

PUBLISHED: 11-MAY-2011
2005.0 DISCOVERY 3, 502-02

FULL FRAME AND BODY MOUNTING

BODY - TDV6 2.7L DIESEL (G965386)

REMOVAL AND INSTALLATION

REMOVAL

NOTE:

In this procedure, the body is removed from the integrated body-frame. This procedure can only be performed using a 2-Post ramp.

1.

WARNING:

Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

- Raise the vehicle with the supports under the integrated body-frame.

2. Disconnect the battery ground cable.

For additional information, refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

3. Remove the auxiliary battery tray.

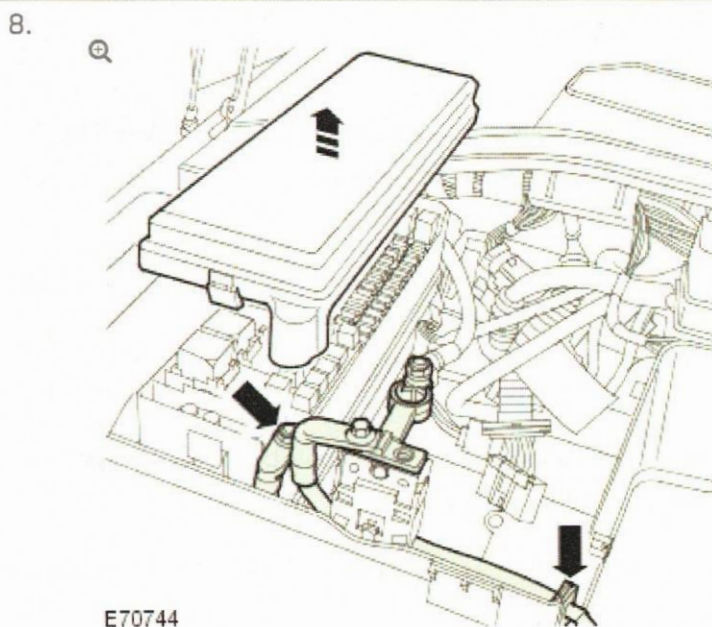
For additional information, refer to: [Auxiliary Battery Tray](#) (414-01 Battery, Mounting and Cables, Removal and Installation).

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4. Remove the coolant expansion tank.
For additional information, refer to: [Coolant Expansion Tank \(303-03C Engine Cooling - TDV6 2.7L Diesel, Removal and Installation\)](#).

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5. Recover the A/C refrigerant.
For additional information, refer to: [Air Conditioning System Recovery, Evacuation and Charging \(412-00 Climate Control System - General Information, General Procedures\)](#).

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6. Remove the air cleaner assembly.
For additional information, refer to: [Air Cleaner \(303-12C Intake Air Distribution and Filtering - TDV6 2.7L Diesel, Removal and Installation\)](#).

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7. Remove the TCM.
For additional information, refer to: [Four-Wheel Drive Control Module \(308-07A Four-Wheel Drive Systems, Removal and Installation\)](#).

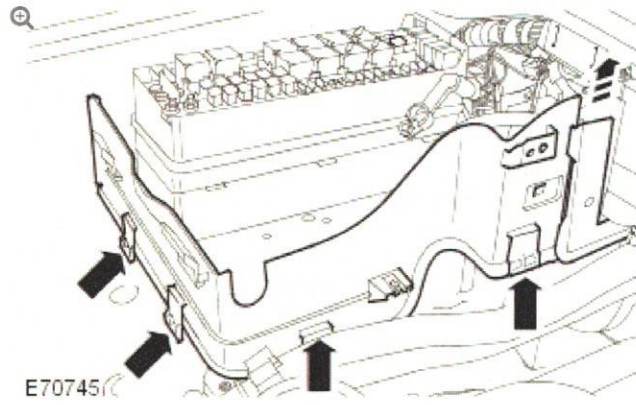


Release the battery positive cable.

- Remove the BJB cover.
- Remove the nut.
- Release the grommet.

