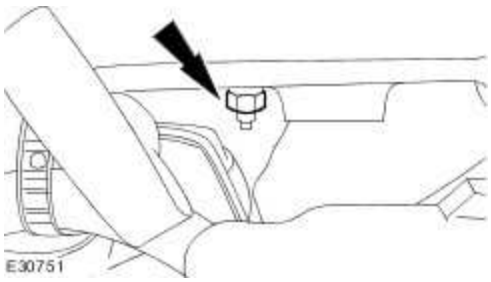
- Remove the dipstick tube retaining bolt.



7 . **NOTE:**

Left-hand shown, right-hand similar.

Loosen the exhaust manifold retaining nut.

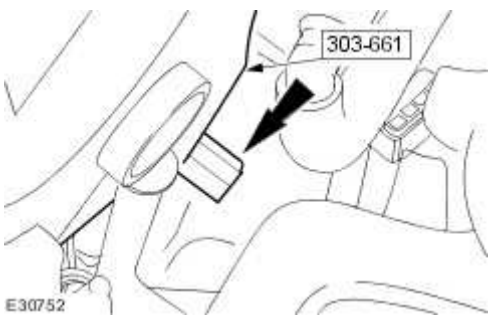


8 . **NOTE:**

Left-hand shown, right-hand similar.

Install the special tool to the exhaust manifold.

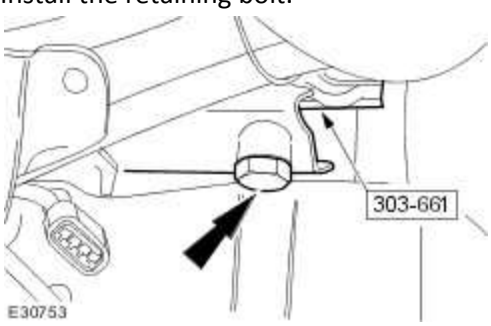
- Install the retaining bolt.



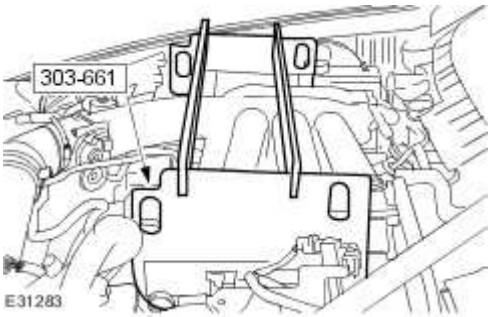
9 . **NOTE:**

Left-hand shown, right-hand similar.

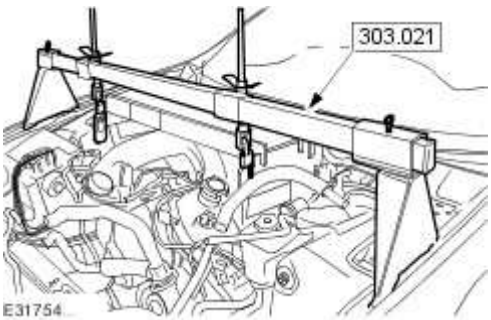
Install the retaining bolt.



10 . Install the special tool support bars to the special tool.



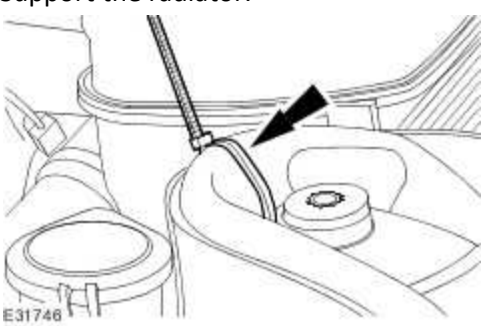
11 . Install the special tool.



12 . **NOTE:**

Right-hand shown, left-hand similar.

Support the radiator.



13 . Remove the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

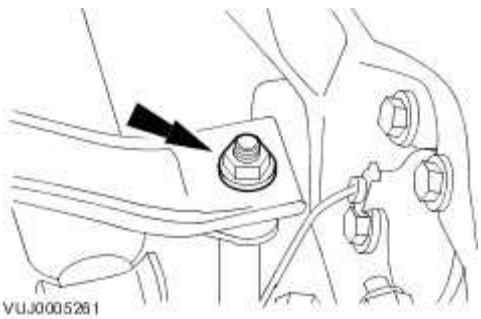
14 . Remove the air deflector.
For additional information, refer to Air Deflector (76.11.41)

15 . Remove both front wheel and tires.
For additional information, refer to Wheel and Tire (74.20.05)

16 . **NOTE:**

Left-hand shown, right-hand similar.

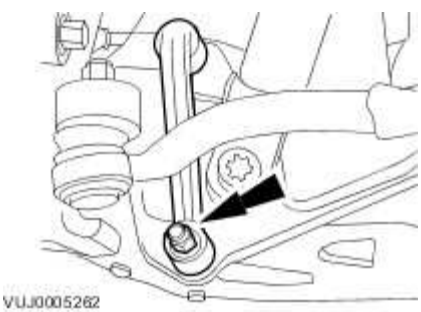
Remove the stabilizer bar link retaining nut.



17 . **NOTE:**

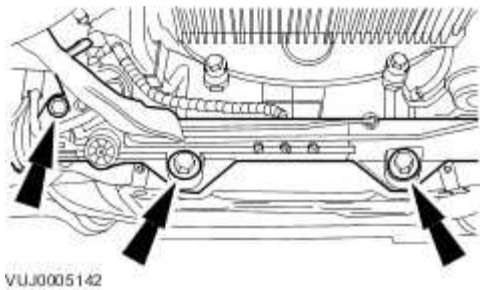
Left-hand shown, right-hand similar.

Remove the stabilizer bar link.



18
. **CAUTION: Make sure the steering gear is supported. Failure to follow this instruction may result in damage to the vehicle.**

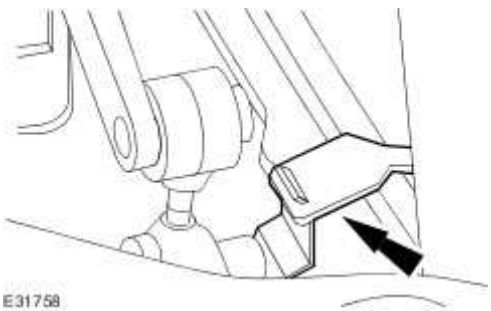
Detach the steering gear.



19 . **NOTE:**

Left-hand shown, right-hand similar.

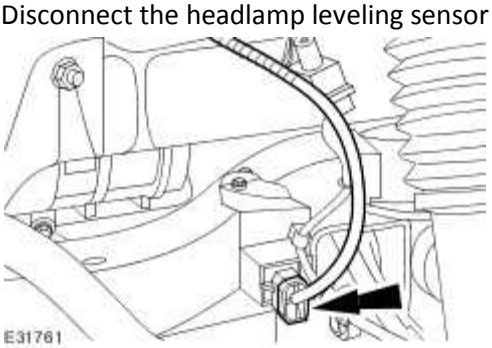
Detach the headlamp leveling sensor retaining clip.



20 . **NOTE:**

Left-hand shown, right-hand similar.

Disconnect the headlamp leveling sensor electrical connector.

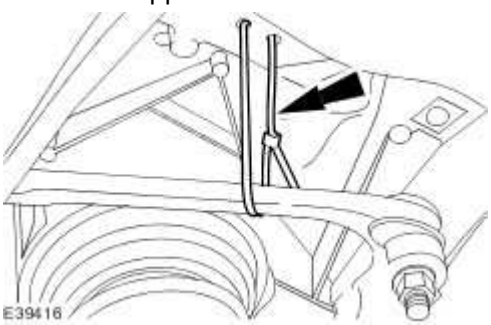


21 . **CAUTION: Make sure the full weight of the suspension components are supported. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

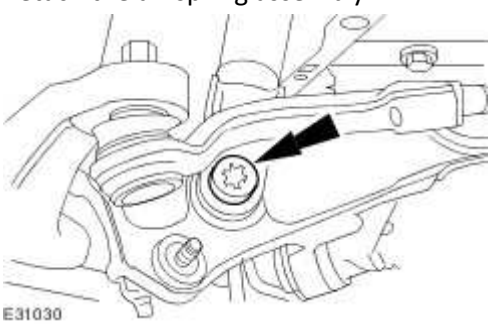
Secure the upper arm.



22 . **NOTE:**

Left-hand shown, right-hand similar.

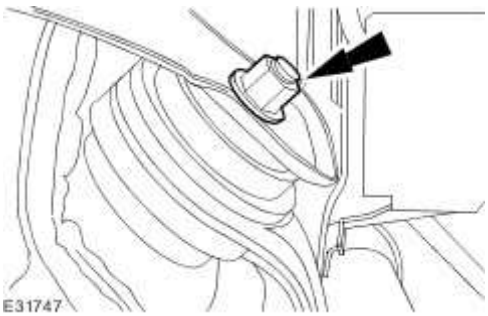
Detach the air spring assembly.



23 . **NOTE:**

Left-hand shown, right-hand similar.

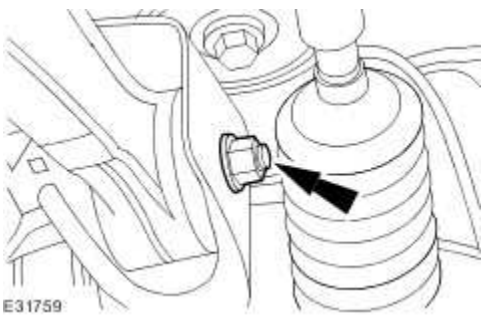
Detach the front lower arm.



24 . **NOTE:**

Left-hand shown, right-hand similar.

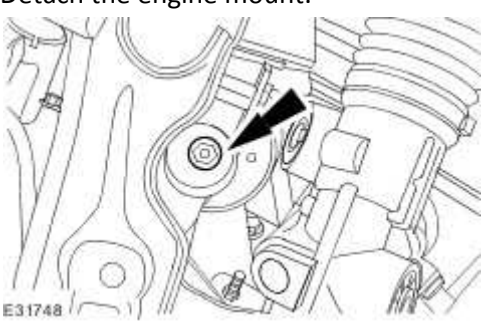
Detach the rear lower arm.



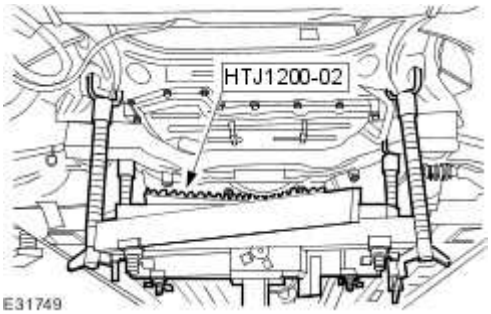
25 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the engine mount.



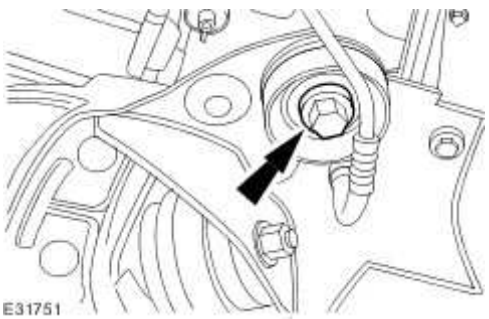
26 . Install the special tool.



27 . **NOTE:**

Left-hand shown, right-hand similar.

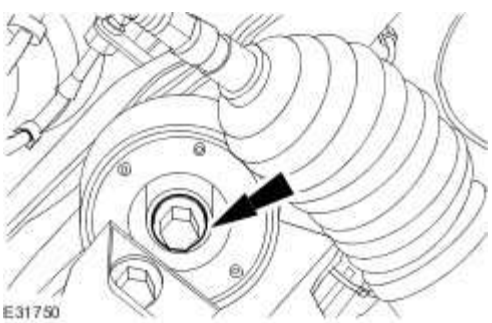
Remove and discard the front subframe front retaining bolt.



28 . **NOTE:**

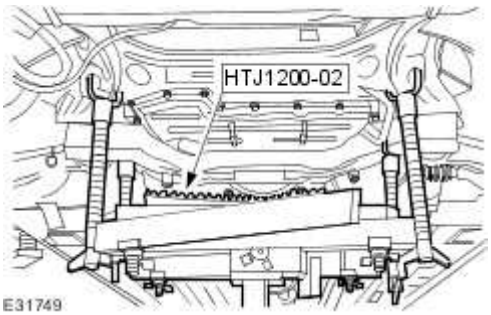
Left-hand shown, right-hand similar.

Remove and discard the front subframe rear retaining bolt.



29 . Using the special tool remove the front subframe.

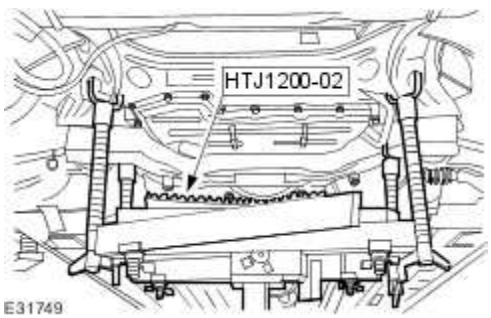
- Remove the front subframe spacer.



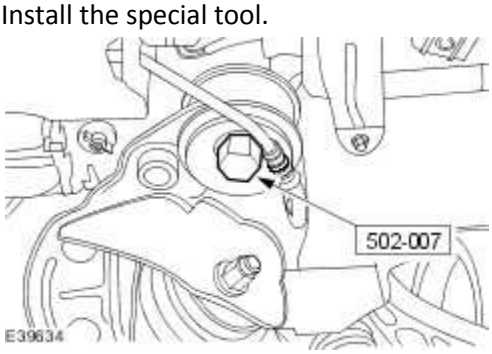
Installation

1 . Using the special tool, install the front subframe.

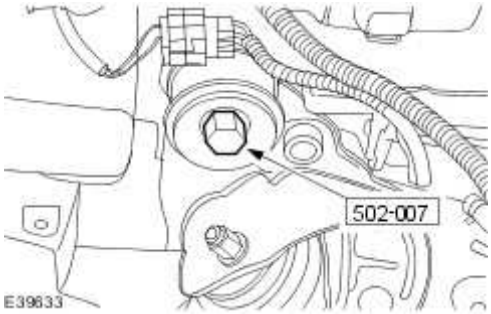
- Install the front subframe spacer.



2 . Install the special tool.



3 . Install the special tool.

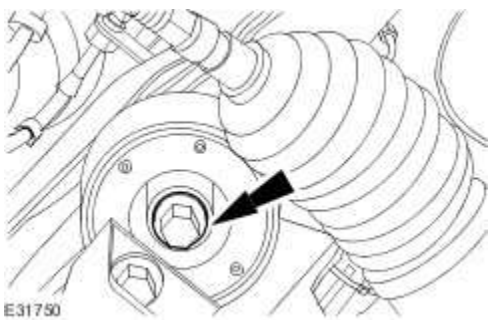


4 . **NOTE:**

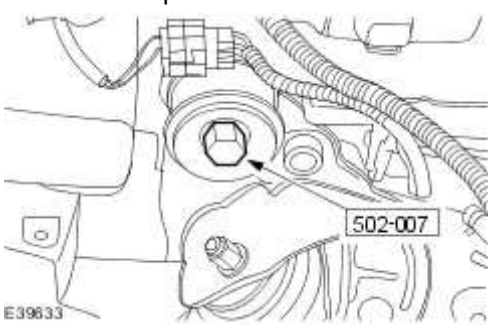
Left-hand shown, right-hand similar.

