

Heating and Ventilation -

Lubricants, Fluids and Sealers

Item	Specification
Sealant — Blower motor to blower motor housing	WSE-M4G323-A4

Torque specifications

Discription	Nm	lb-ft
Blower	15	11
Heater core and evaporator core housing	15	11
Heater control valve nut	6	4
Heater control valve bolt	22	16

Heating and Ventilation - Blower

Removal and Installation

Removal

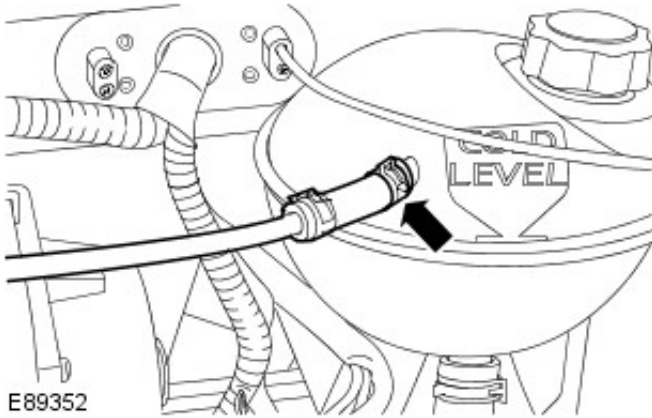
NOTE: Left-hand drive (LHD) vehicle shown, right-hand drive (RHD) similar.

NOTE: Removal steps in this procedure may contain installation details.

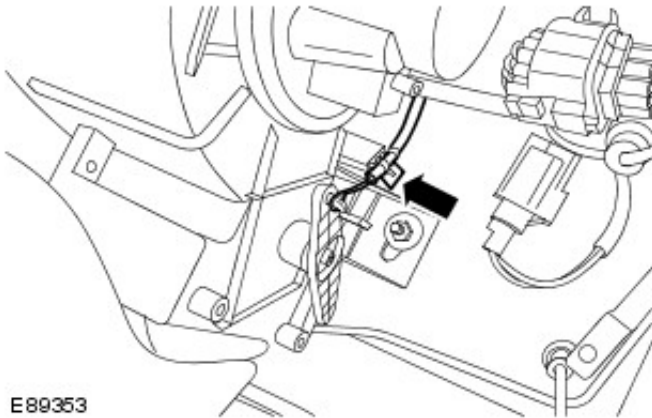
1. For additional information, refer to: [Air Inlet Duct](#) (412-01 Air Distribution and Filtering, Removal and Installation).

2. NOTE: Left-hand drive (LHD) vehicles only.

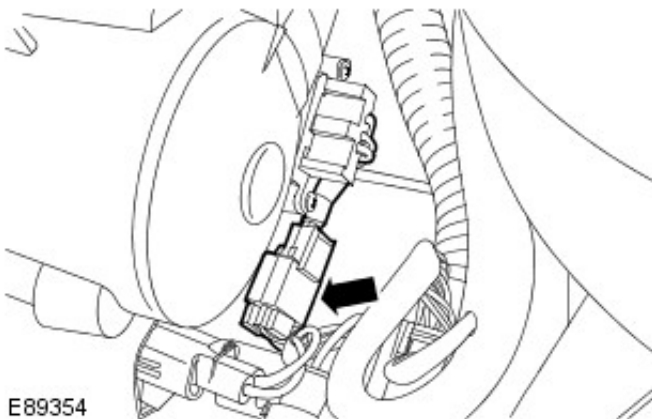
Disconnect the coolant expansion tank overflow pipe from the expansion tank.



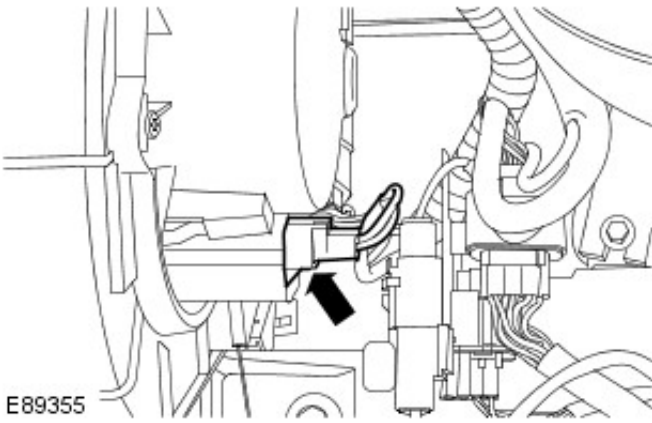
3. Disconnect the recirculation blend door control cable.



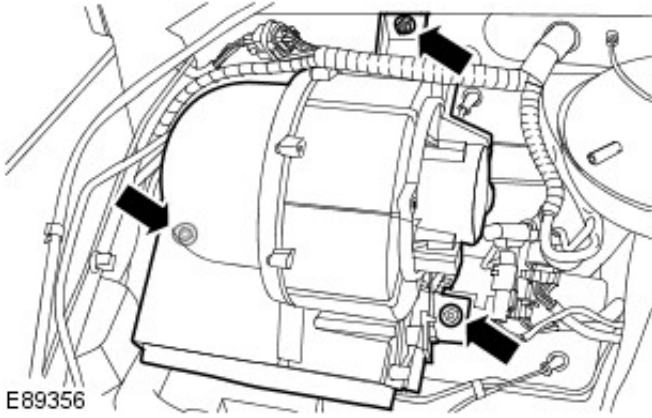
4. Disconnect the blower motor resistor electrical connector.



5. Disconnect the blower motor electrical connector.



6. Remove the blower.
Tighten to 15 Nm



Installation

1. To install, reverse the removal procedure.

Heating and Ventilation - Blower Motor

Removal and Installation

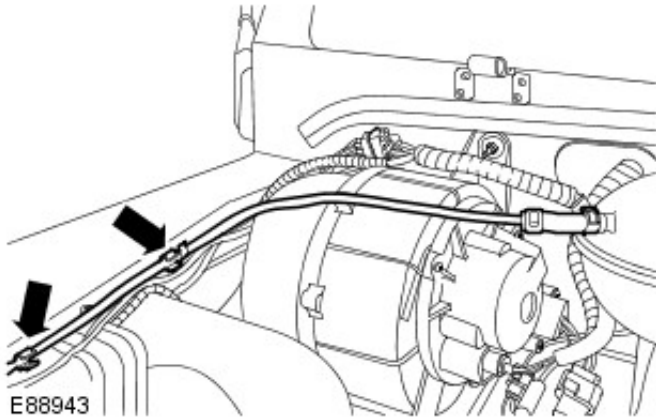
Materials

Name	Specification
Silicone Sealant	WSE-M4G323-A4

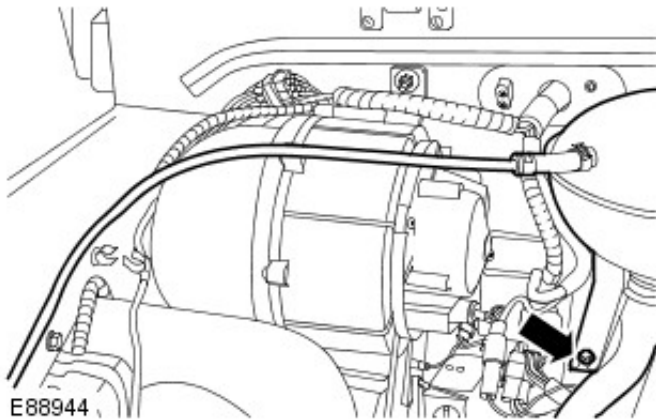
Removal

NOTE: LHD shown, RHD similar.