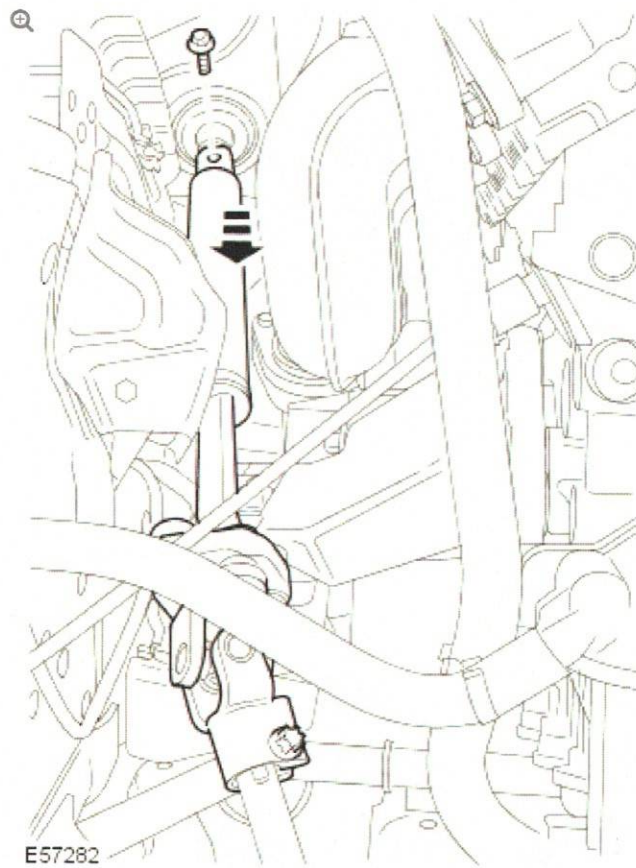
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9. Remove the battery compartment side wall.
■ Release the 4 clips.

10.



Remove the battery compartment side wall extension.

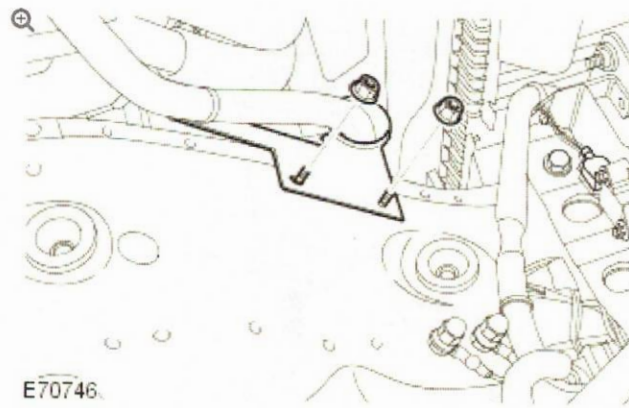
11.



Disconnect the steering column lower shaft from the steering column.

- Remove and discard the Torx bolt.

12.

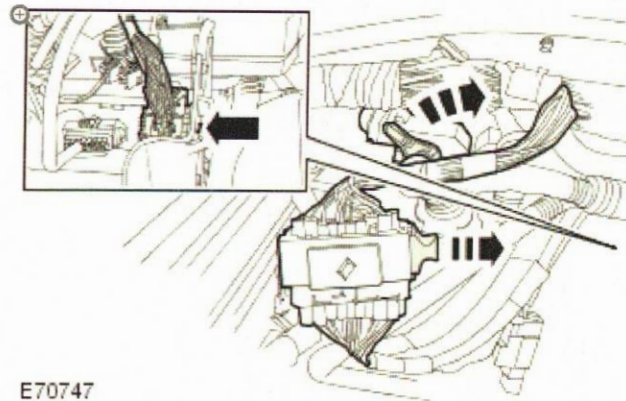


E70746

Release the battery positive cable bracket.

- Remove the 2 nuts.

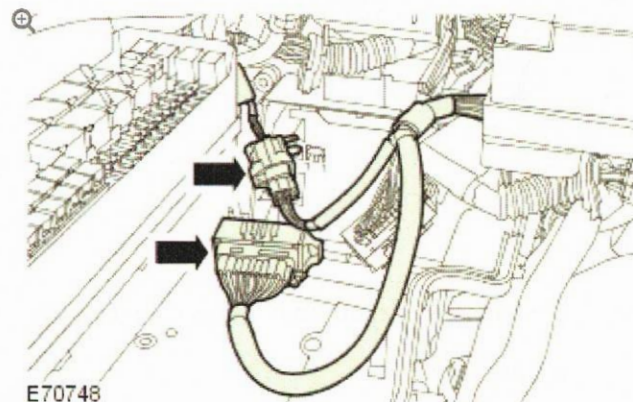
13.



E70747

Release and disconnect the 2 engine wiring harness electrical connectors.