Install a new front subframe rear retaining bolt.

- Tighten to 115 Nm.



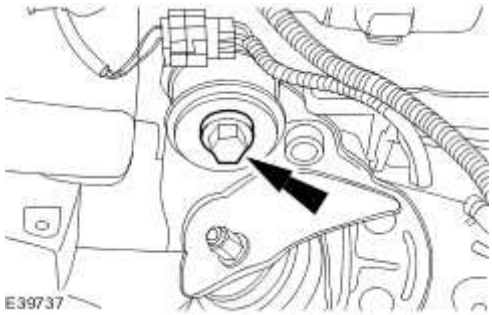
5 . Remove the special tool.



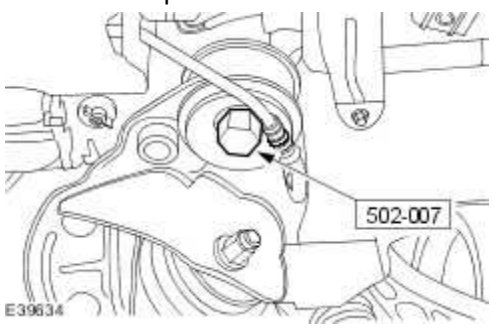
6 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.

- Stage 2: Tighten 270°.

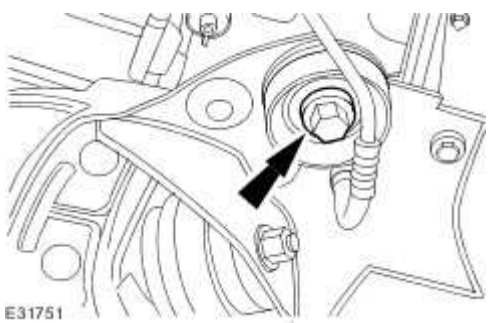


7 . Remove the special tool.

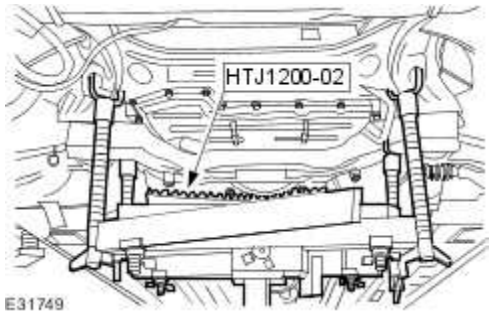


8 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.
- Stage 2: Tighten 270°.



9 . Remove the special tool.

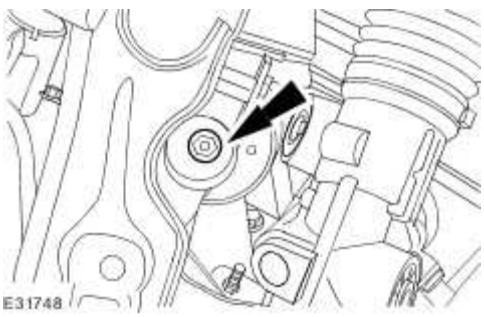


10 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the engine mount.

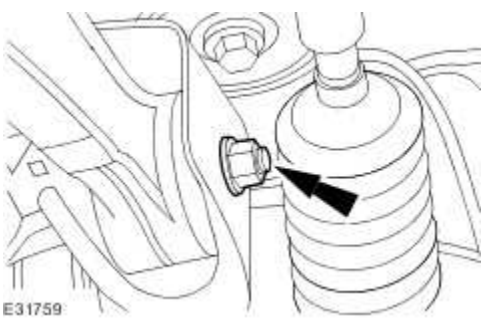
Tighten to 63 Nm.



11 . **NOTE:**

Left-hand shown, right-hand similar.

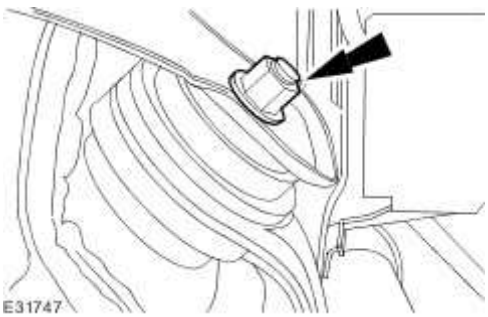
Attach the rear lower arm.



12 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the front lower arm.

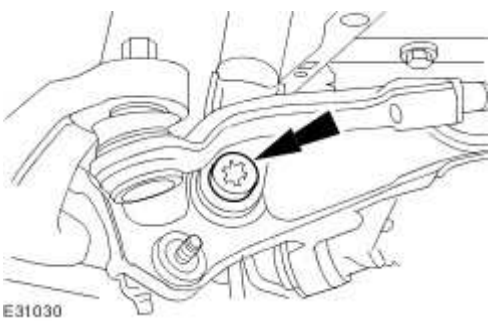


13 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the air spring assembly.

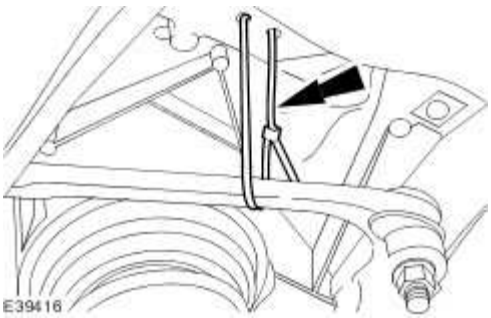
Tighten to 175 Nm.



14 . **NOTE:**

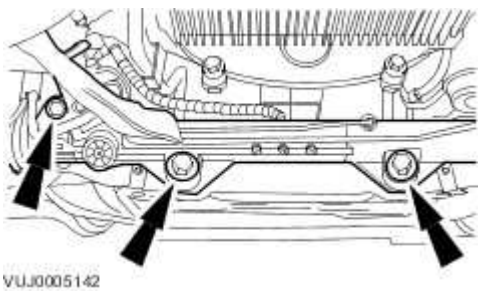
Left-hand shown, right-hand similar.

Release the upper arm.



15 . Install the steering gear.

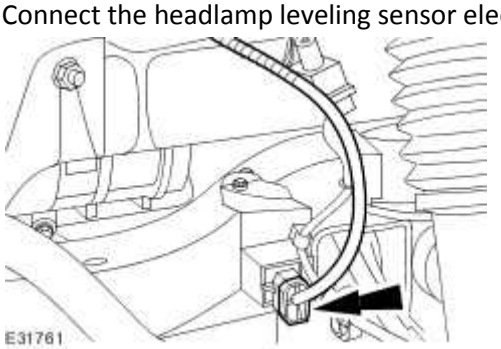
Tighten to 100 Nm.



16 . **NOTE:**

Left-hand shown, right-hand similar.

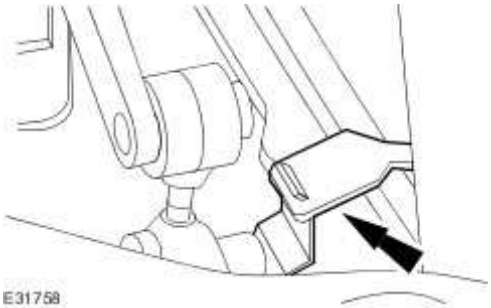
Connect the headlamp leveling sensor electrical connector.



17 . **NOTE:**

Left-hand shown, right-hand similar.

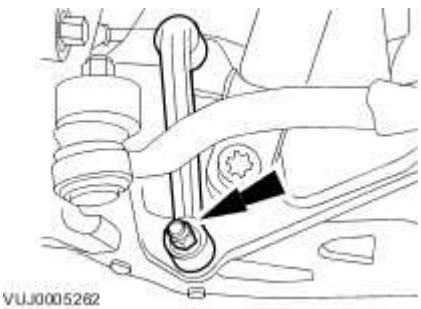
Attach the headlamp leveling sensor retaining clip.



18 . **NOTE:**

Left-hand shown, right-hand similar.

Install the stabilizer bar link.

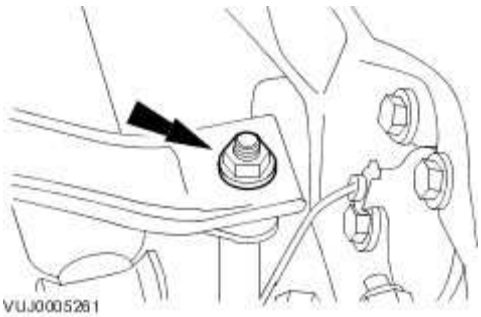


19 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the stabilizer bar link.

Tighten to 43 Nm.



20 . Install both front wheel and tires.
For additional information, refer to Wheel and Tire (74.20.05)

21 . Install the air deflector.
For additional information, refer to Air Deflector (76.11.41)

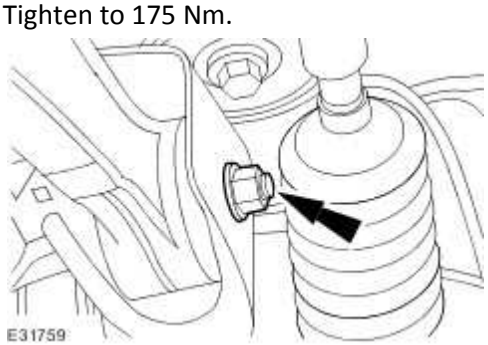
22 . Install the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

23
. **CAUTION: The final tightening of the rear lower arm inner retaining nut and bolt must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the component.**

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.

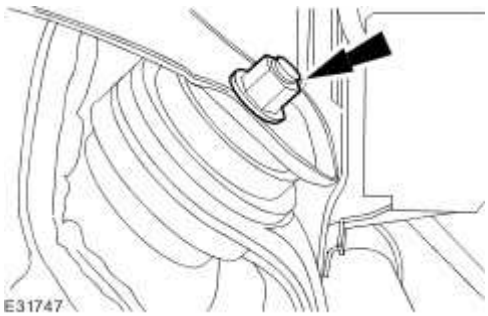


24 . **CAUTION: The final tightening of the front lower arm inner retaining nut and bolt must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the component.**

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.



25 . **NOTE:**

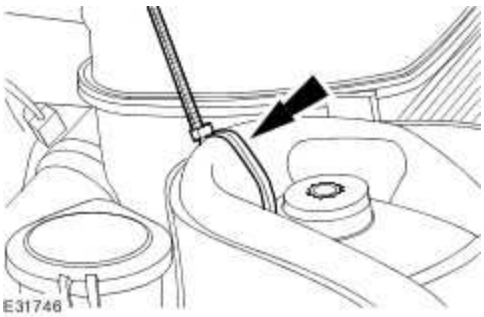
Left-hand shown, right-hand similar.

Tighten to 70 Nm.

26 . **NOTE:**

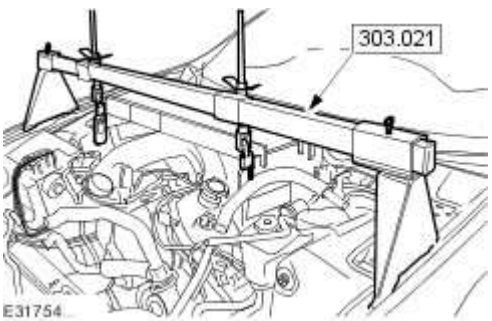
Right-hand shown, left-hand similar.

Remove the radiator support.

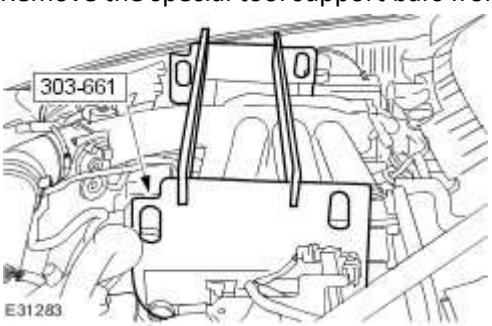


27 . Remove the special tool.

- Loosen the special tool adjustment bolts.



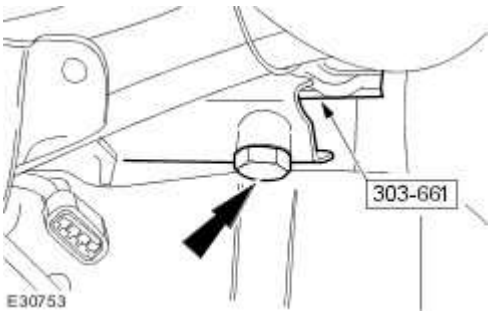
28 . Remove the special tool support bars from the special tool.



29 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the retaining bolt.

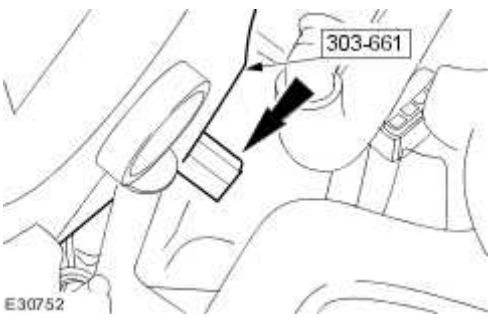


30 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the special tool from the exhaust manifold.

- Remove the retaining bolt.

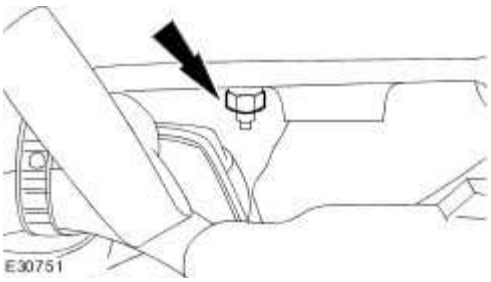


31 . **NOTE:**

Left-hand shown, right-hand similar.

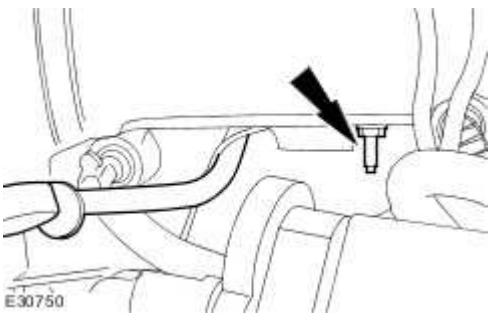
Install the exhaust manifold retaining nut.

- Tighten to 20 Nm.

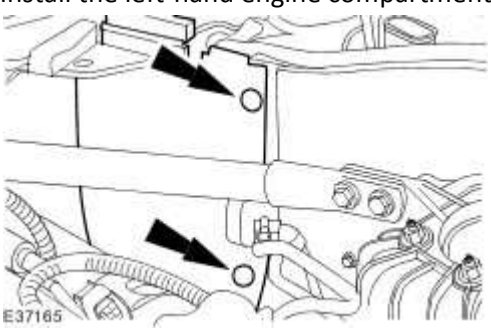


32 . Attach the dipstick tube.

- Install the dipstick tube retaining bolt.
- Tighten to 10 Nm.