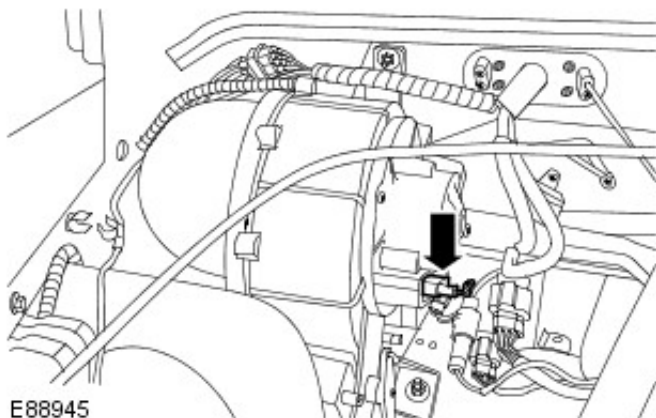
1. Release the coolant expansion tank to radiator pipe.



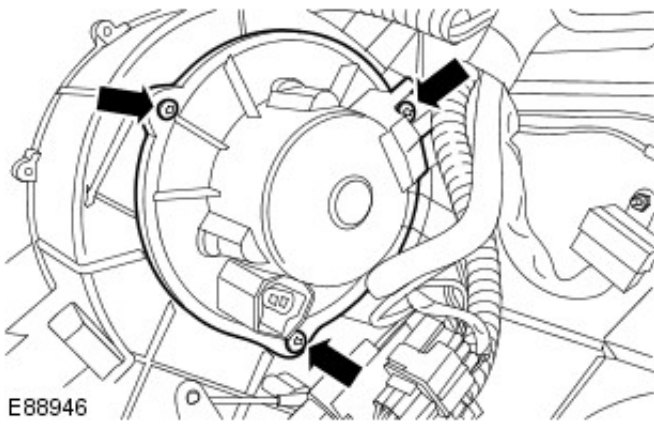
2. Release the coolant expansion tank.
 - Remove the bolt.



3. Disconnect the blower motor electrical connector.



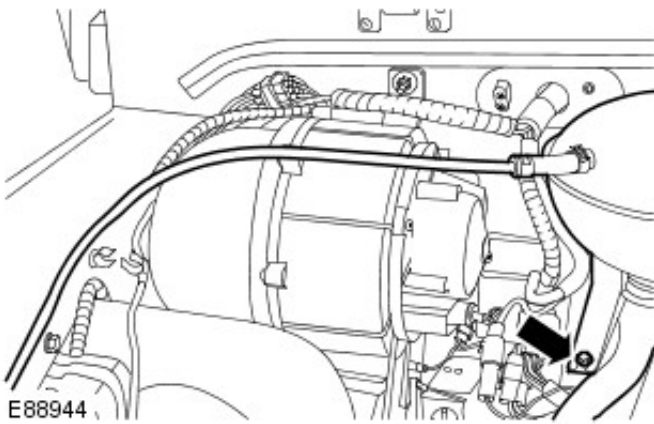
4. Remove the blower motor.
 - Remove the 3 screws.



E88946

Installation

1. To install, reverse the removal procedure.
 - Apply a bead of sealant to the mating faces of the blower motor and blower motor housing. [sealant](#)
2. Tighten to 10 Nm (7 lb.ft).



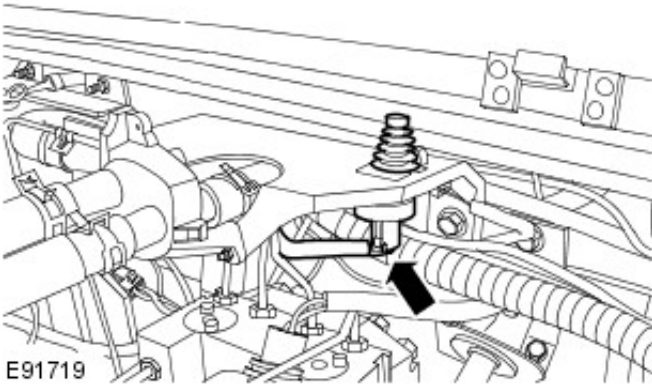
E88944

Heating and Ventilation - Heater Control Valve

Removal and Installation

Removal

1. Remove the bonnet switch.
 - Disconnect the bonnet switch electrical connector.

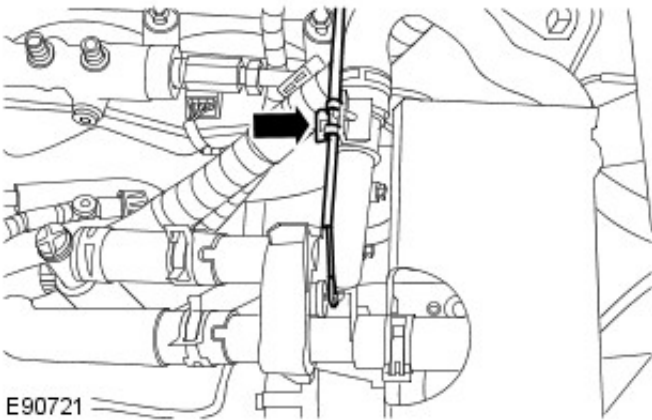


E91719

2. **NOTE:** Note the fitted position of the cable prior to removal.