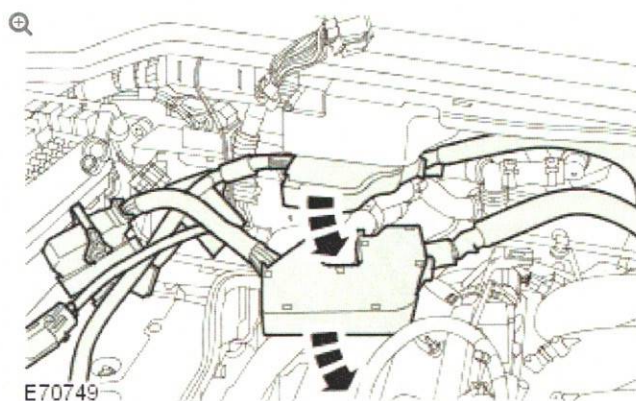
14.



E70748

Release and disconnect the 2 transmission wiring harness electrical connectors.

15.



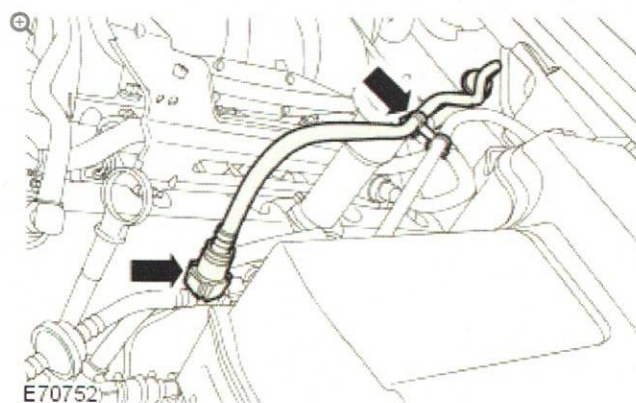
Release the engine and transmission wiring harness cassettes, position the wiring harnesses aside.

- Release the 2 clips.

16.

CAUTION:

Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



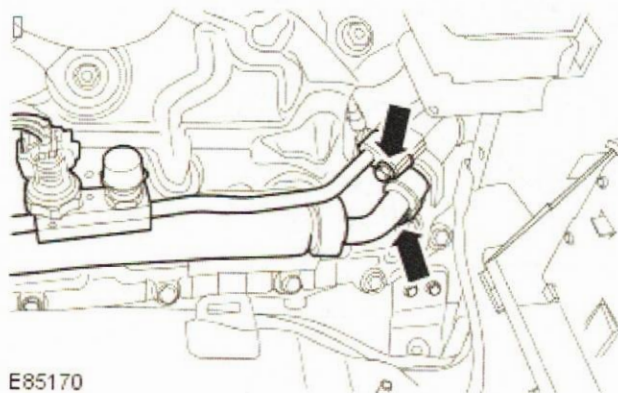
Disconnect the brake booster vacuum hose.

- Release the clip.

17.

CAUTION:

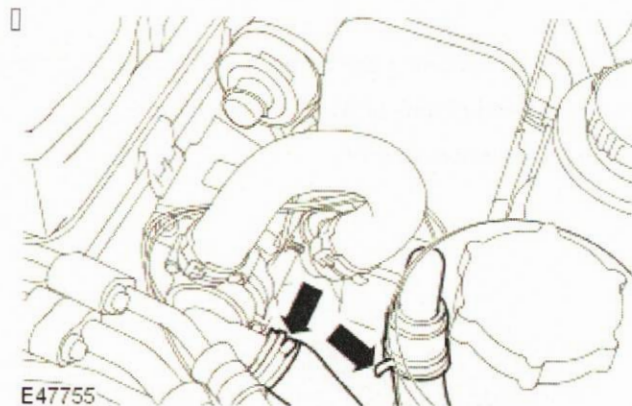
Immediately cap all refrigerant lines to prevent ingress of dirt and moisture.



Disconnect the high and low-pressure A/C lines.

- Remove the 2 bolts.
- Remove and discard the 2 O-ring seals.

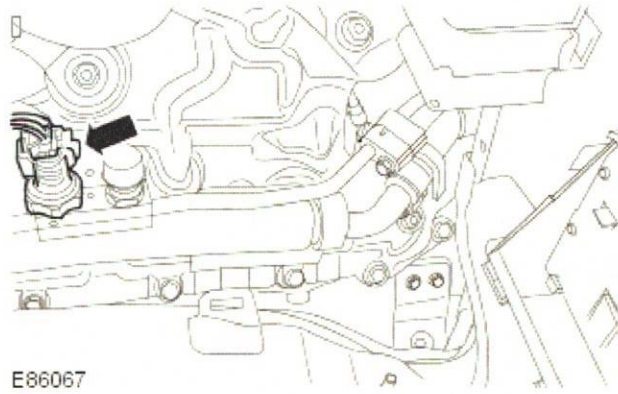
18.