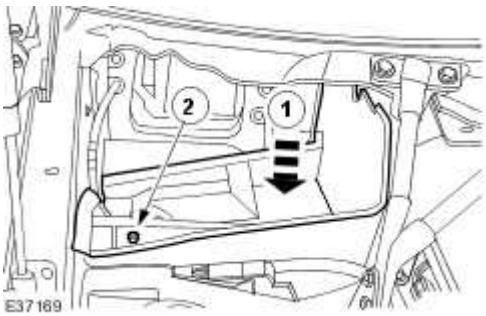
33 . Install the left-hand engine compartment access panel.



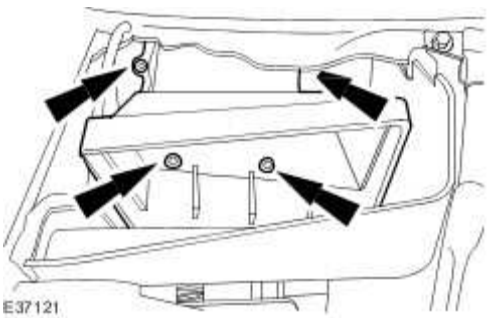
34 . Install the right-hand engine compartment panel retaining bolt.

1) Install the right-hand engine compartment panel.

2) Install the right-hand engine compartment panel retaining bolt.



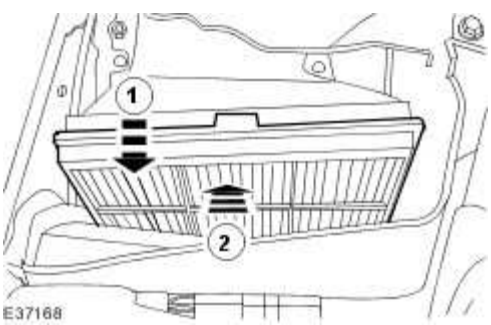
35 . Install the cabin air filter housing.



36 . Attach the cabin air filter.

1) Install the cabin air filter.

2) Attach the cabin air filter.



37 . Install the cowl vent screen.
For additional information, refer to Cowl Vent Screen (76.10.01)

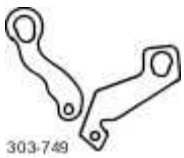
38 . Check the caster and camber adjustment.

For additional information, refer to Camber and Caster Adjustment

Front Subframe - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.5L NA V8 - AJV8 (76.10.05)

Special Service Tools

Powertrain Assembly Jack
HTJ1200-02



Engine Lifting Brackets
303-749

Engine Support Bracket
303-021

Subframe Alignment Bolt
502-007

Removal

Vehicles with 3.5L or 4.2L engine without supercharger

1. Remove the throttle body.

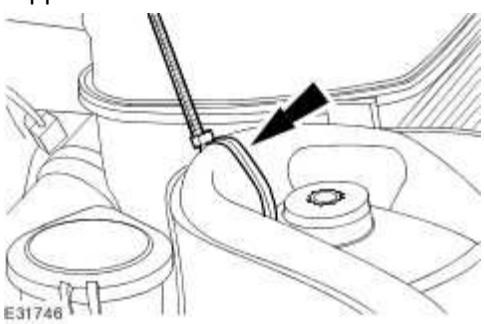
. For additional information, refer to Throttle Body - 4.2L NA V8 - AJV8/3.5L NA V8 - AJV8, VIN Range: G00442->G45703 (19.70.04)
For additional information, refer to Throttle Body - 4.2L NA V8 - AJV8/3.5L NA V8 - AJV8, VIN Range: G45704->G99999 (19.70.04)

All vehicles

2 . **NOTE:**

Right-hand shown, left-similar.

Support the radiator.

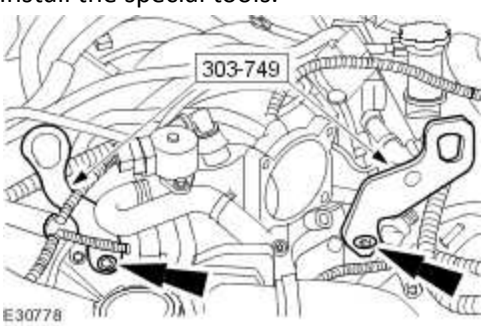


3 **NOTE:**

.

Vehicles with 3.5L or 4.2L engine without supercharger shown, vehicles with 4.2L engine with supercharger similar.

Install the special tools.



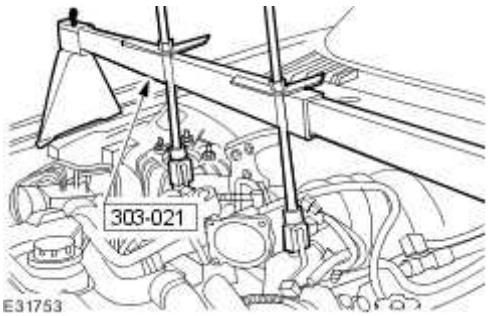
4 **NOTE:**

.

Vehicles with 3.5L or 4.2L engine without supercharger shown, vehicles with 4.2L engine

with supercharger similar.

Install the special tool.



5 . Remove the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

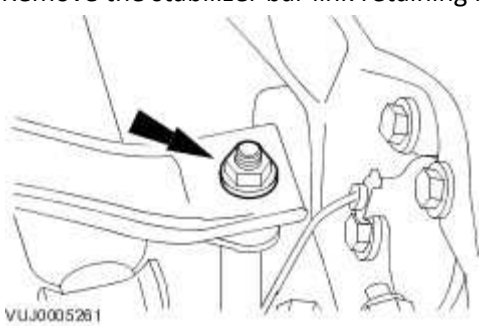
6 . Remove the air deflector.
For additional information, refer to Air Deflector (76.11.41)

7 . Remove both front wheel and tires.
For additional information, refer to Wheel and Tire (74.20.05)

8 . **NOTE:**

Left-hand shown, right-hand similar.

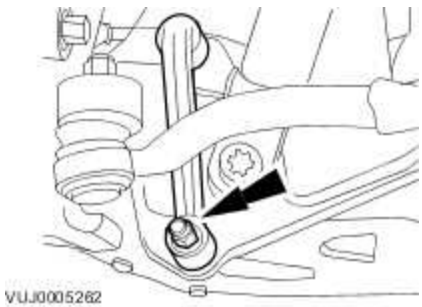
Remove the stabilizer bar link retaining nut.



9 . **NOTE:**

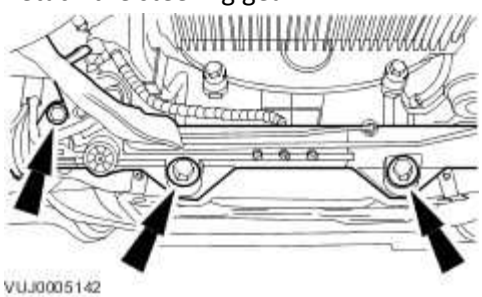
Left-hand shown, right-hand similar.

Remove the stabilizer bar link.



10 . **CAUTION: Make sure the steering gear is supported. Failure to follow this instruction may result in damage to the vehicle.**

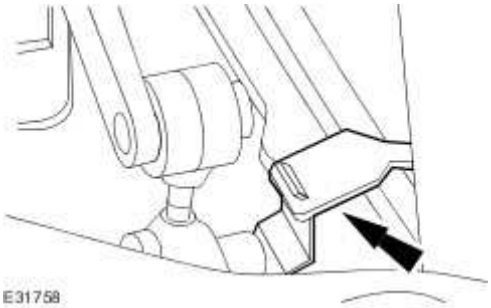
Detach the steering gear.



11 . **NOTE:**

Left-hand shown, right-hand similar.

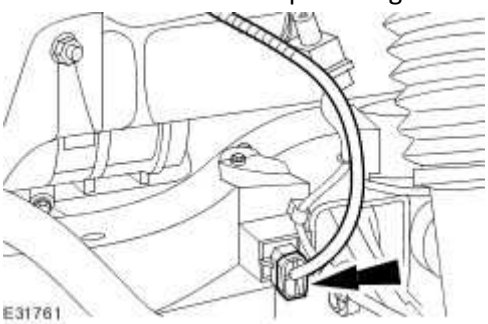
Detach the headlamp leveling sensor retaining clip.



12 . **NOTE:**

Left-hand shown, right-hand similar.

Disconnect the headlamp leveling sensor electrical connector.

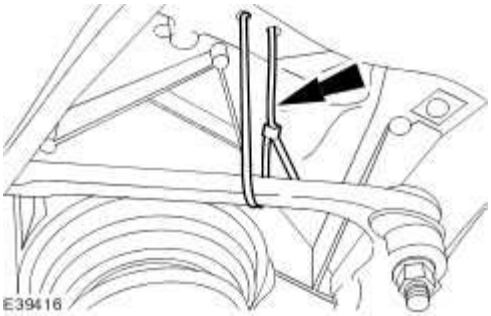


13 . **CAUTION: Make sure the full weight of the suspension components are supported. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

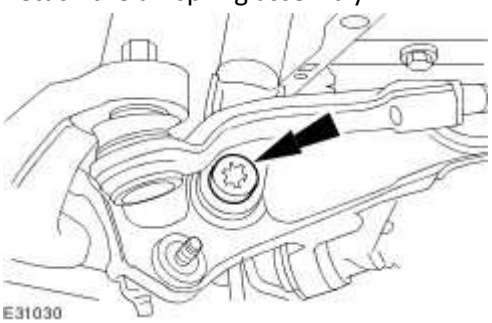
Secure the upper arm.



14 . **NOTE:**

Left-hand shown, right-hand similar.

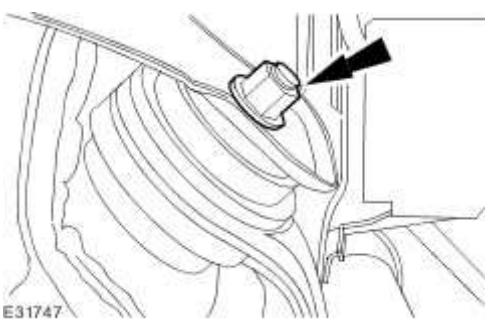
Detach the air spring assembly.



15 . **NOTE:**

Left-hand shown, right-hand similar.

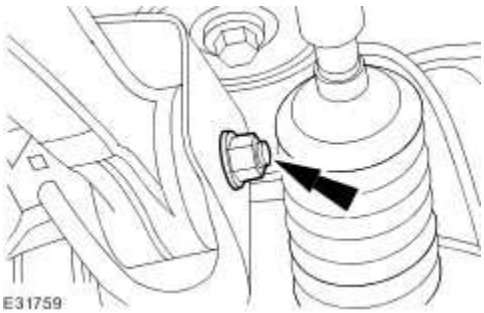
Detach the front lower arm.



16 . **NOTE:**

Left-hand shown, right-hand similar.

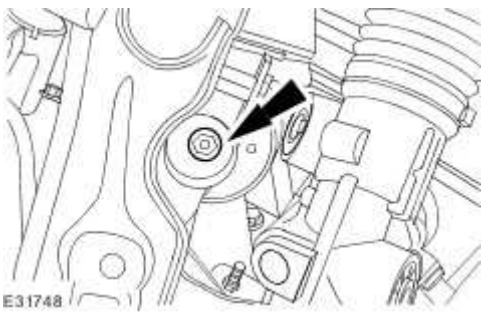
Detach the rear lower arm.



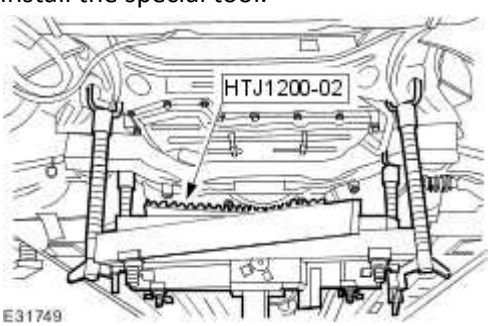
17 . **NOTE:**

Left-hand shown, right-hand similar.

Detach the engine mount.



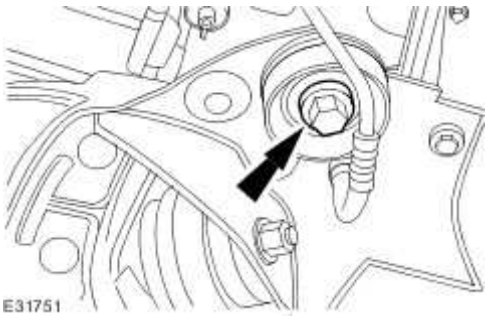
18 . Install the special tool.



19 . **NOTE:**

Left-hand shown, right-hand similar.

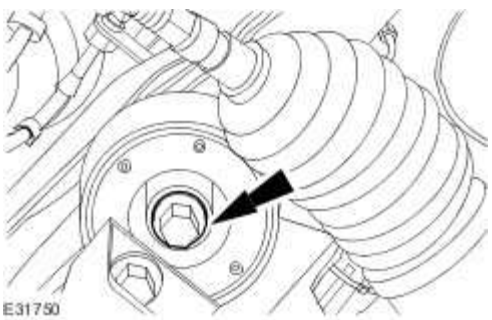
Remove and discard the front subframe front retaining bolt.



20 . **NOTE:**

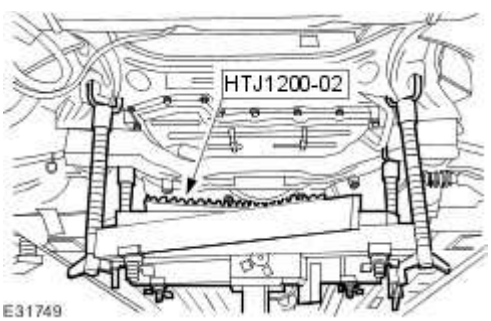
Left-hand shown, right-hand similar.

Remove and discard the front subframe rear retaining bolt.



21 . Using the special tool remove the front subframe.

- Remove the front subframe spacer.

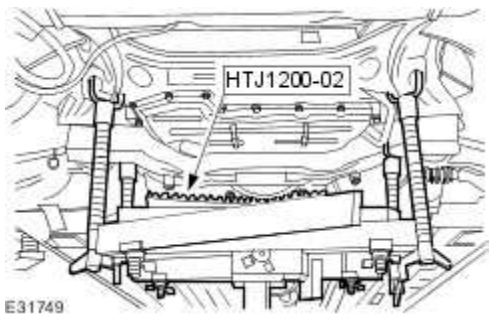


Installation

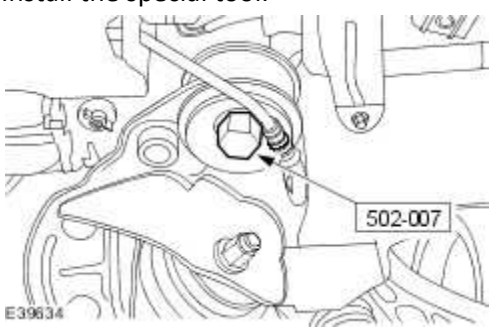
All vehicles

1 . Using the special tool, install the front subframe.