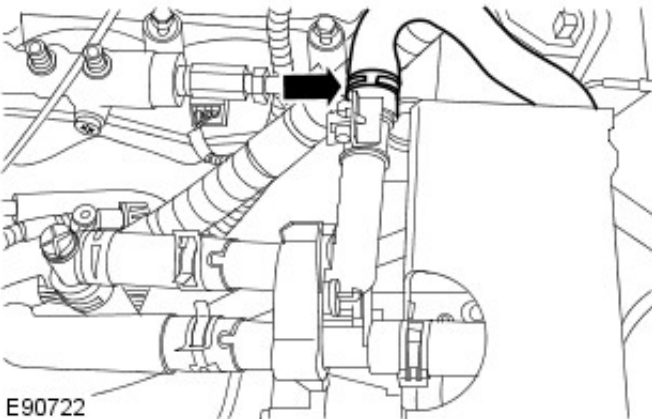
Disconnect the heater control valve control cable.

- Release the clip.



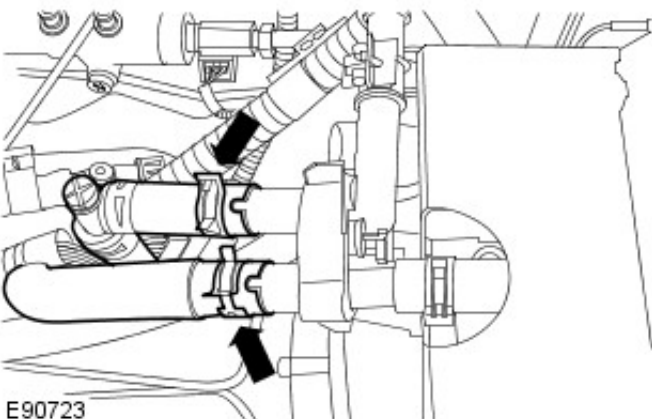
E90721

3. Disconnect the heater core feed hose.
 - Using a suitable pipe clamp, clamp the hose.
 - Release the clip.



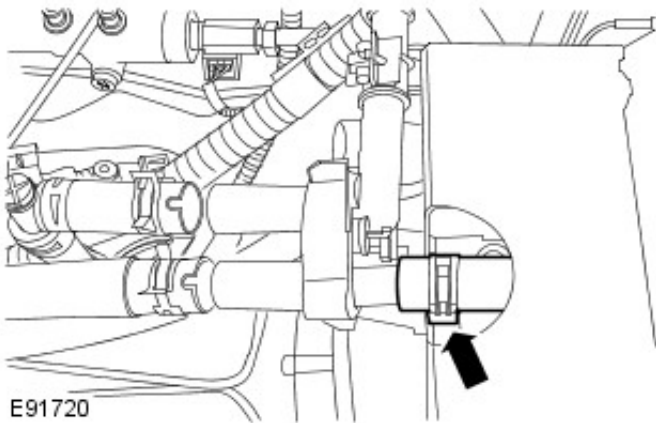
E90722

4. Disconnect the heater control valve feed and return hoses.
 - Using a suitable pipe clamp, clamp the hoses.
 - Release the 2 clips.

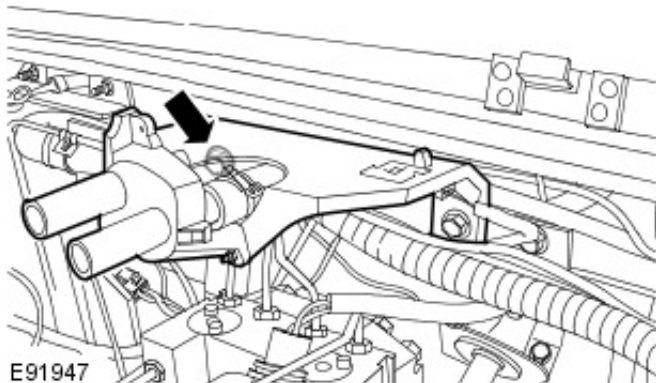


E90723

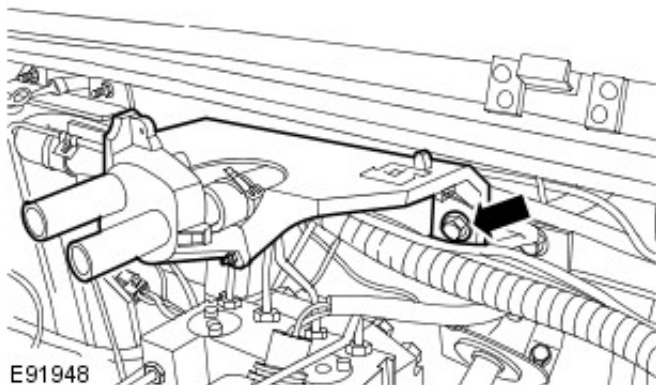
5. Disconnect the heater core return hose.
 - Release the clip.



6. Release the heater control valve.
 - Remove the nut.

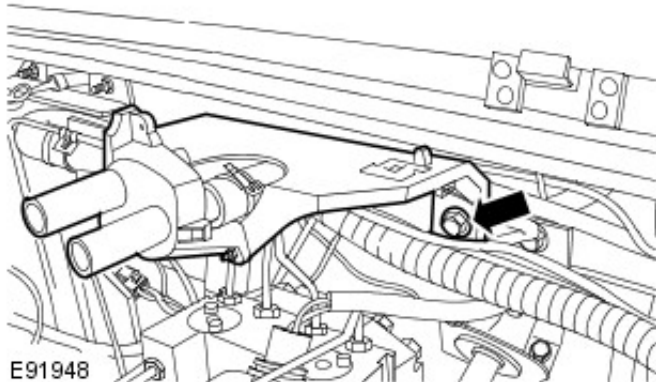


7. Remove the heater control valve.
 - Remove the bolt.

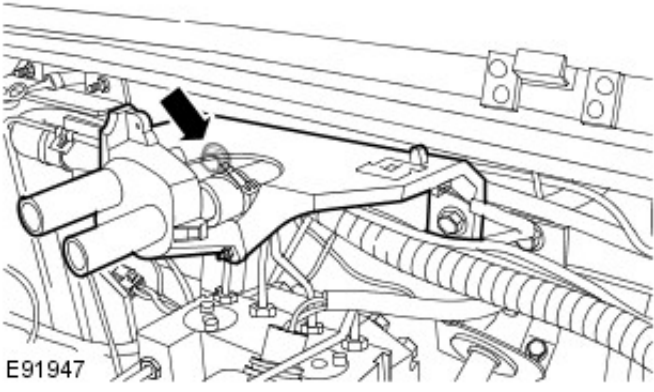


Installation

1. To install, reverse the removal procedure.
 - Tighten to 22 Nm (16 lb.ft).



2. Tighten to 6 Nm (4 lb.ft).



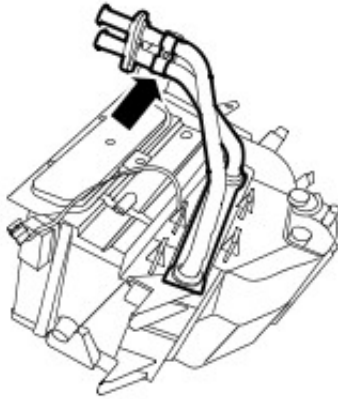
E91947

Heating and Ventilation - Heater Core


Removal and Installation

Removal

1. Disconnect the battery ground cable.
For additional information, refer to: Battery Disconnect (414-01 Battery, Mounting and Cables, General Procedures).
2. Remove the heater core housing.
For additional information, refer to: Heater Core Housing (412-02 Heating and Ventilation, Removal and Installation).