Disconnect the fuel fired booster heater inlet and outlet coolant hoses.

- Release the 2 clips.
- Clamp the hoses

19.

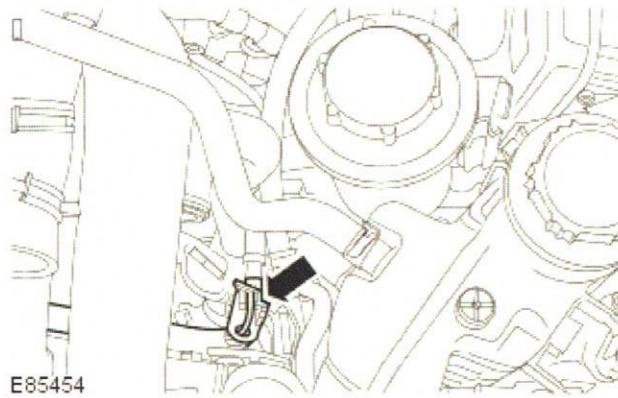


E86067

Disconnect the A/C low-pressure switch electrical connector.

- Release the wiring harness.

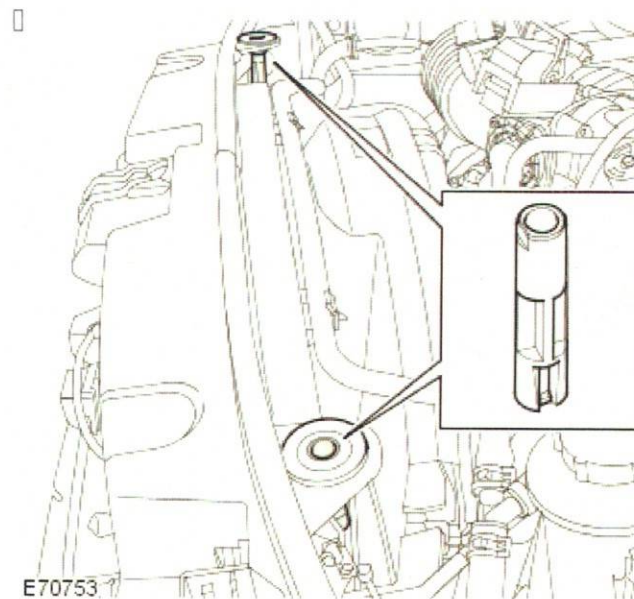
20.



E85454

Disconnect the cooling fan electrical connector.

21.

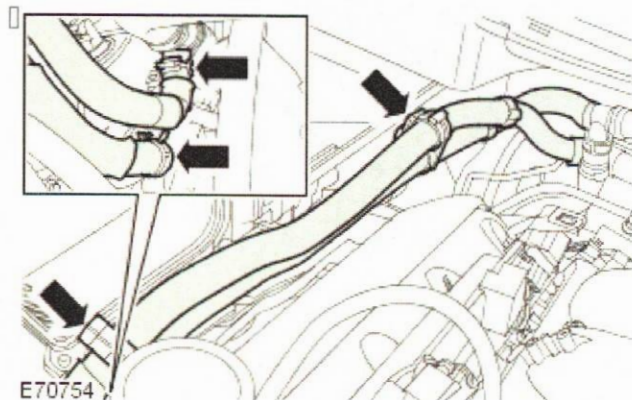


E70753

Remove the radiator securing pegs.

- Depress the 2 clips.

22.



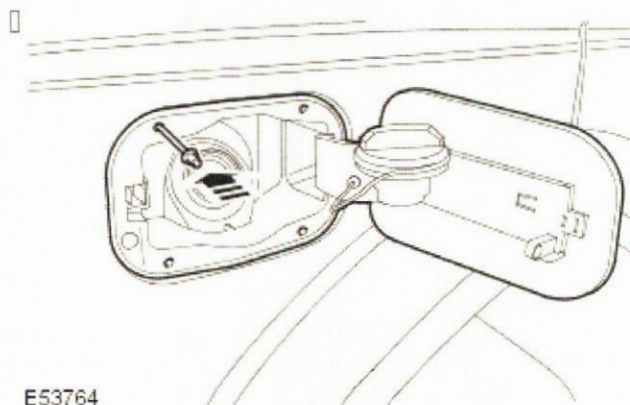
Disconnect the 2 heater coolant hoses.

- Release the clips.
- Clamp the two hoses.

23.