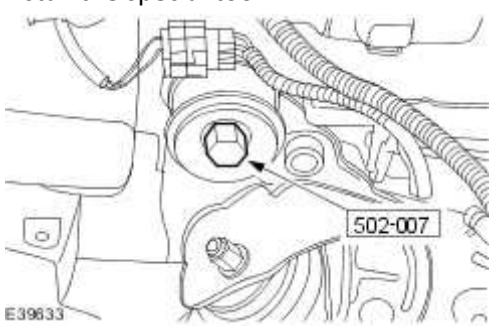
- Install the front subframe spacer.



2 . Install the special tool.



3 . Install the special tool.

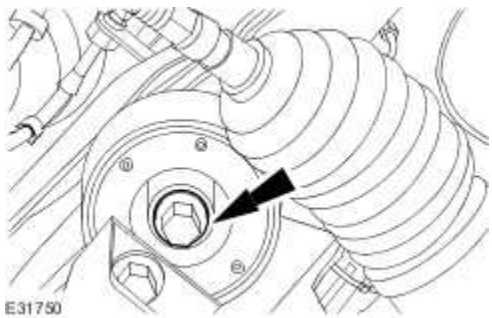


4 . **NOTE:**

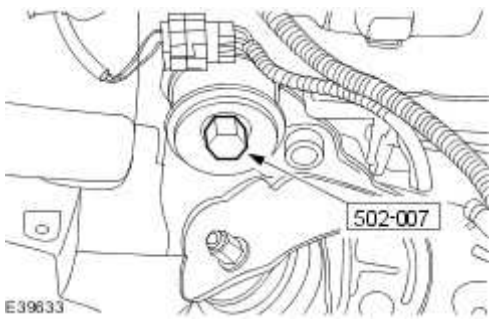
Left-hand shown, right-hand similar.

Install a new front subframe rear retaining bolt.

- Tighten to 115 Nm.

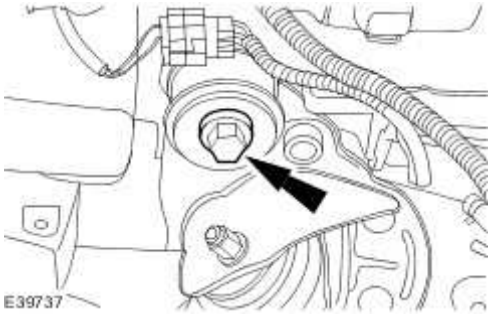


5 . Remove the special tool.

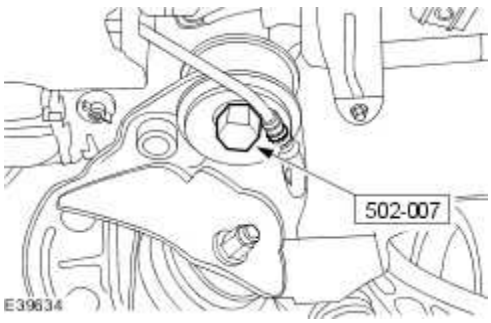


6 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.
- Stage 2: Tighten 270°.

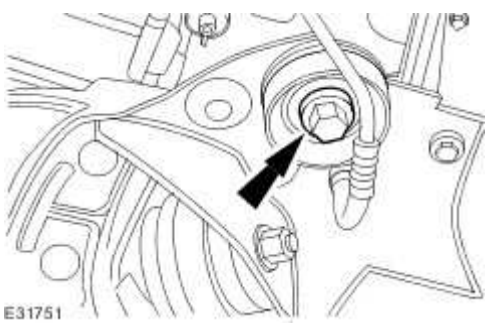


7 . Remove the special tool.

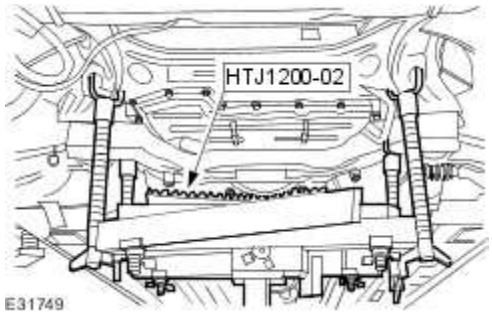


8 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.
- Stage 2: Tighten 270°.



9 . Remove the special tool.

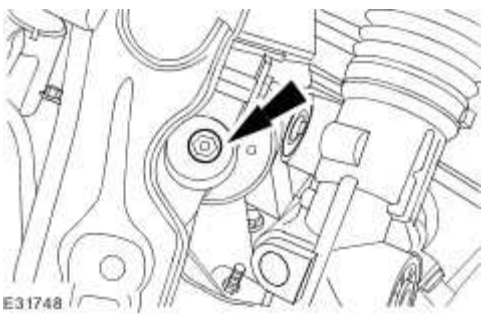


10 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the engine mount.

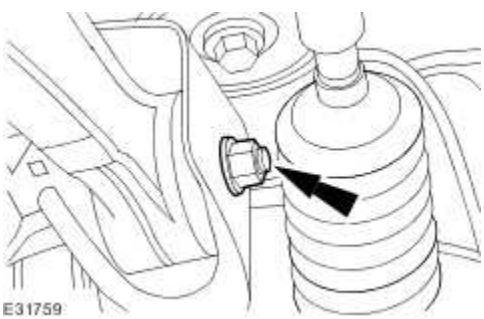
Tighten to 63 Nm.



11 . **NOTE:**

Left-hand shown, right-hand similar.

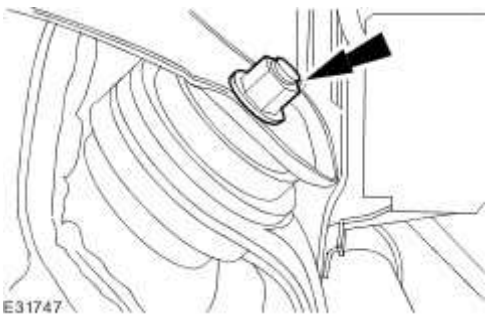
Attach the rear lower arm.



12 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the front lower arm.

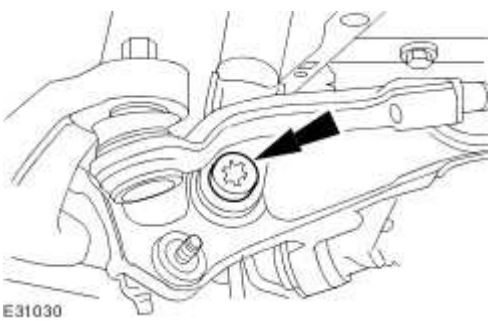


13 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the air spring assembly.

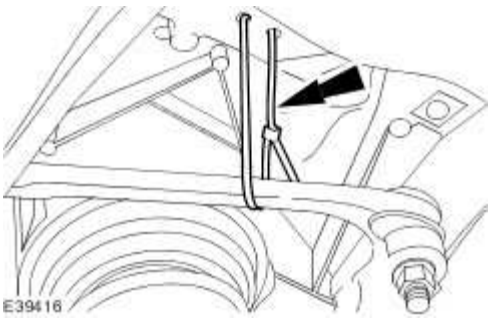
Tighten to 175 Nm.



14 . **NOTE:**

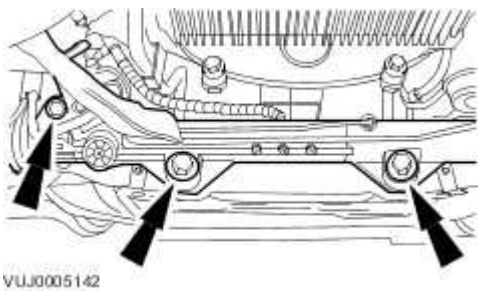
Left-hand shown, right-hand similar.

Release the upper arm.



15 . Install the steering gear.

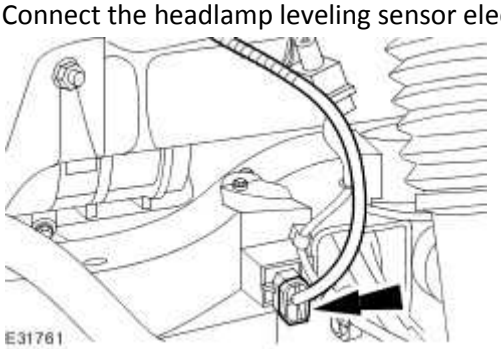
Tighten to 100 Nm.



16 . **NOTE:**

Left-hand shown, right-hand similar.

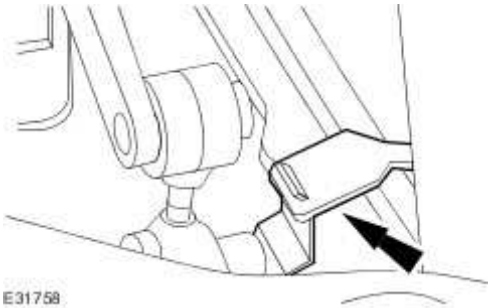
Connect the headlamp leveling sensor electrical connector.



17 . **NOTE:**

Left-hand shown, right-hand similar.

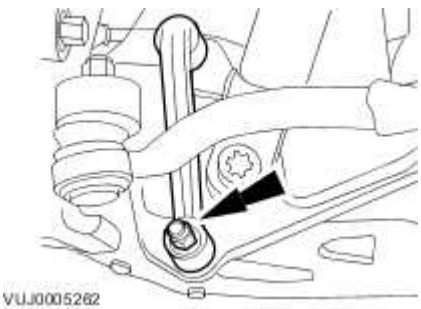
Attach the headlamp leveling sensor retaining clip.



18 . **NOTE:**

Left-hand shown, right-hand similar.

Install the stabilizer bar link.

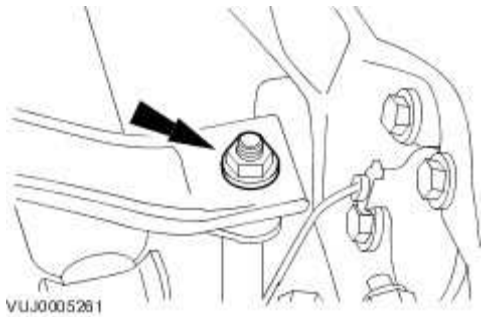


19 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the stabilizer bar link.

Tighten to 43 Nm.



20 . Install both front wheel and tires.
For additional information, refer to Wheel and Tire (74.20.05)

21 . Install the air deflector.
For additional information, refer to Air Deflector (76.11.41)

22 . Install the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

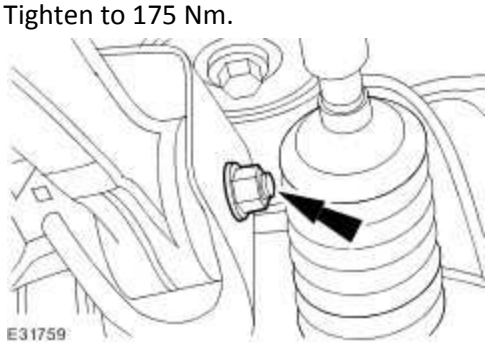
23 **NOTE:**
.

The final tightening of the rear lower arm inner retaining nut and bolt must be carried out with the vehicle on its wheels.

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.



24 **NOTE:**

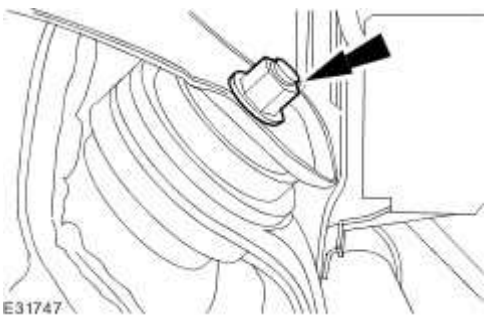
.

The final tightening of the front lower arm inner retaining nut and bolt must be carried out with the vehicle on its wheels.

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.



25 . **NOTE:**

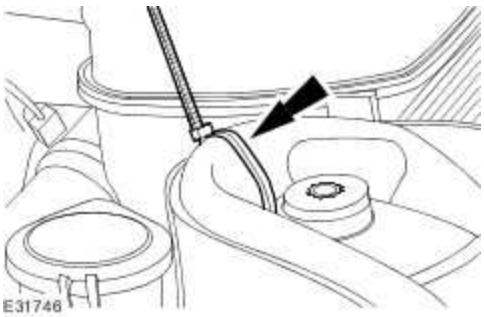
Left-hand shown, right-hand similar.

Tighten to 70 Nm.

26 . **NOTE:**

Right-hand shown, left-similar.

Remove the radiator support.



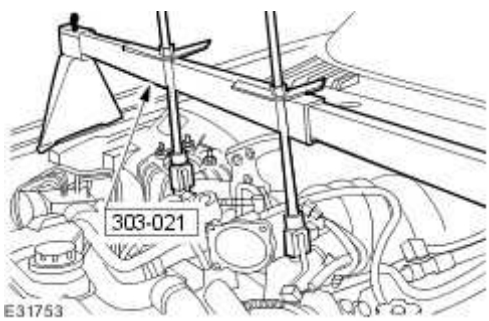
27 **NOTE:**

.

Vehicles with 3.5L or 4.2L engine without supercharger shown, vehicles with 4.2L engine with supercharger similar.

Remove the special tool.

- Loosen the special tool adjustment bolts.

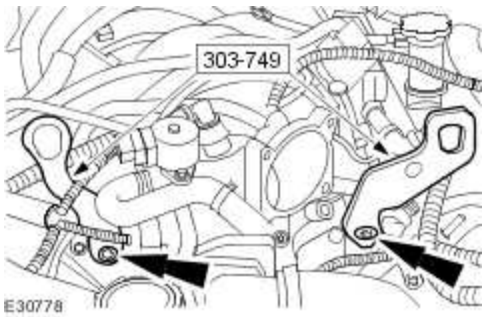


28 **NOTE:**

.

Vehicles with 3.5L or 4.2L engine without supercharger shown, vehicles with 4.2L engine with supercharger similar.

Remove the special tools.



Vehicles with 4.2L engine without supercharger

29 Install the throttle body.

. For additional information, refer to Throttle Body - 4.2L NA V8 - AJV8/3.5L NA V8 - AJV8, VIN Range: G00442->G45703 (19.70.04)
For additional information, refer to Throttle Body - 4.2L NA V8 - AJV8/3.5L NA V8 - AJV8, VIN Range: G45704->G99999 (19.70.04)

All vehicles

30 . Check the caster and camber adjustment.
For additional information, refer to Camber and Caster Adjustment

Front Subframe - 2.7L V6 - TdV6 (76.10.05)

Special Service Tools

HTJ1200-2
Powertrain Assembly Jack

303-1129
Engine Lifting Brackets

303-021
Engine Support Bracket

502-007
Subframe Alignment Bolt

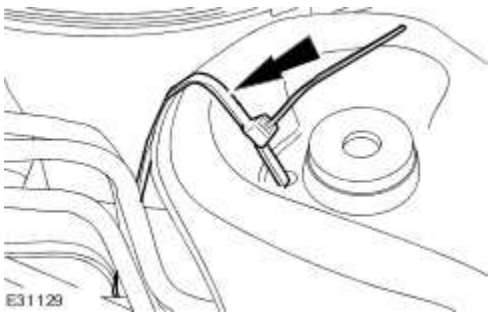
Removal

1 . Remove the radiator grille opening panel.
For additional information, refer to Radiator Grille Opening Panel (76.10.06)

2 . **NOTE:**

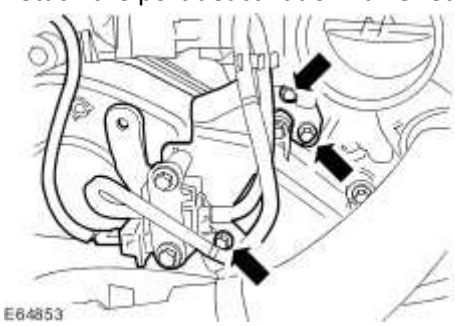
Right-hand shown, left-hand similar.