E88665

3.  **CAUTION:** Make sure no damage occurs to the foam seal on the heater core. Failure to follow this caution may result in damage to the component.

Remove the heater core.

- Remove the screw.
- Remove the pipe clamp.

4. **NOTE:** Do not disassemble further if the component is removed for access only.

Remove the grommet from the heater core pipes.

Installation

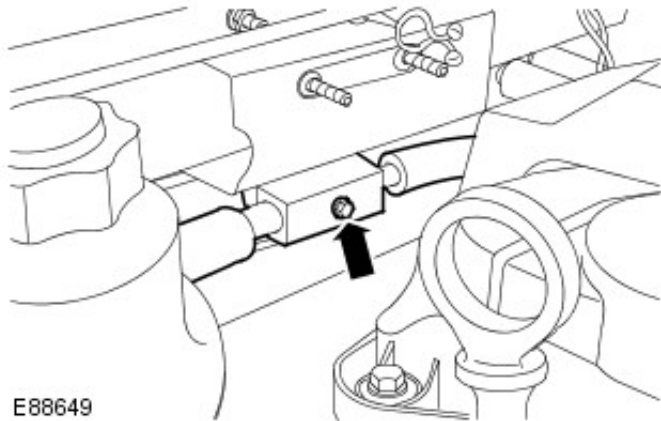
1. To install, reverse the removal procedure.
2. Connect the battery ground cable.
For additional information, refer to: Battery Connect (414-01 Battery, Mounting and Cables, General Procedures).


Heating and Ventilation - Heater Core and Evaporator Core Housing

Removal and Installation

Removal

1. Disconnect the battery ground cable.
For additional information, refer to: Battery Disconnect (414-01 Battery, Mounting and Cables, General Procedures).
2. Recover the air conditioning (A/C) refrigerant.
For additional information, refer to: Air Conditioning (A/C) System Recovery, Evacuation and Charging (412-00 Climate Control System - General Information, General Procedures).
3. Remove the engine control module (ECM).
For additional information, refer to: Engine Control Module (ECM) (303-14 Electronic Engine Controls - 2.4L Diesel, Removal and Installation).



4.  **CAUTION:** Make sure that all openings are sealed. Use new blanking caps.

Release the thermostatic expansion valve manifold and tube assembly.

- Remove the bolt.
- Remove and discard the O-ring seals.



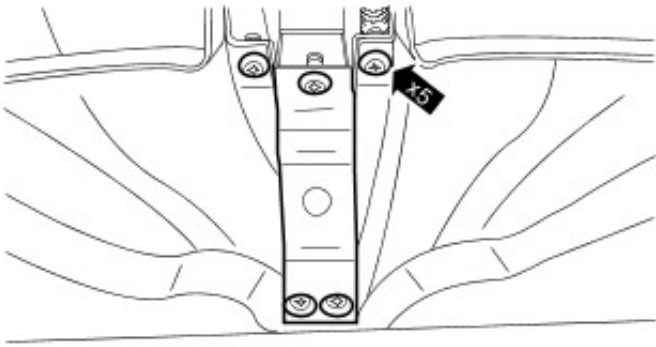
5. Disconnect the heater core hoses.
 - Using a suitable pipe clamp, clamp the heater hoses.
 - Release the 2 clips.

6. Remove the instrument panel.
For additional information, refer to: Instrument Panel (501-12 Instrument Panel and Console, Removal and Installation).

7. **NOTE:** Make sure the clips are discarded.

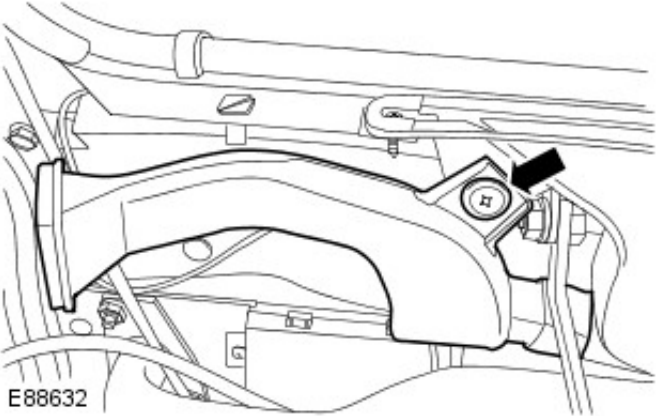
Remove the audio unit support bracket.

- Remove and discard the 5 clips.



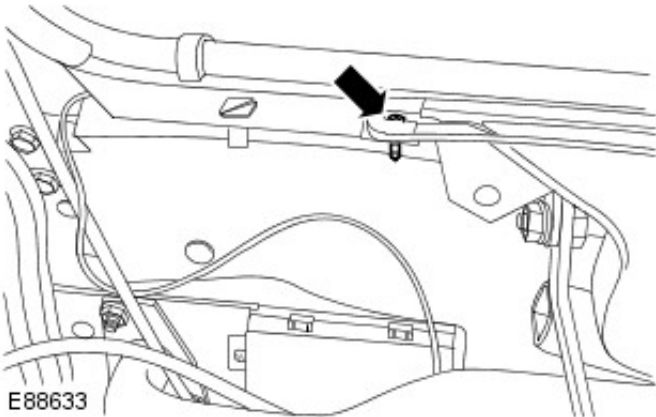
E88598

8. Remove the LH demister duct.
 - Remove the clip.



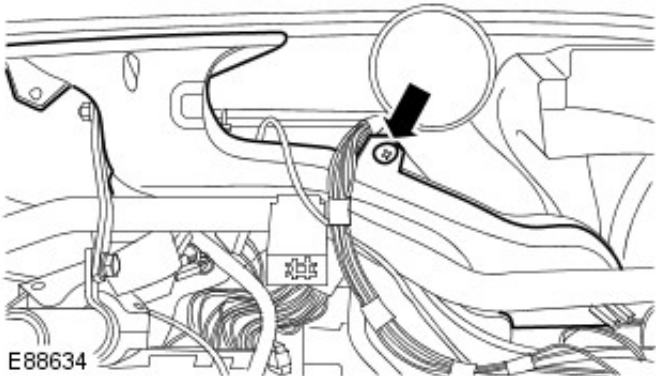
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9. Release the LH defrost vent duct.
 - Remove the screw.