WARNINGS:

- Place the vehicle in a well ventilated, quarantined area and arrange 'No Smoking/Petrol Fumes' signs about the vehicle.
- Do not carry or operate cellular phones when working on or near any fuel related components. Highly flammable vapors are always present and may ignite. Failure to follow these instructions may result in personal injury.

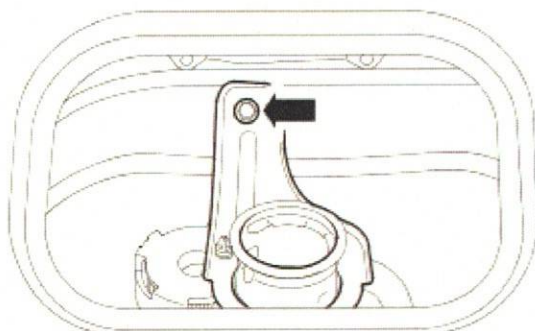


Remove the fuel filler door and inner assembly.

- Open the fuel filler door and remove the cap.

- Using a 2 mm metal rod, pierce the inner assembly and release the 4 clips.
- Release from the filler neck.
- Replace the filler cap.

24.



E70762

Release the fuel filler neck.

- Remove the bolt.

25. Remove both front fender splash shields.

For additional information, refer to: [Fender Splash Shield](#) (501-02 Front End Body Panels, Removal and Installation).

26. Remove the front bumper cover.

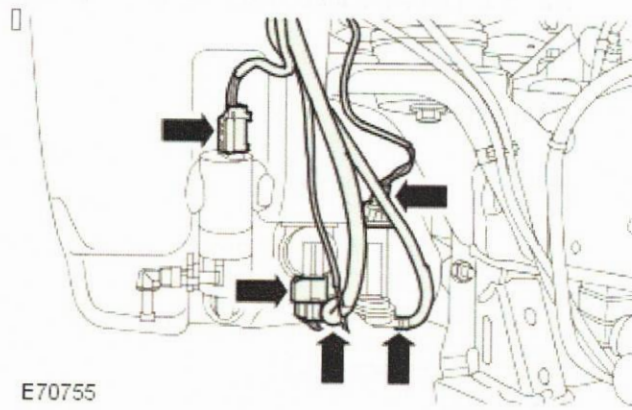
For additional information, refer to: [Front Bumper Cover](#) (501-19 Bumpers, Removal and Installation).

27. Disconnect the washer reservoir 3 electrical connectors.

28.

NOTE:

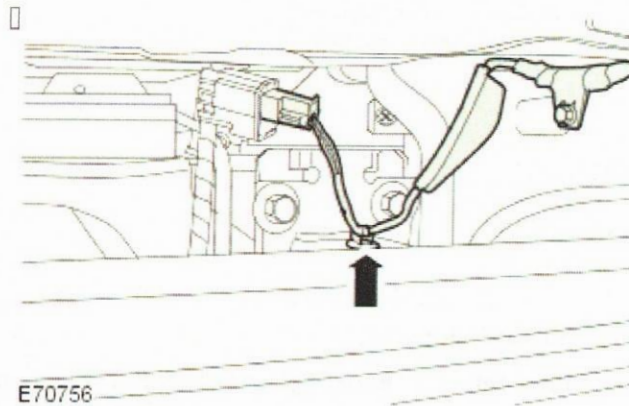
Note the fitted position.



E70755

Disconnect the 2 washer pump hoses.

29.



E70756

Disconnect the ambient air temperature sensor harness.

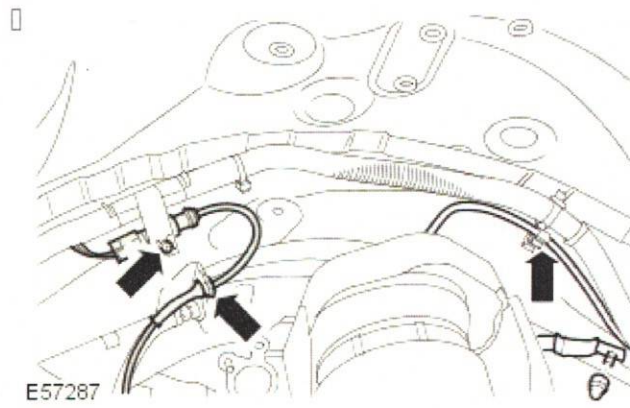
- Release the clip.
- Disconnect the electrical connector.

30. RH side front: Release the air suspension line from the wiring harness clip.

31. RH side front: Release the ABS sensor lead.

- Release the 2 clips.
- Disconnect the electrical connector.