Using suitable tie strap(s), support the radiator.

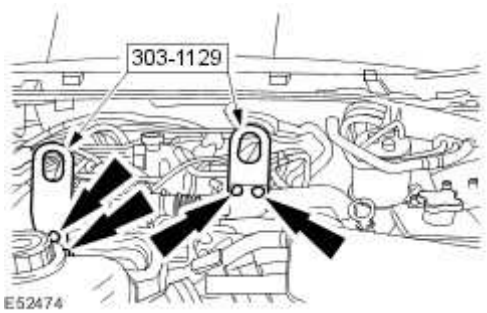


3 . Remove the intake air shutoff throttle.
For additional information, refer to Intake Air Shutoff Throttle

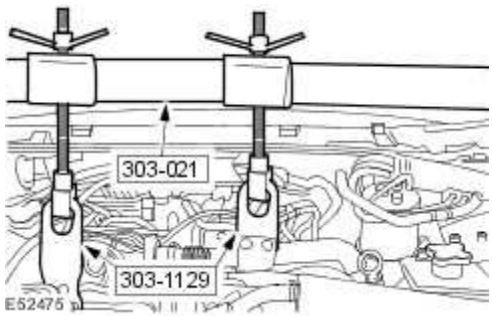
4 . Detach the port deactivation valve retaining bracket.



5 . Install the special tools.



6 . Install the special tool.

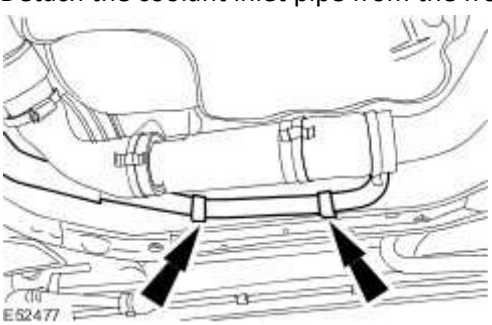


7 . Remove the air deflector.
For additional information, refer to Air Deflector (76.11.41)

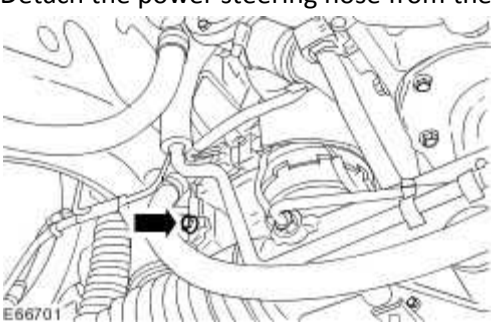
8 . Remove the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

9 . Remove both front wheels and tires.
For additional information, refer to Wheel and Tire (74.20.05)

10 . Detach the coolant inlet pipe from the front subframe.



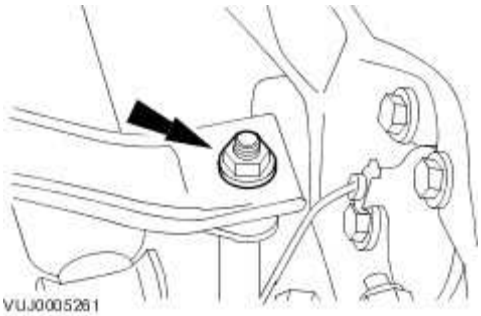
11 . Detach the power steering hose from the front subframe.



12 . **NOTE:**

Left-hand shown, right-hand similar.

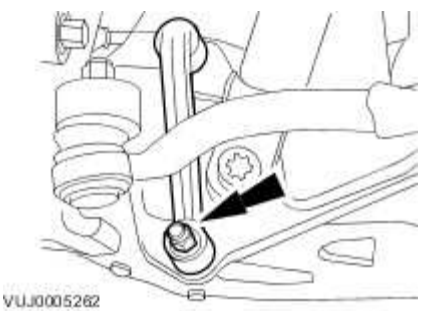
Remove the stabilizer bar link upper retaining nut.



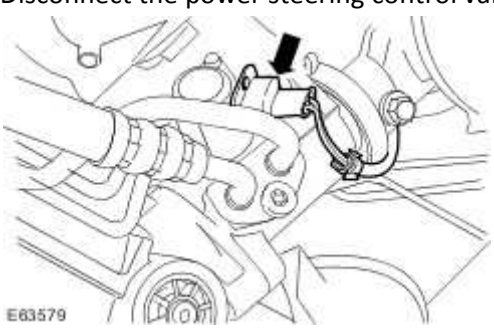
13 . **NOTE:**

Left-hand shown, right-hand similar.

Remove the stabilizer bar link.

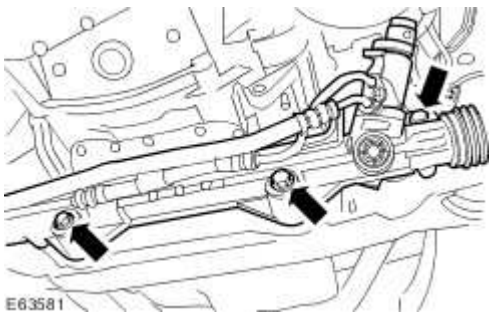


14 . Disconnect the power steering control valve actuator electrical connector.

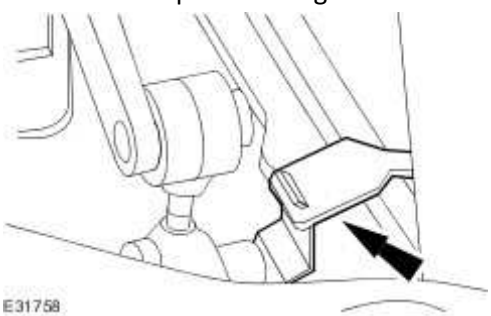


15. **CAUTION: The steering gear must be supported. Failure to follow this instruction may result in damage to the steering gear.**

Detach the steering gear.

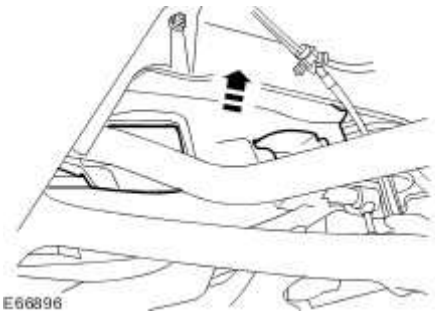


16 . Detach the suspension height sensor.



17 . Disconnect the suspension height sensor electrical connector.

18 . Reposition the left-hand splash shield.



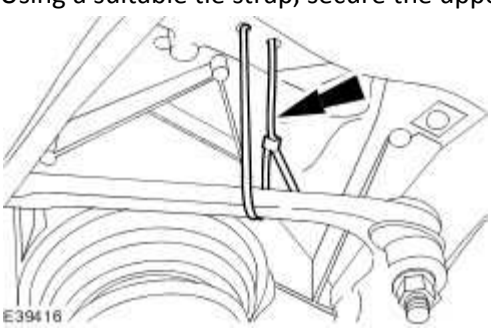
19 . Detach the transmission fluid cooler.

20 . **CAUTION: Make sure the full weight of the suspension components are supported. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

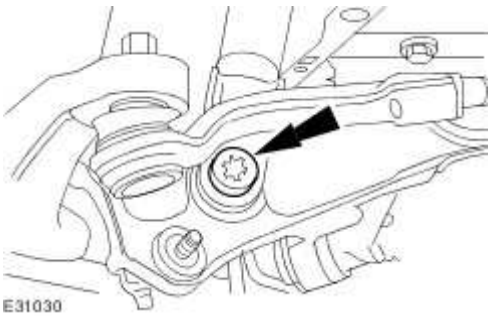
Using a suitable tie strap, secure the upper arm.



21 . **NOTE:**

Left-hand shown, right-hand similar.

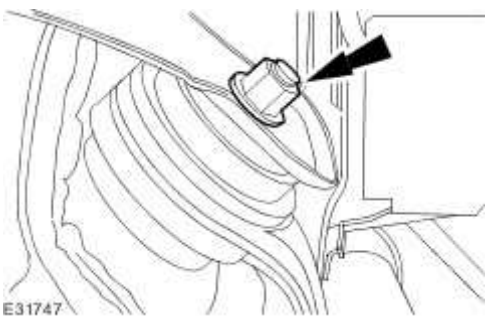
Detach the air spring assembly.



22 . **NOTE:**

Left-hand shown, right-hand similar.

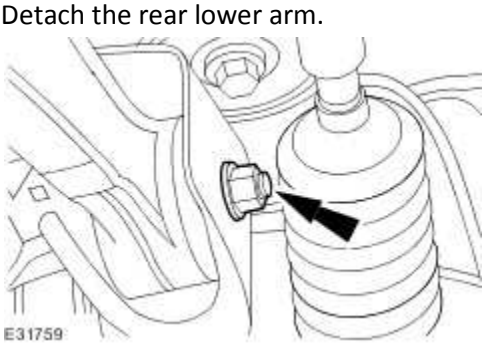
Detach the front lower arm.



23 . **NOTE:**

Left-hand shown, right-hand similar.

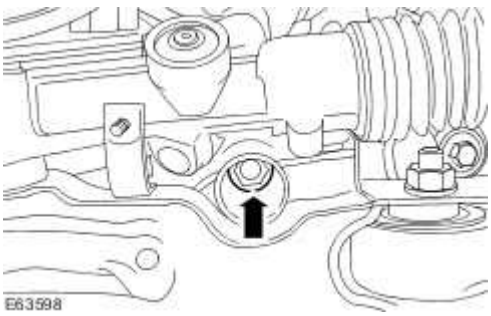
Detach the rear lower arm.



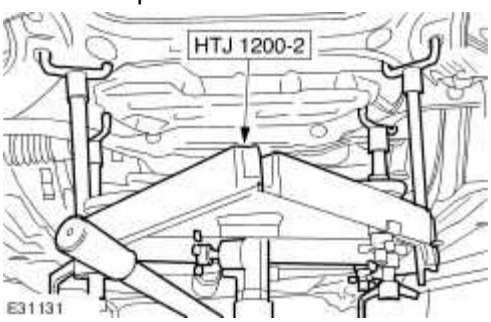
24 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the engine mounts lower retaining nuts.



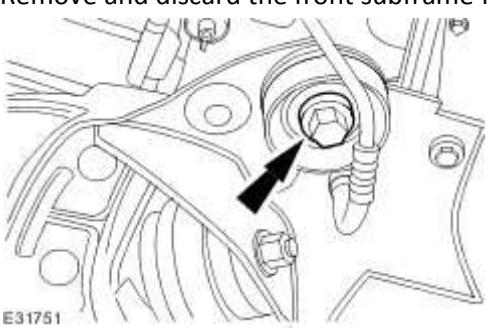
25 . Install the special tool to the front subframe.



26 . **NOTE:**

Left-hand shown, right-hand similar.

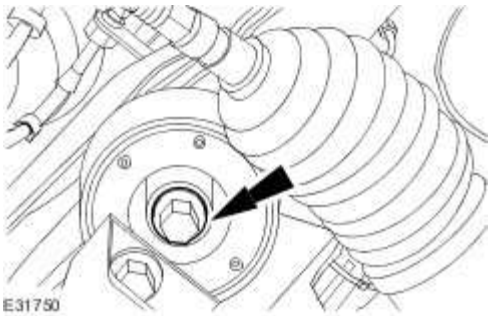
Remove and discard the front subframe front retaining bolt.



27 . **NOTE:**

Left-hand shown, right-hand similar.

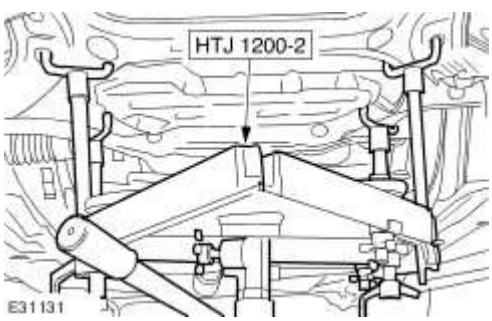
Remove and discard the front subframe rear retaining bolt.



28 . **CAUTION: When lowering the special tool care must be taken to manoeuvre the special tool so that the front subframe does not touch the air conditioning (A/C) pipes. Failure to follow this instruction may result in damage to the A/C pipes.**

Remove the front subframe.

- Remove the front subframe spacer.



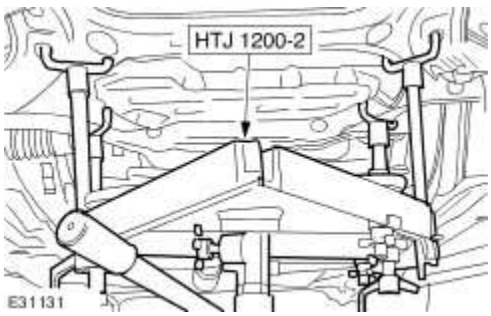
Installation

1 . **CAUTION: When raising the special tool care must be taken to manoeuvre the special tool so that the front subframe does not touch the air conditioning (A/C) pipes.**

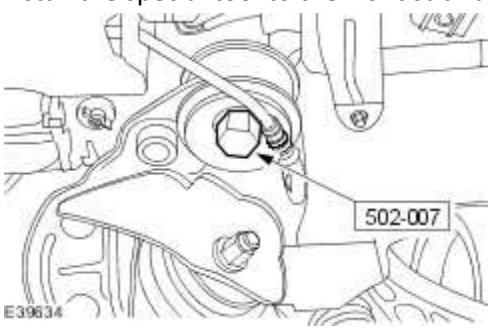
Failure to follow this instruction may result in damage to the A/C pipes.

Install the front subframe.

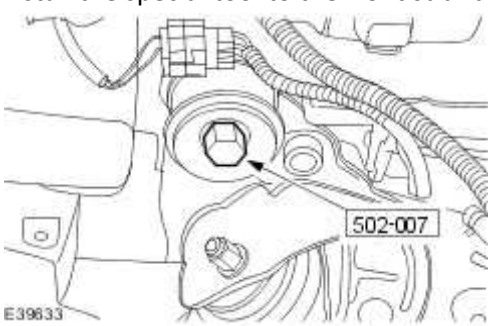
- Install the front subframe spacer.



2 . Install the special tool to the front subframe.



3 . Install the special tool to the front subframe.

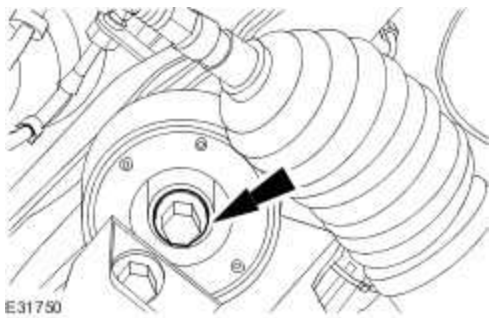


4 . **NOTE:**

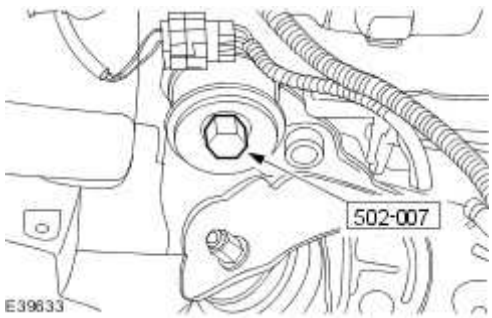
Left-hand shown, right-hand similar.