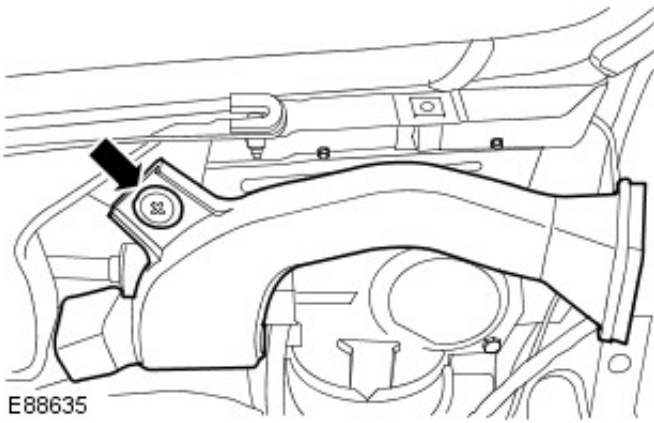
E88633

10. Remove the LH defrost vent duct.
 - Remove the clip.

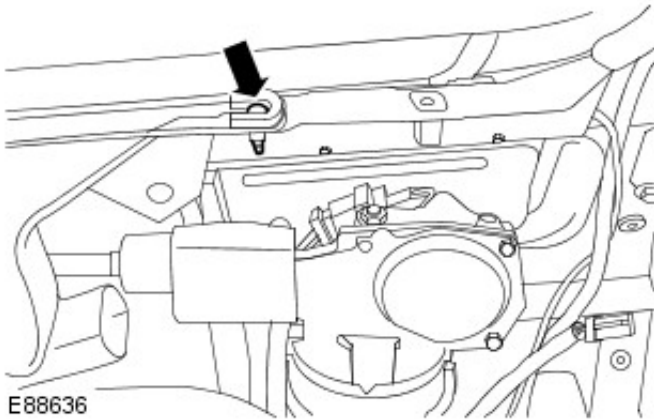


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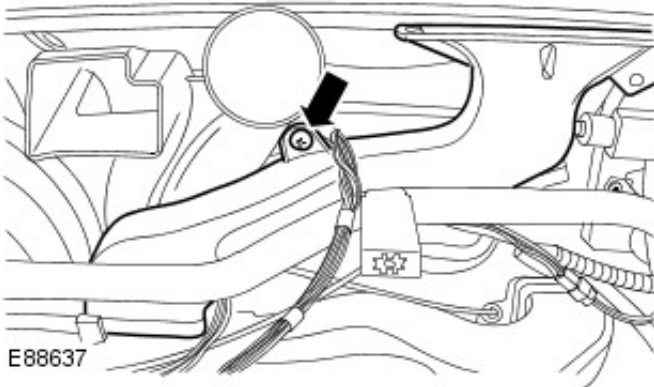
11. Remove the RH demister duct.
 - Remove the clip.



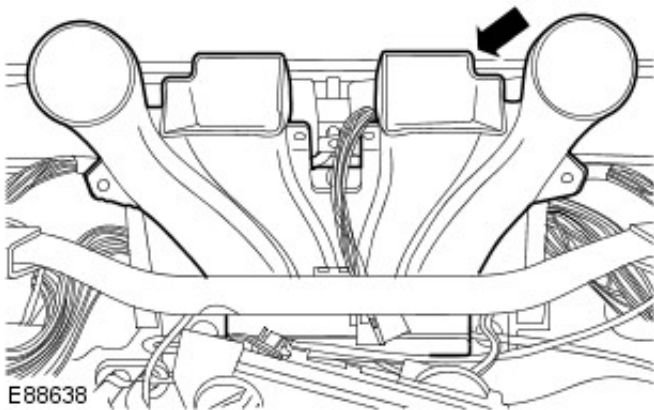
12. Release the RH defrost vent duct.
 - Remove the screw.



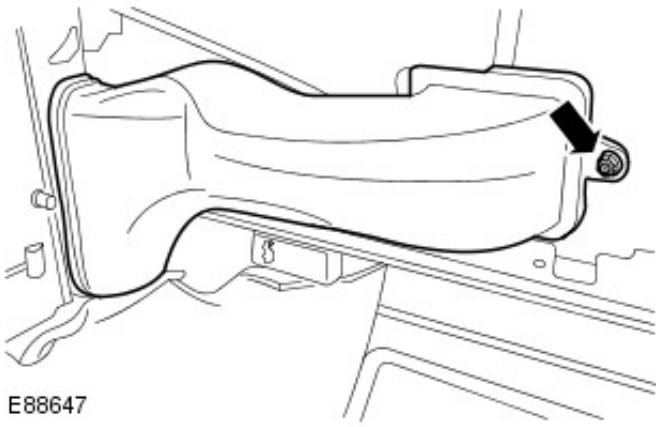
13. Remove the RH vent duct.
 - Remove the clip.