32.



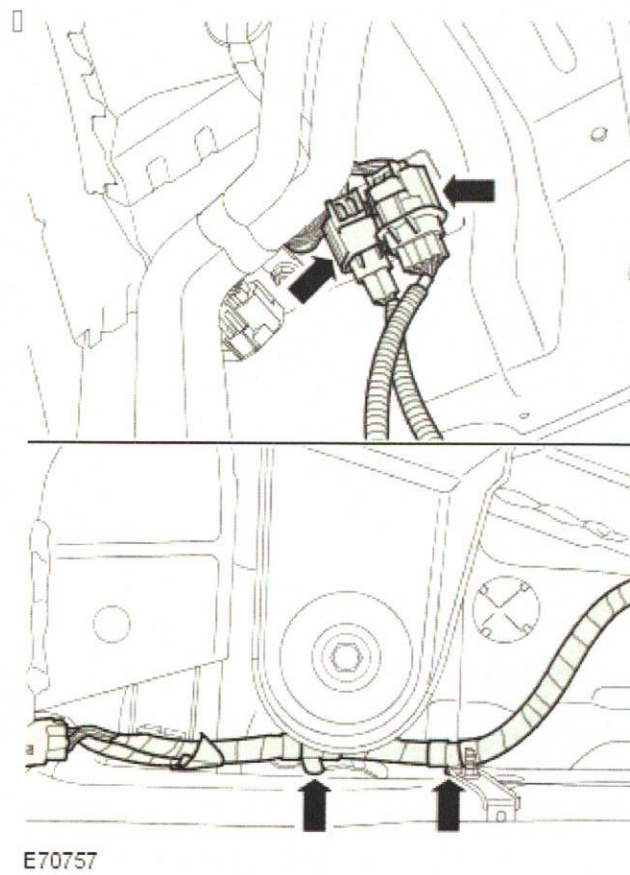
RH side front: Disconnect the engine ground cable from the body.

- Remove the nut.

33. RH side front: Disconnect the 2 body harness electrical connectors.

- Disconnect the 2 electrical connectors.

34.



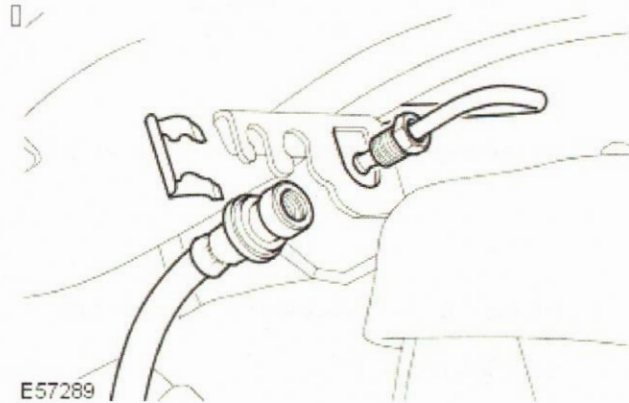
RH side front: Release the body-frame harness.

- Release the 2 clips.

35.

CAUTION:

Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



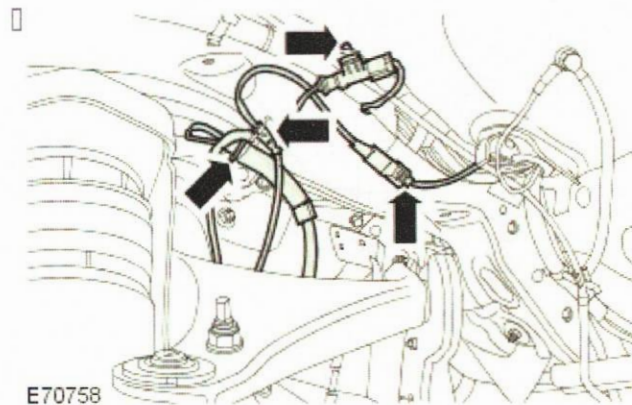
RH side front: Release the brake line.

- Position an absorbent cloth to collect fluid spillage.
- Disconnect the line union.
- Remove the clip.

36. LH side front: Release the ABS sensor lead.

- Release the 2 clips.
- Disconnect the electrical connector.