Install a new front subframe rear retaining bolt.

- Tighten to 115 Nm.

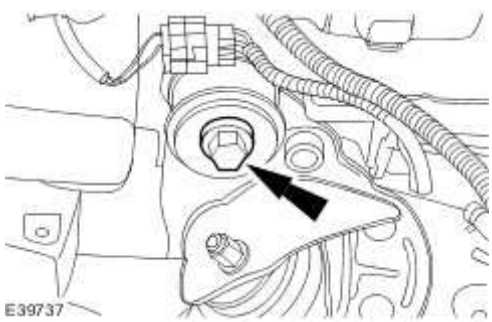


5 . Remove the special tool from the subframe.

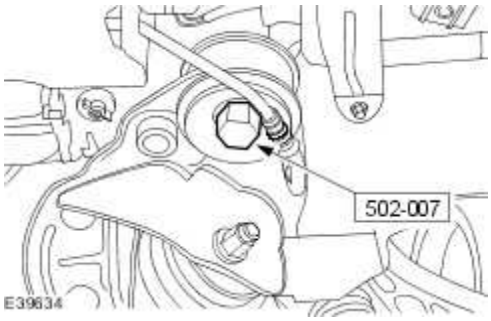


6 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.
- Stage 2: Tighten 270°.

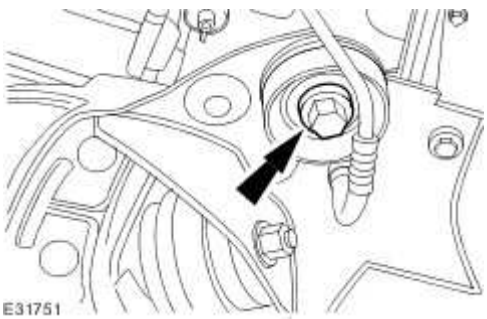


7 . Remove the special tool from the subframe.

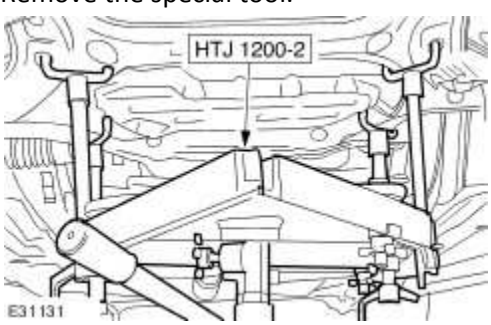


8 . Install a new front subframe front retaining bolt.

- Stage 1: Tighten to 100 Nm.
- Stage 2: Tighten 270°.



9 . Remove the special tool.

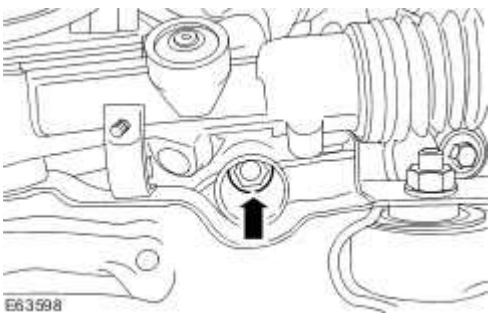


10 . **NOTE:**

Right-hand shown, left-hand similar.

Install the engine mounts lower retaining nuts.

- Tighten to 63 Nm.

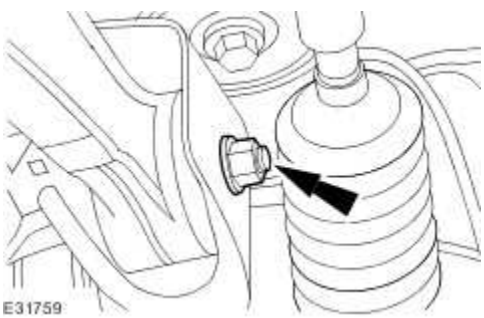


11. **CAUTION: The final tightening of the rear lower arm retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Attach the rear lower arm.

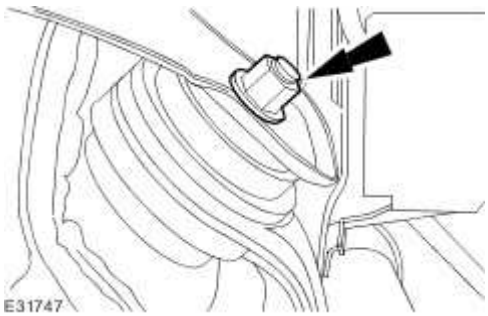


12. **CAUTION: The final tightening of the front lower arm retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Attach the front lower arm.

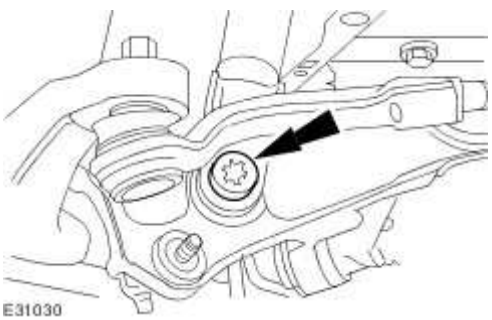


13 . **NOTE:**

Left-hand shown, right-hand similar.

Attach the air spring assembly.

- Tighten to 175 Nm.

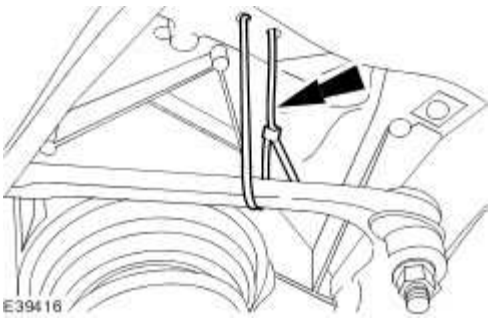


14 . **NOTE:**

Left-hand shown, right-hand similar.

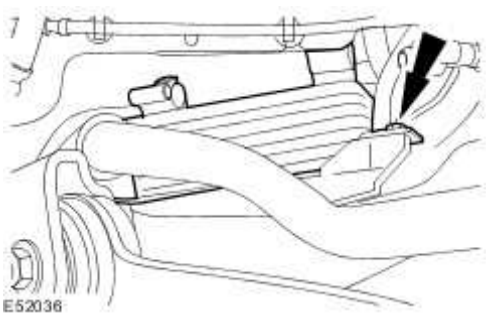
Release the upper arm.

- Remove and discard the tie strap.

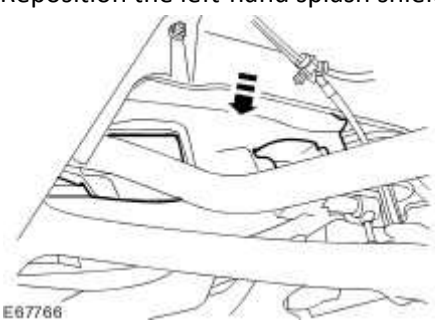


15 . Attach the transmission fluid cooler.

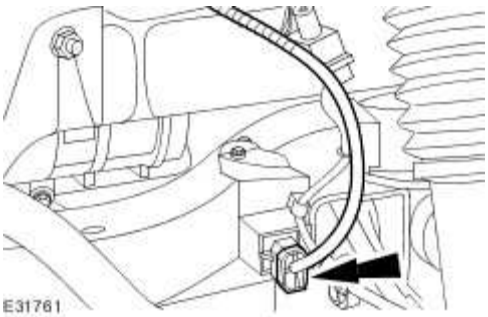
Tighten to 5 Nm.



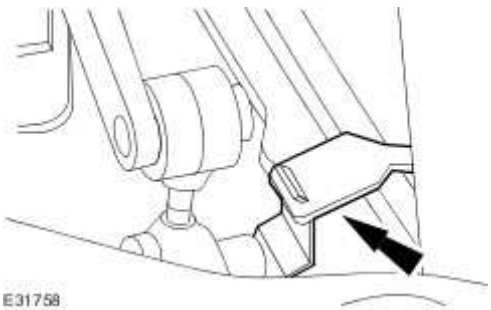
16 . Reposition the left-hand splash shield.



17 . Connect the suspension height sensor electrical connector.

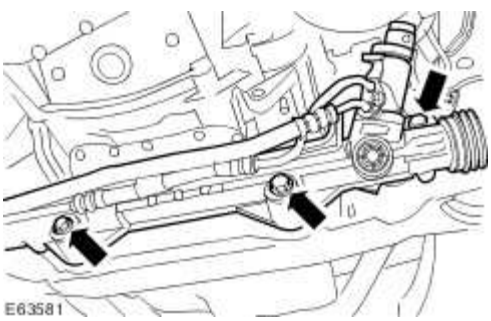


18 . Attach the suspension height sensor.

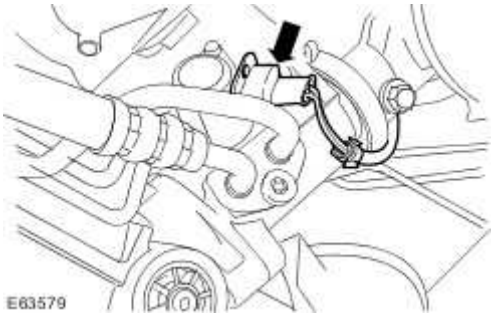


19 . Attach the steering gear.

Tighten to 100 Nm.



20 . Connect the power steering control valve actuator electrical connector.

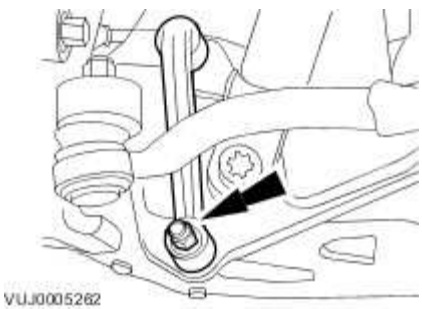


21 . **CAUTION: The final tightening of the stabilizer bar link retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Install the stabilizer bar link.

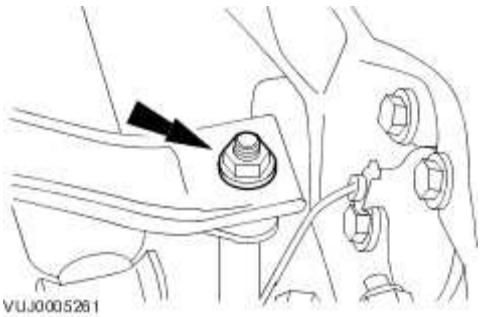


22 . **NOTE:**

Left-hand shown, right-hand similar.

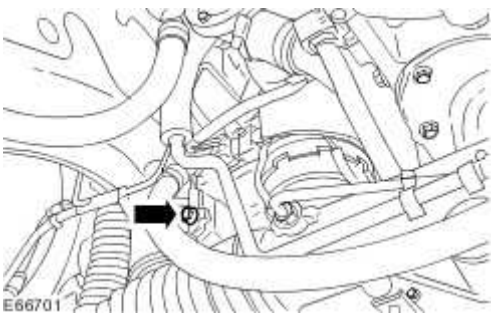
Attach the stabilizer bar link.

- Tighten to 43 Nm.

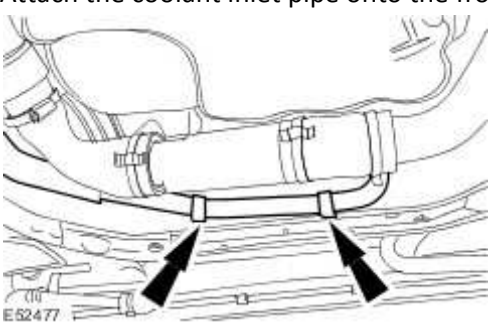


23 . Attach the power steering hose onto the front subframe.

Tighten to 10 Nm.



24 . Attach the coolant inlet pipe onto the front subframe.

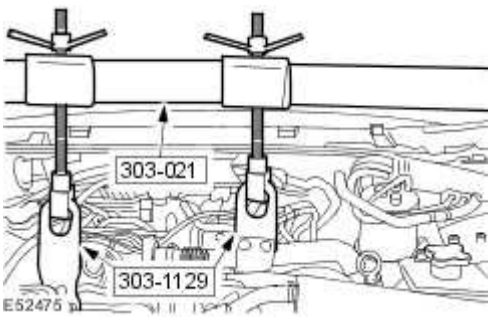


25 . Install both front wheels and tires.
For additional information, refer to Wheel and Tire (74.20.05)

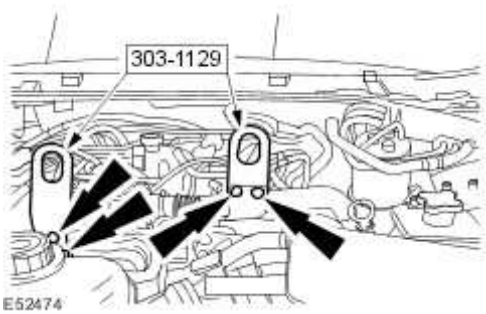
26 . Install the radiator splash shield.
For additional information, refer to Radiator Splash Shield (76.22.90)

27 . Install the air deflector.
For additional information, refer to Air Deflector (76.11.41)

28 . Remove the special tool.

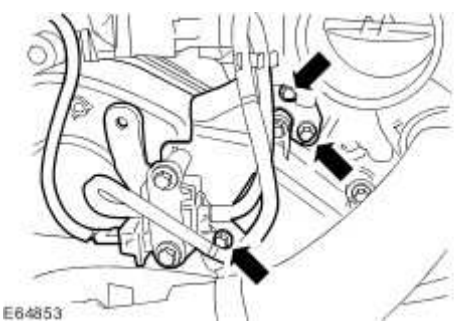


29 . Remove the special tools.



30 . Attach the port deactivation valve retaining bracket.

Tighten to 8 Nm.

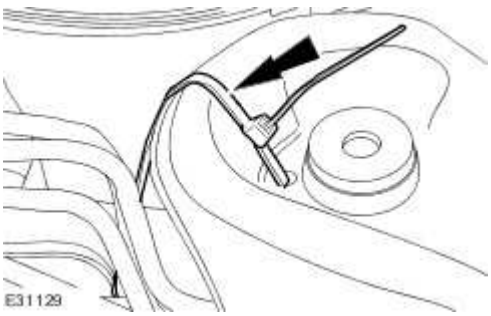


31 . Install the intake air shutoff throttle.
For additional information, refer to Intake Air Shutoff Throttle

32 . **NOTE:**

Right-hand shown, left-hand similar.

Remove and discard the tie straps.