14. Remove the center register duct.

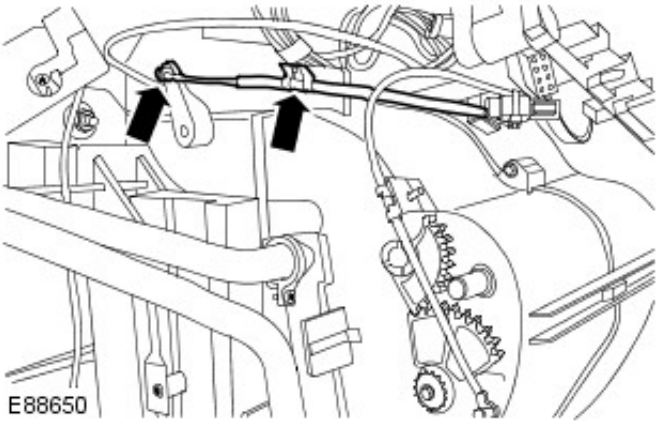


15. Remove the air inlet duct.
 - Remove the nut.



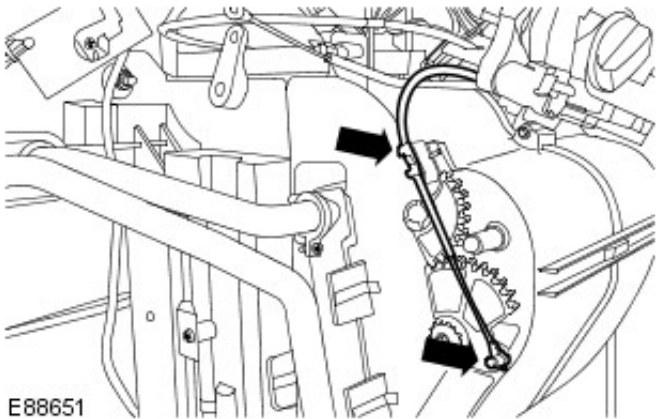
E88647

16. Disconnect the defrost duct blend door control cable.
 - Release the clip.



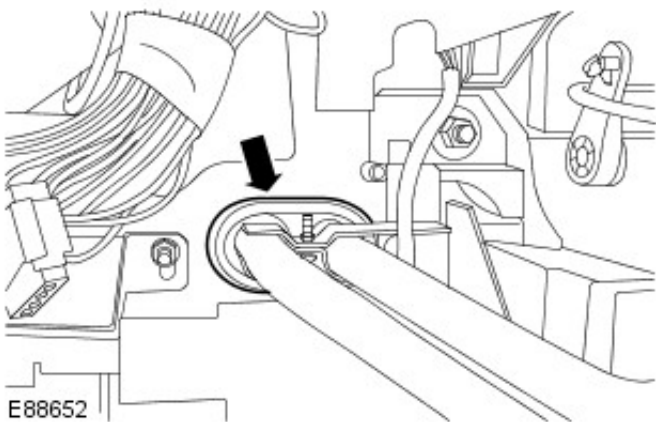
E88650

17. Disconnect the footwell duct blend door control cable.
 - Release the clip.



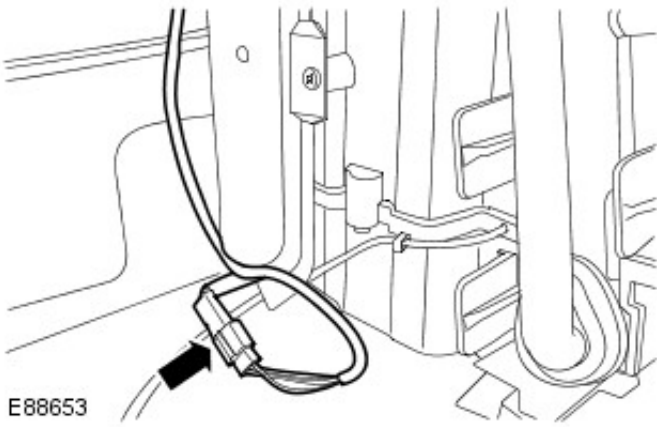
E88651

18. Release the grommet from the bulkhead.

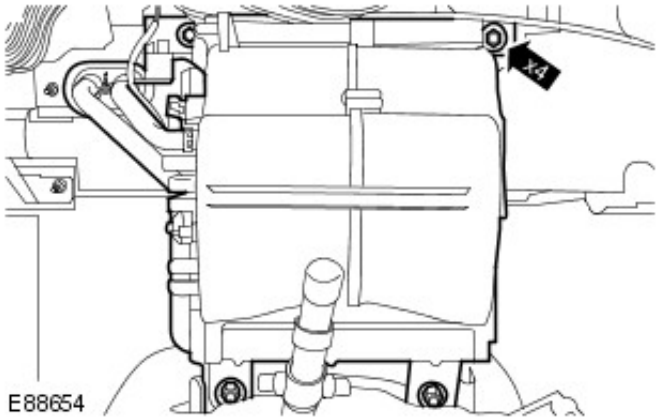


E88652

19. Disconnect the de-icing switch electrical connector.

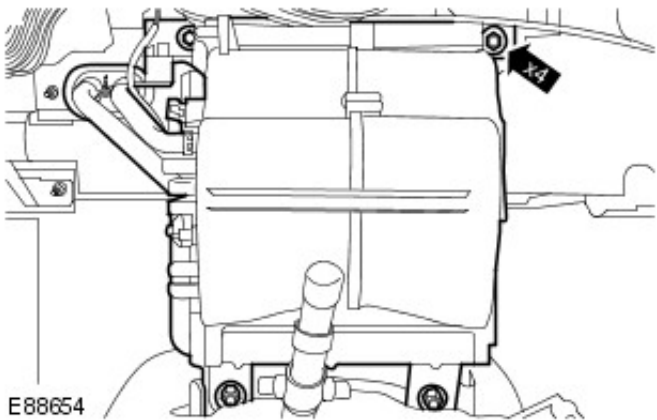


20. Remove the heater core and evaporator core housing.
 - Remove the 4 nuts.

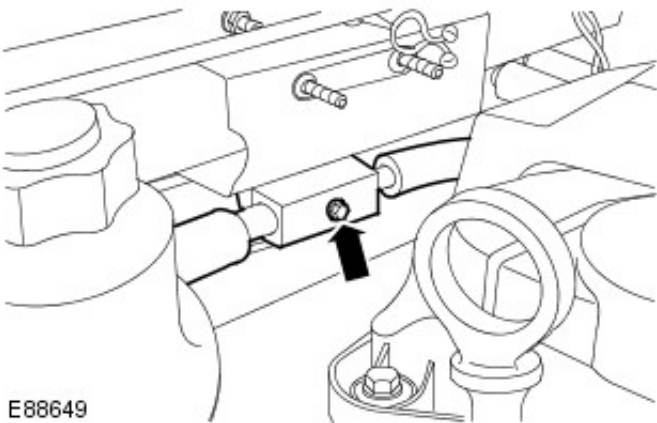


Installation

1. To install, reverse the removal procedure.
 - Tighten to 15 Nm (11 lb.ft).



2. Tighten to 8 Nm (6 lb.ft).



3. Connect the battery ground cable.
For additional information, refer to: Battery Connect (414-01 Battery, Mounting and Cables, General Procedures).

Heating and Ventilation - Heater Core Housing

Removal and Installation

Removal

1. Disconnect the battery ground cable.
For additional information, refer to: Battery Disconnect (414-01, General Procedures).

2. Disconnect the heater core hoses.
 - Using a suitable pipe clamp, clamp the heater hoses.
 - Release the 2 clips.

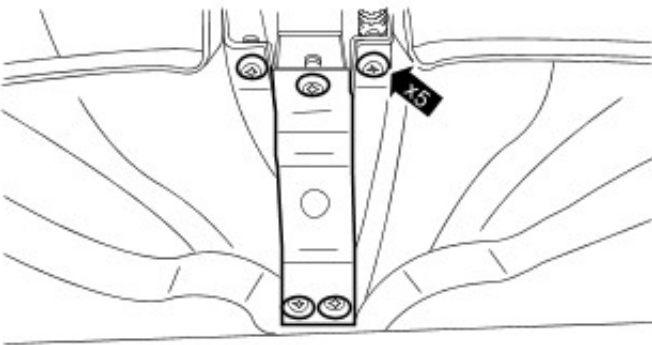


E88648

3. Remove the instrument panel.
For additional information, refer to: Instrument Panel (501-12, Removal and Installation).