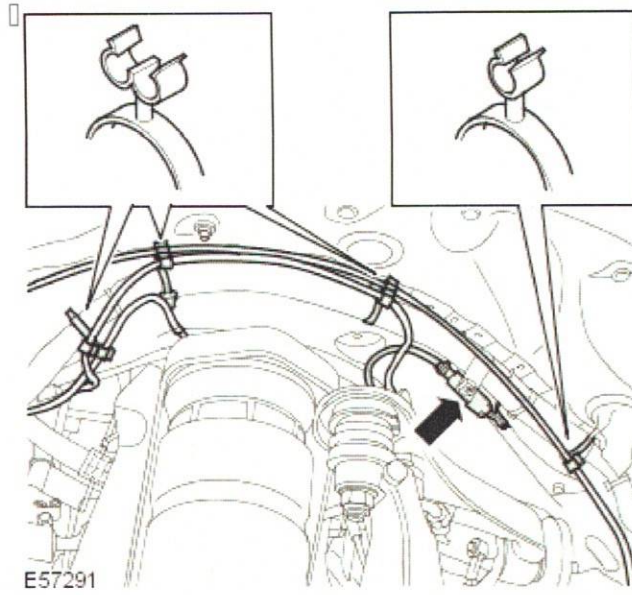
37.



LH side front: Disconnect the brake pad wear sensor electrical connector.

- Release from the 4 clips.

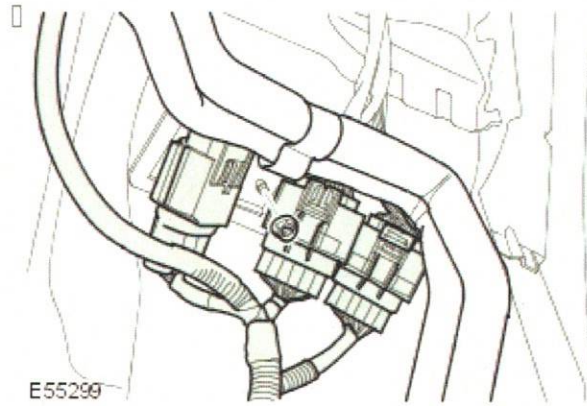
38.



LH side front: Release the 2 air lines.

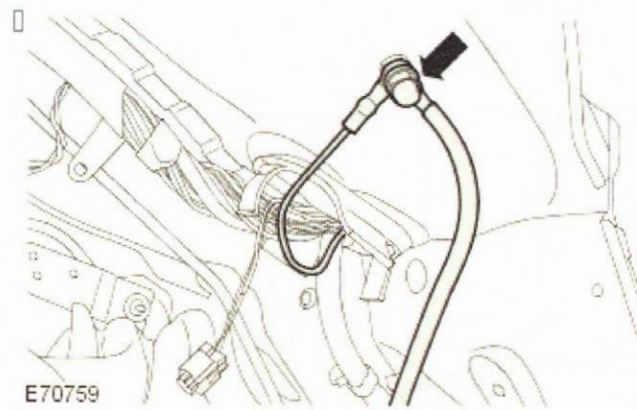
- Release from the 5 clips.

39.



LH side front: Disconnect the 3 body harness electrical connectors.

40.



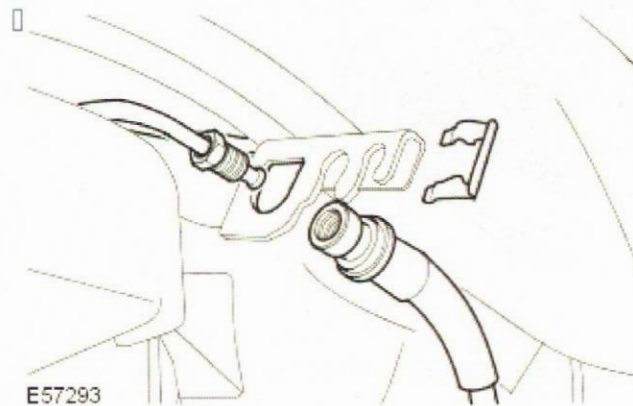
LH side front: Release the integrated body frame ground cable.

- Remove the nut.
- Release the 2 ground cables.

41.

CAUTION:

Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



LH side front: Release the brake line.

- Position an absorbent cloth to collect fluid spillage.
- Disconnect the line union.
- Remove the clip.

42.

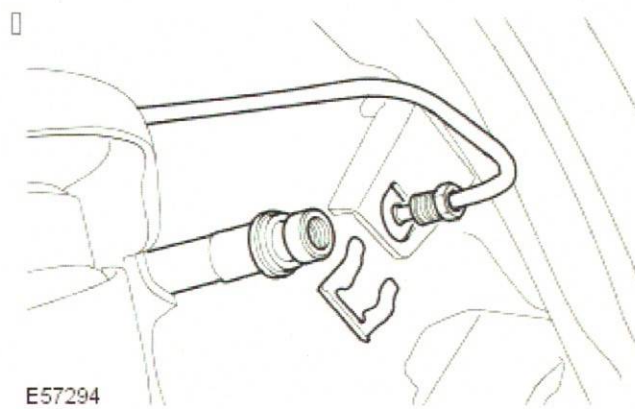
Remove the rear bumper cover.