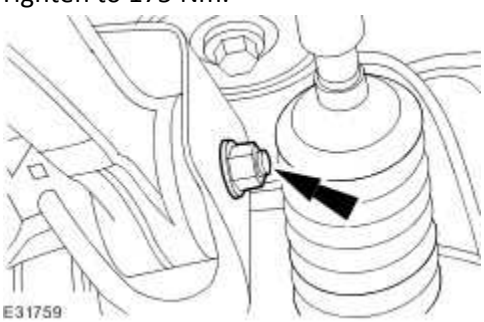
33 . Install the radiator grille opening panel.
For additional information, refer to Radiator Grille Opening Panel (76.10.06)

34 . **CAUTION: The final tightening of the rear lower arm retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.



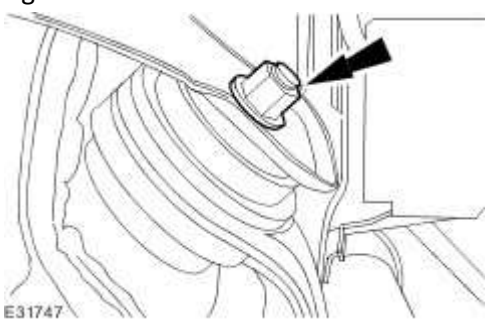
35

· **CAUTION: The final tightening of the front lower arm retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

Left-hand shown, right-hand similar.

Tighten to 175 Nm.



36

· **CAUTION: The final tightening of the stabilizer bar link retaining nut must be carried out with the vehicle on its wheels. Failure to follow this instruction may result in damage to the vehicle.**

NOTE:

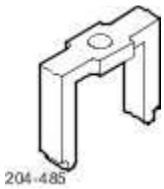
Left-hand shown, right-hand similar.

Tighten to 70 Nm.

37 . Check the caster and camber adjustment.
For additional information, refer to Camber and Caster Adjustment

Front Subframe Front Bushing (60.35.51)

Special Service Tools



Support - Remover, Front Subframe
204-485

Pusher - Bush, Front Subframe Front Bush
204-486

Support - Replacer, Front Subframe Front Bush
204-488

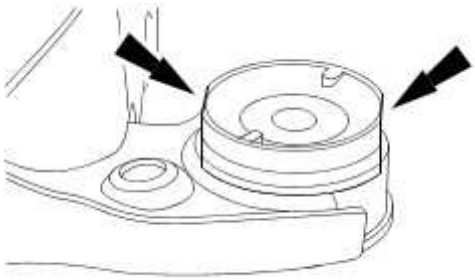
Installer - Bush, Front Subframe Front Bush
204-487

Removal

1. Remove the front subframe. For additional information, refer to
. For additional information, refer to Front Subframe - 3.0L NA V6 - AJ27 (76.10.05) or For additional information, refer to Front Subframe - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.5L NA V8 - AJV8 (76.10.05) in this section.

2. **CAUTION: Make sure the cutting blade does not contact the front subframe. Failure to follow this instruction may result in damage to the front subframe.**

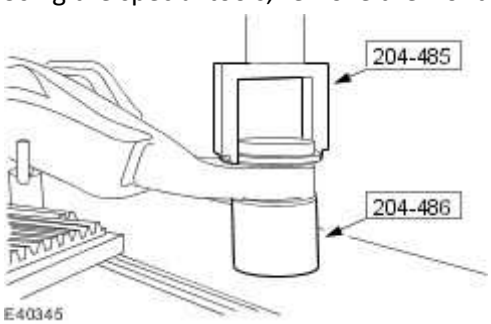
Cut the edges of the front subframe front bushing



3. **NOTE:**

Note the orientation of the bushing before removal.

Using the special tools, remove the front subframe front bushing.

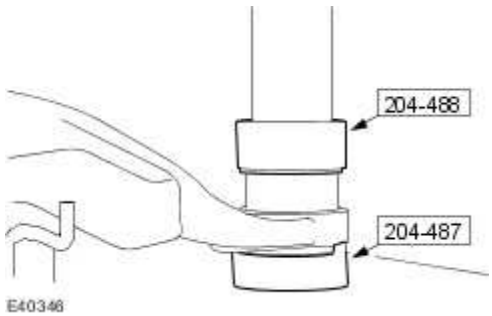


Installation

1. **NOTE:**

Make sure the bushing is correctly orientated.

Using the special tools, install the front subframe front bushing.



2 Install the front subframe. For additional information, refer to
. For additional information, refer to Front Subframe - 3.0L NA V6 - AJ27 (76.10.05) or For additional information, refer to Front Subframe - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.5L NA V8 - AJV8 (76.10.05) in this section.

Front Subframe Rear Bushing (60.35.26)

Special Service Tools

204-489

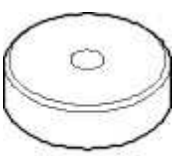
Support - Remover, Front Subframe Rear Bush
204-489

204-490

Pusher - Remover, Front Subframe Rear Bush
204-490

204-481

Receiver - Bush
204-481



204-492

Installer - Bush, Front Subframe Rear Bush
204-492

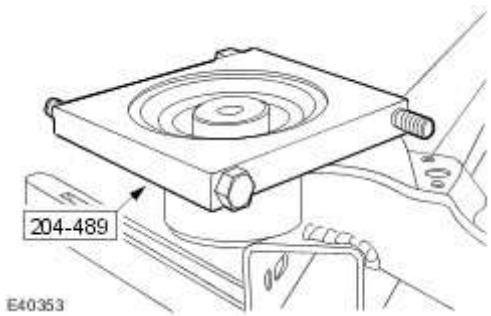
204-491

Support - Installer, Front Subframe Rear Bush
204-491

Removal

1. Remove the front subframe. For additional information, refer to
. For additional information, refer to Front Subframe - 3.0L NA V6 - AJ27 (76.10.05) or
For additional information, refer to Front Subframe - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.5L NA V8 - AJV8 (76.10.05) in this section.

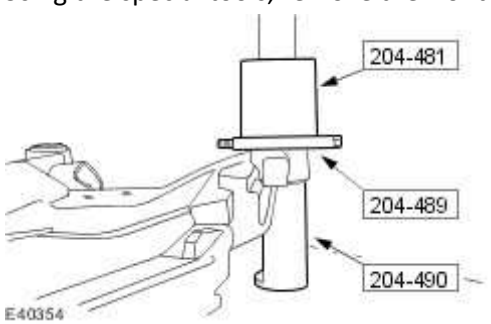
2 . Install the special tool.



3 . **NOTE:**

Note the orientation of the bushing before removal.

Using the special tools, remove the front subframe rear bushing.



Installation

1
. **WARNING: Make sure the front subframe rear bushing is fully installed into the front subframe. Failure to follow this instruction may result in personal injury.**

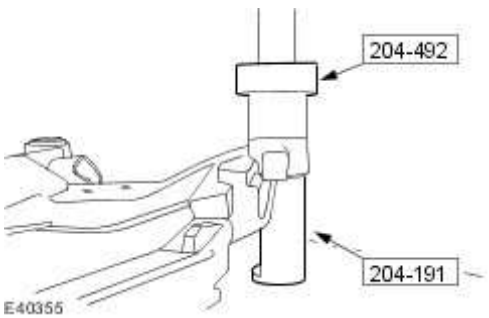
NOTE:

Make sure the bushing is correctly orientated.

NOTE:

On installation, make sure the front subframe rear bushing upper lip contacts the front subframe.

Using the special tools, install the front subframe rear bushing.



2 Install the front subframe. For additional information, refer to
. For additional information, refer to Front Subframe - 3.0L NA V6 - AJ27 (76.10.05) or For additional information, refer to Front Subframe - 4.2L NA V8 - AJV8/4.2L SC V8 - AJV8/3.5L NA V8 - AJV8 (76.10.05) in this section.

Rear Subframe (64.25.01)

Special Service Tools

Powertrain Assembly Jack
HTJ1200-2

Removal

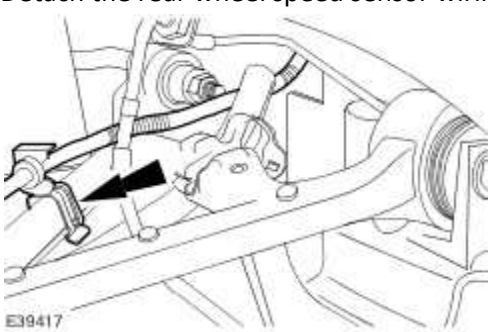
1 . Drain the right-hand fuel tank saddle. <<310-00>>

2 . Remove the axle assembly. <<205-02>>

3 . **NOTE:**

Right-hand shown, left-hand similar.

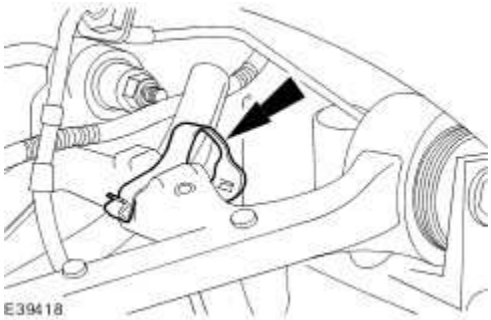
Detach the rear wheel speed sensor wiring harness from the upper arm



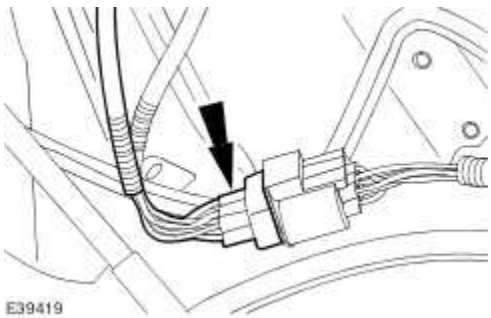
4 . **NOTE:**

Right-hand shown, left-hand similar.

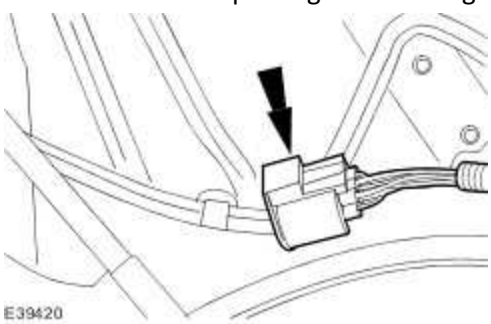
Detach the headlamp leveling sensor retaining clip.



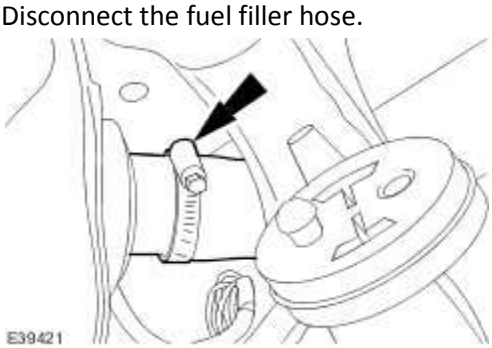
5 . Disconnect the electric parking brake electrical connector.



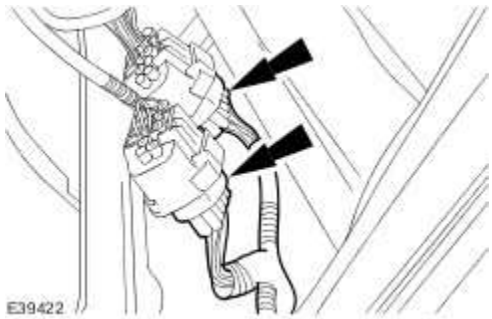
6 . Detach the electric parking brake wiring harness.



7 . Disconnect the fuel filler hose.



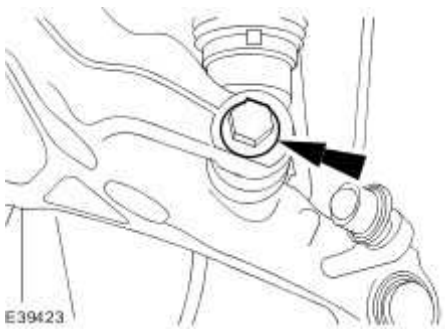
8 . Disconnect the electrical connectors.



9 . **NOTE:**

Right-hand shown, left-hand similar.

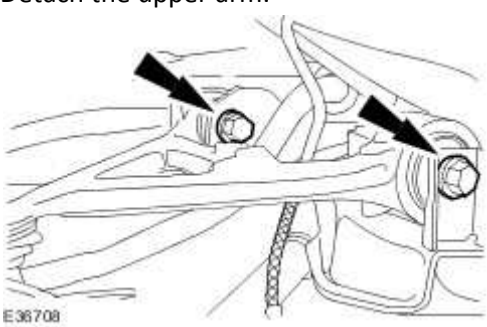
Detach the rear air spring.



10 . **NOTE:**

Right-hand shown, left-hand similar.

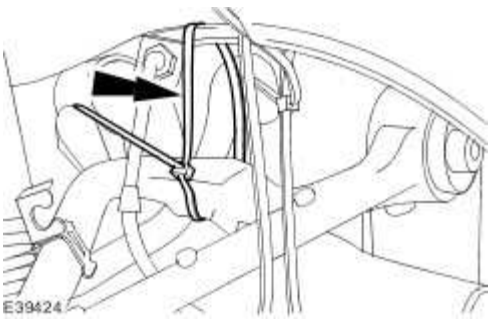
Detach the upper arm.



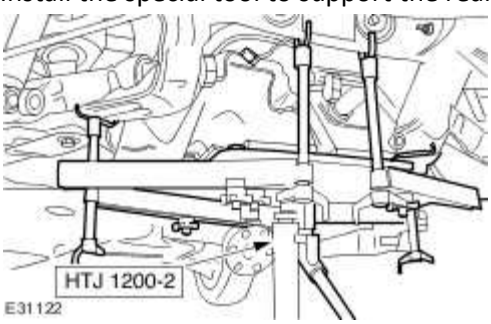
11 . **NOTE:**

Right-hand shown, left-hand similar.

Support the upper arm.



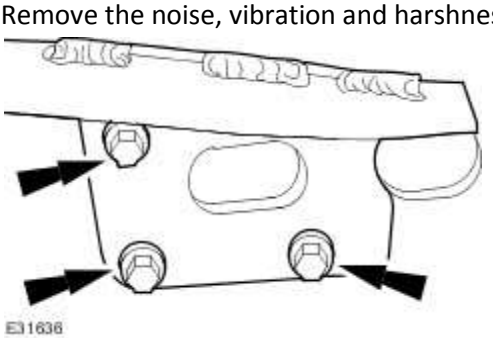
12 . Install the special tool to support the rear subframe.



13 . **NOTE:**

Left-hand shown, right-hand similar.

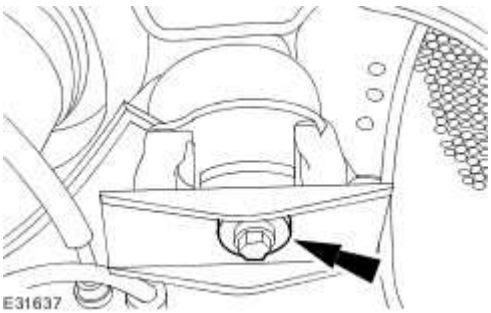
Remove the noise, vibration and harshness brace retaining bolts.



14 . **NOTE:**

Left-hand shown, right-hand similar.