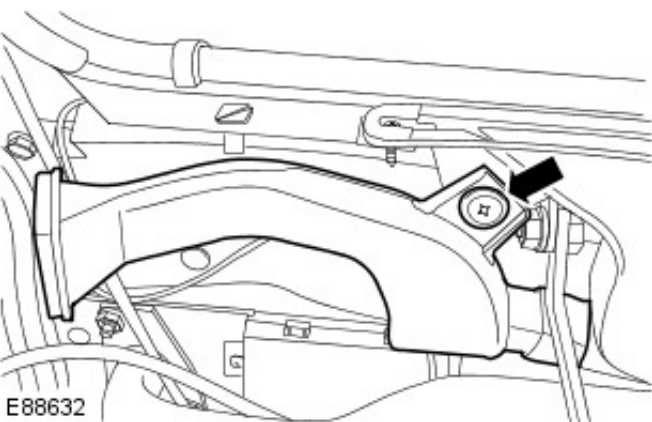
4. **NOTE:** Make sure the clips are discarded.

- Remove the audio unit support bracket.
- Remove and discard the 5 clips.



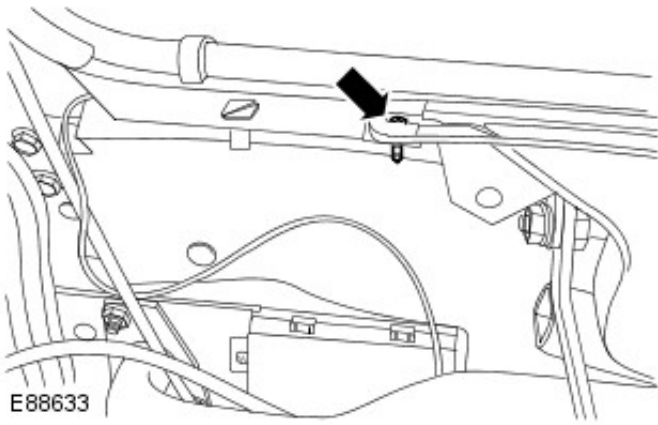
E88598

5. Remove the LH demister duct.
 - Remove the clip.

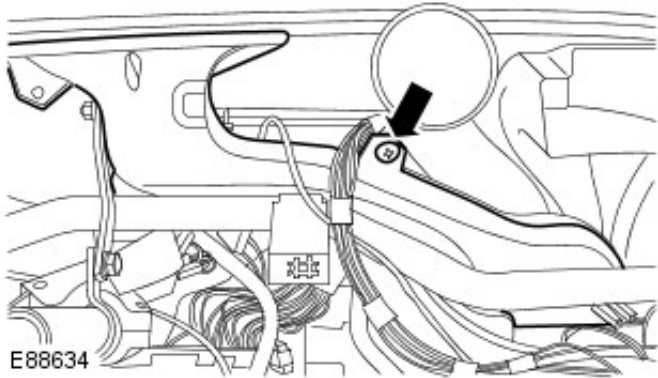


E88632

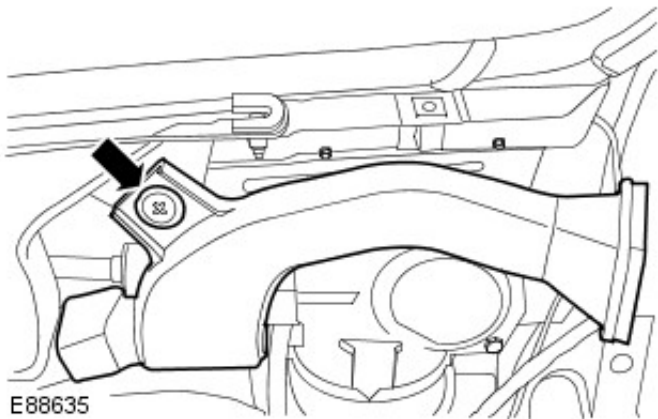
6. Release the LH defrost vent duct.
 - Remove the screw.



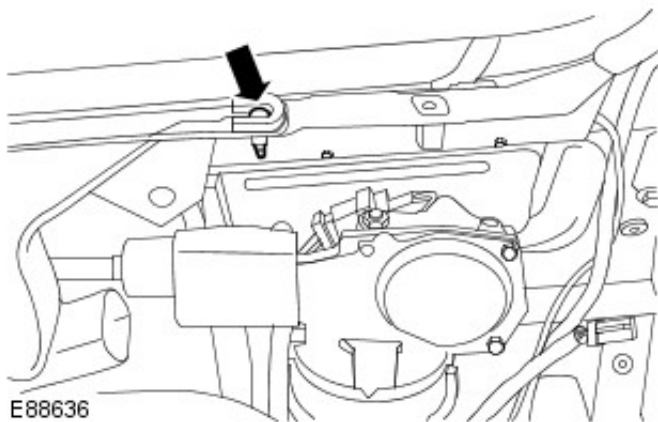
7. Remove the LH defrost vent duct.
 - Remove the clip.



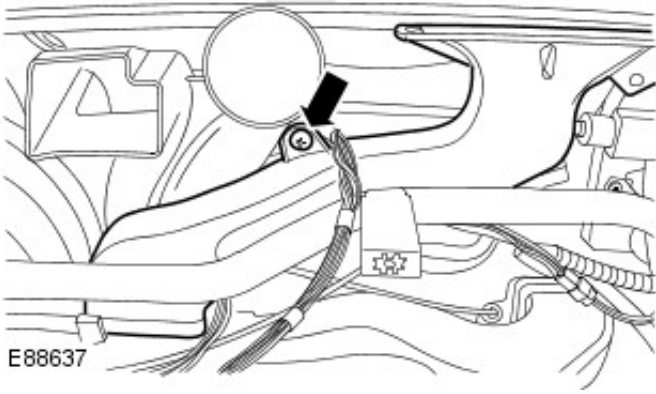
8. Remove the RH demister duct.
 - Remove the clip.



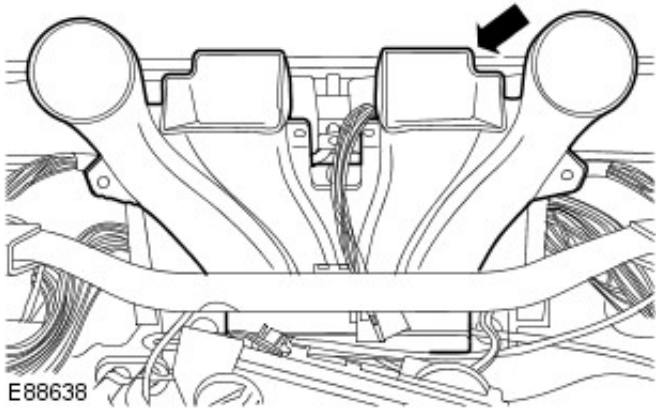
9. Release the RH defrost vent duct.
 - Remove the screw.



10. Remove the RH vent duct.
 - Remove the clip.

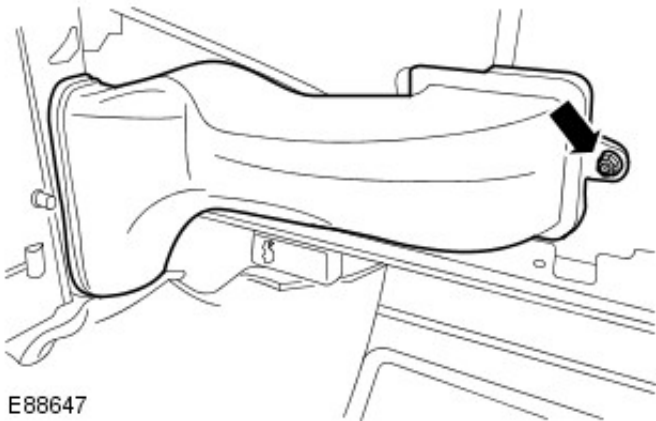


11. Remove the center register duct.



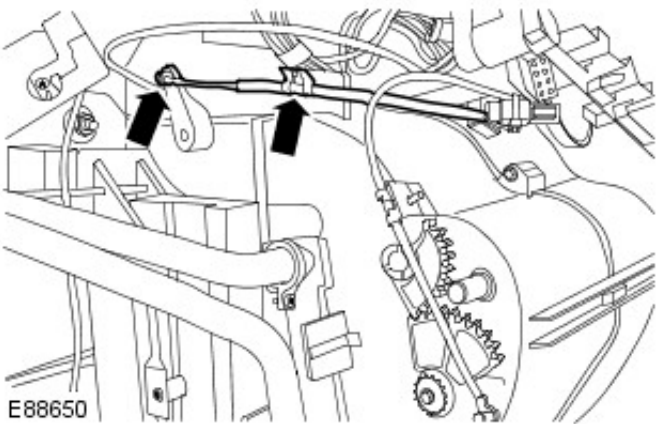
12. Remove the air inlet duct.

- Remove the nut.



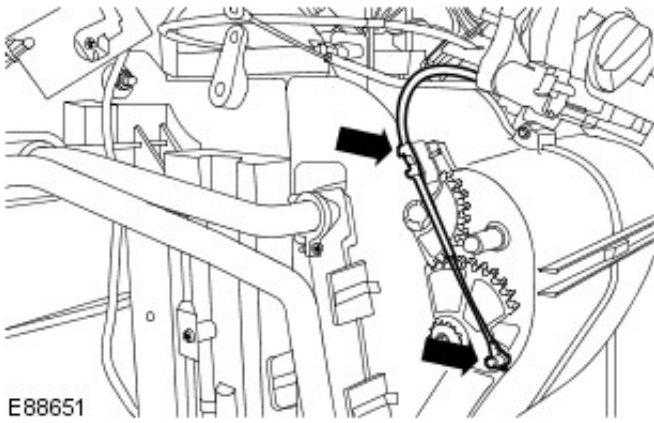
13. Disconnect the defrost duct blend door control cable.

- Release the clip.



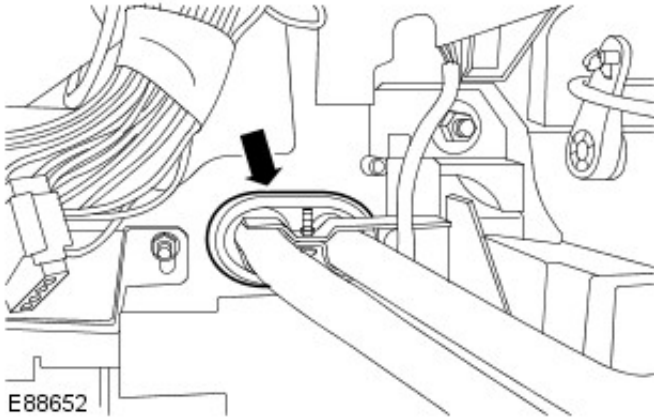
14. Disconnect the footwell duct blend door control cable.

- Release the clip.



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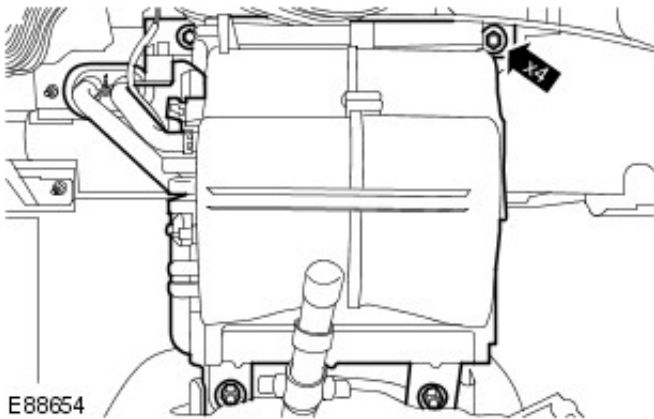
15. Release the grommet from the bulkhead.



E88652

16. Remove the heater core housing.

- Remove the 4 nuts.

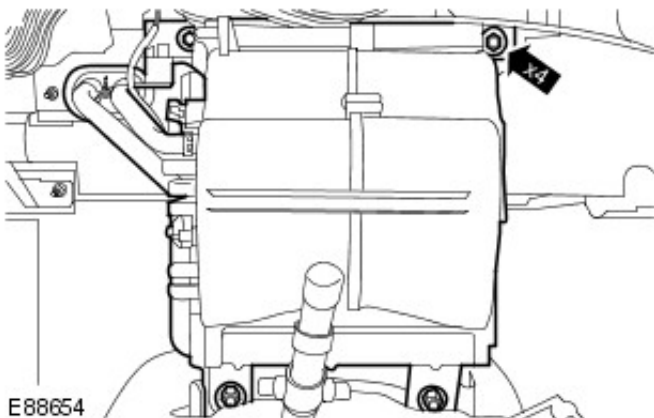


E88654

Installation

1. To install, reverse the removal procedure.

- Tighten to 15 Nm (11 lb.ft).



E88654

2. Connect the battery ground cable.
For additional information, refer to: Battery Connect (414-01, General Procedures).