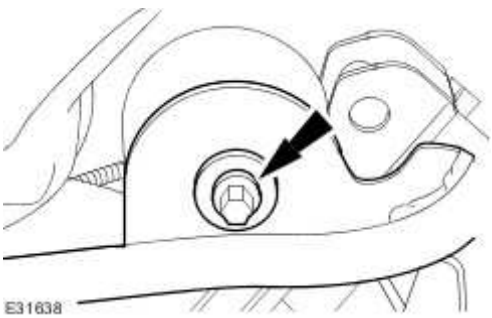
Remove and discard the rear subframe rear retaining bolt.



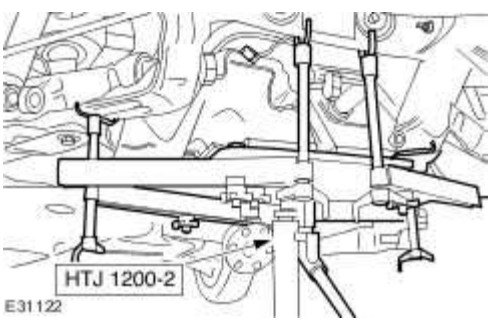
15 . **NOTE:**

Left-hand shown, right-hand similar.

Remove and discard the rear subframe front retaining bolt.

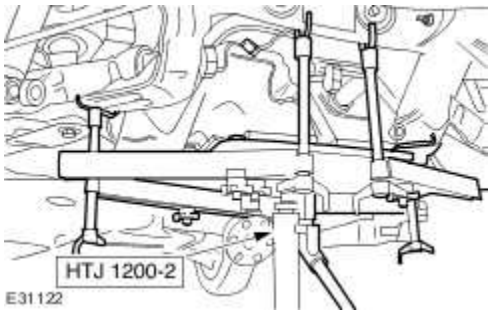


16 . Remove the rear subframe.



Installation

1 . Install the rear subframe.

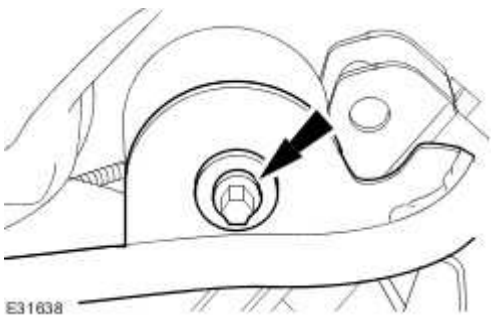


2 . **NOTE:**

Left-hand shown, right-hand similar.

Loosely install the rear subframe front retaining bolt.

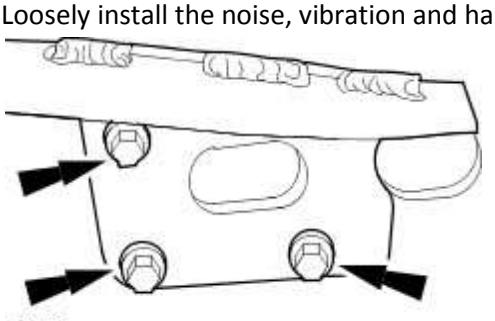
Install a new retaining bolt.



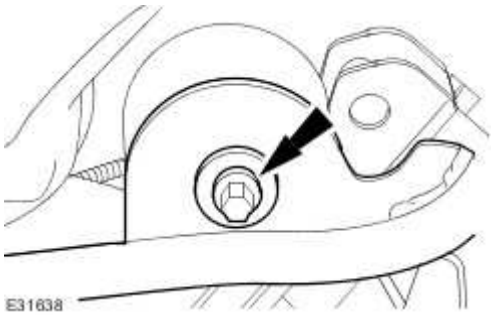
3 . **NOTE:**

Left-hand shown, right-hand similar.

Loosely install the noise, vibration and harshness brace retaining bolts.



4 . Tighten to 125 Nm.

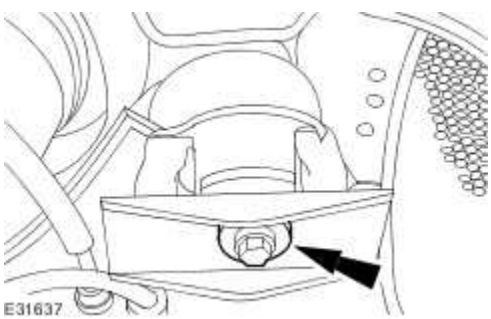


5 . **NOTE:**

Left-hand shown, right-hand similar.

Install the rear subframe rear retaining bolt.

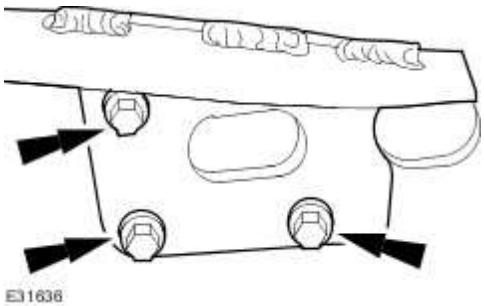
- Install a new retaining bolt.
- Tighten to 125 Nm.



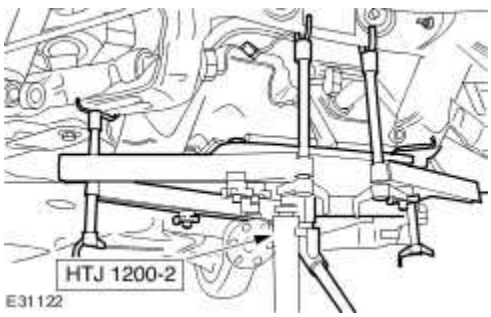
6 . **NOTE:**

Left-hand shown, right-hand similar.

Tighten to 48 Nm.



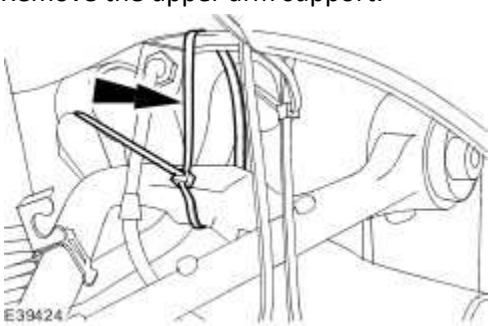
7 . Remove the special tool.



8 . **NOTE:**

Right-hand shown, left-hand similar.

Remove the upper arm support.

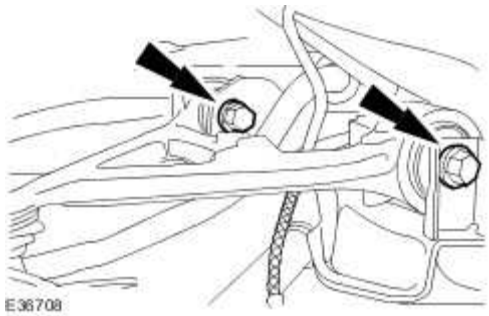


9 . **NOTE:**

Right-hand shown, left-hand similar.

Attach the upper arm.

Tighten to 98 Nm.

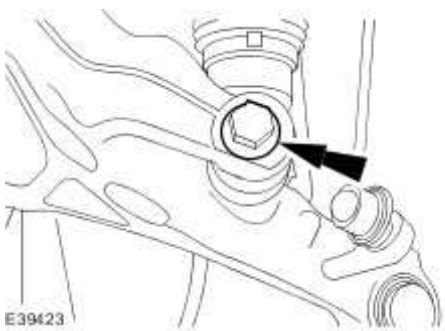


10 . **NOTE:**

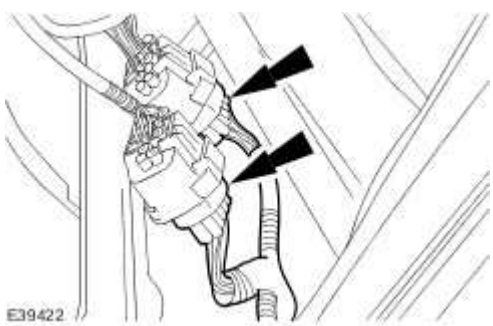
Right-hand shown, left-hand similar.

Attach the rear air spring.

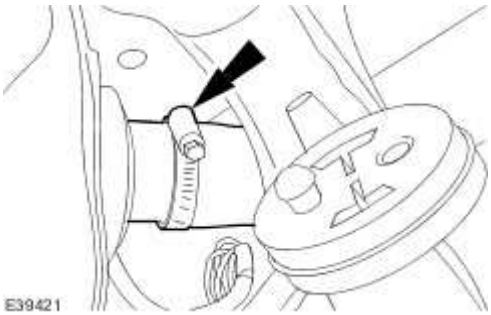
Tighten to 133 Nm.



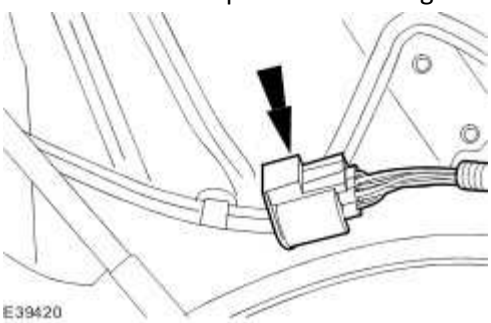
11 . Connect the electrical connectors.



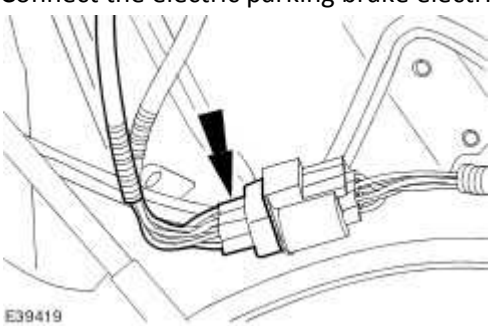
12 . Connect the fuel filler hose.



13 . Attach the electric park brake wiring harness.



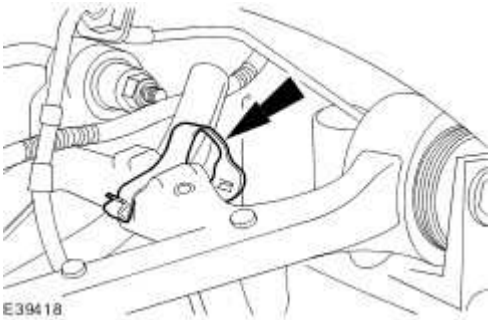
14 . Connect the electric parking brake electrical connector.



15 . **NOTE:**

Right-hand shown, left-hand similar.

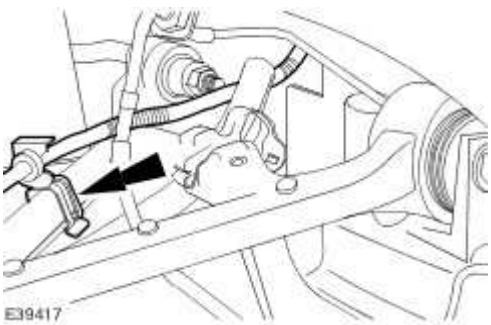
Attach the headlamp leveling sensor retaining clip.



16 . **NOTE:**

Right-hand shown, left-hand similar.

Attach the rear wheel speed sensor wiring harness to the upper arm.



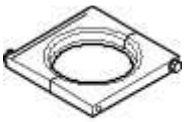
17 . Install the axle assembly. <<205-02>>

18 . Refill the fuel tank.

19 . Carry out the rear toe adjustment procedure. <<204-00>>

Rear Subframe Front Bushing (64.25.34)

Special Service Tools



Remover Support - Bush
204-479

Receiver - Bush
204-481

Remover - Bush
204-482

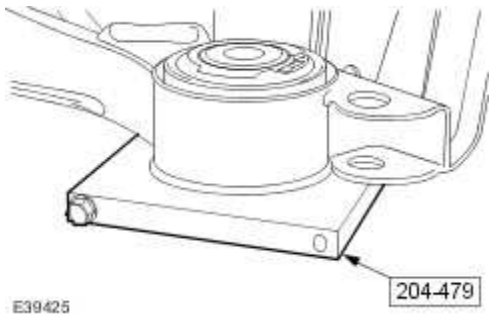
Support - Bush
204-480

Installer - Bush
204-483

Removal

1 . Remove the rear subframe.
For additional information, refer to Rear Subframe (64.25.01)

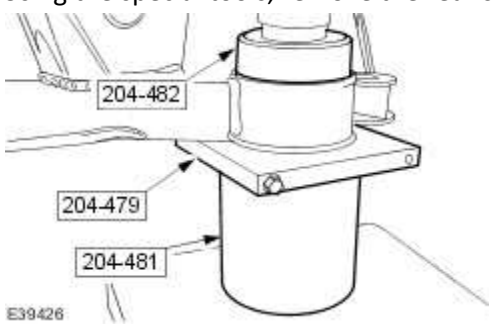
2 . Install the special tool to the rear subframe front bushing.



3 . **NOTE:**

Note the orientation of the bushing before removal.

Using the special tools, remove the rear subframe front bushing.

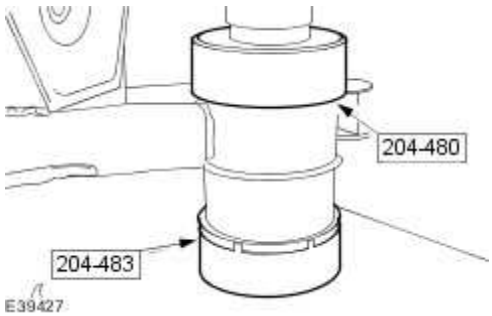


Installation

1 . **NOTE:**

Make sure the bushing is correctly orientated.

Using the special tools, install the rear subframe front bushing.



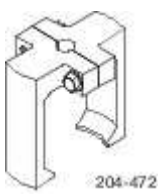
2 . Install the rear subframe.
For additional information, refer to Rear Subframe (64.25.01)

Rear Subframe Rear Bushing (64.25.36)

Special Service Tools

Forcing bolt
204-469

Remover - bush
204-473



Remover support - bush
204-472

Receiver - bush
204-475

Replacer - bush
204-474

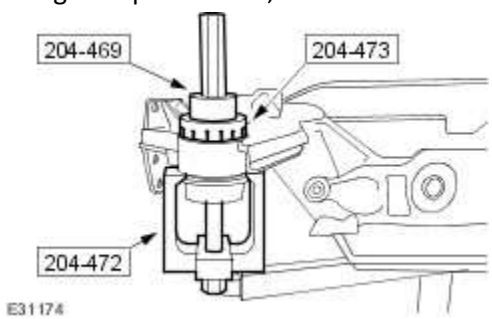
Removal

1 . Remove the rear subframe.
For additional information, refer to

2 . **NOTE:**

Note the orientation of the bushing before removal.

Using the special tools, remove the rear subframe rear bushing.

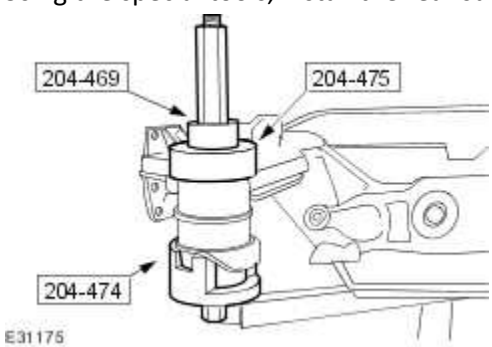


Installation

1 . **NOTE:**

Make sure the bushing is correctly orientated.

Using the special tools, install the rear subframe rear bushing.



2 . Install the rear subframe.