For additional information, refer to: [Rear Bumper Cover \(501-19 Bumpers, Removal and Installation\)](#).

43.

CAUTION:

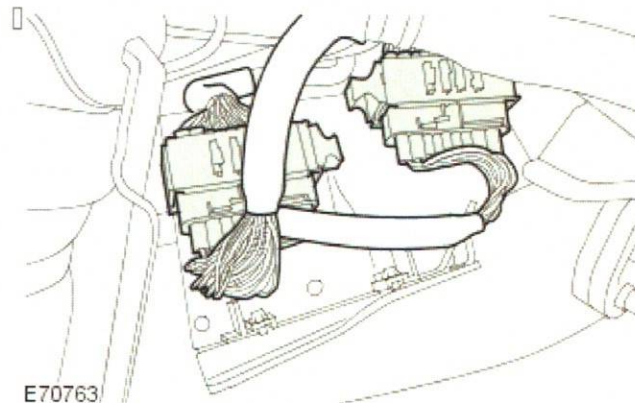
Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



RH side rear: Disconnect the brake line.

- Position an absorbent cloth to collect fluid spillage.
- Disconnect the line union.
- Remove the clip.

44.

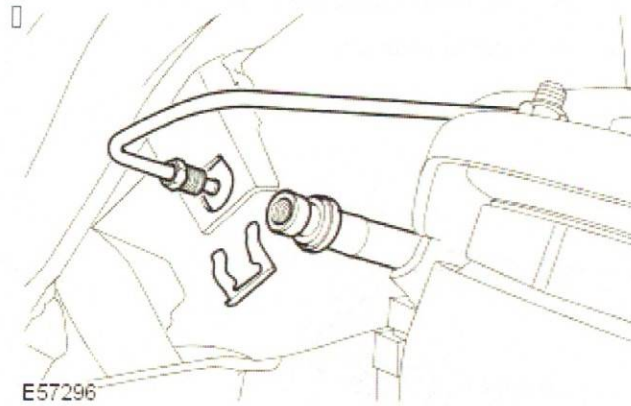


LH side rear: Disconnect the 2 electrical connectors from the frame wiring harness.

45.

CAUTION:

Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



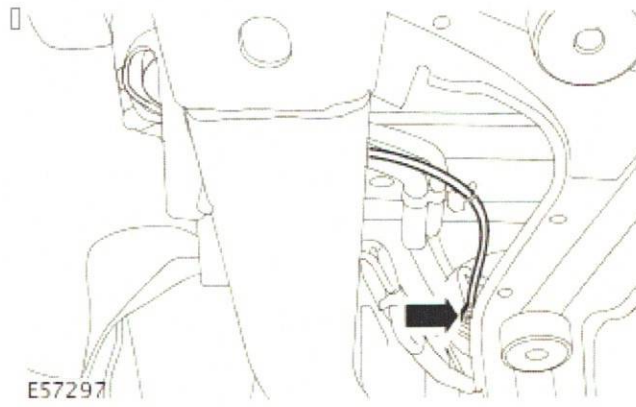
LH side rear: Disconnect the brake line.

- Position an absorbent cloth to collect fluid spillage.
- Disconnect the line union.
- Remove the clip.

46.

CAUTION:

Before disconnecting or removing the components, make sure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.



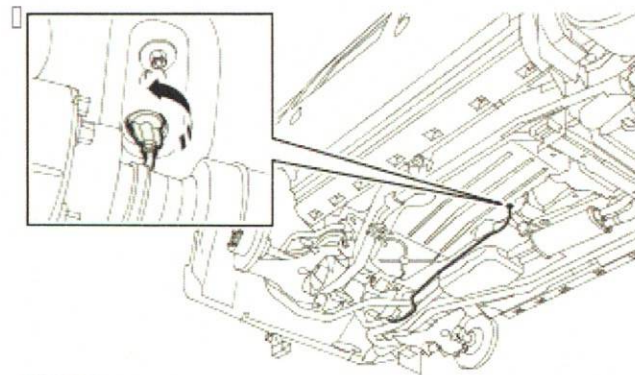
LH side rear: Disconnect the suspension air compressor intake line.

- Raise the vehicle on the lift.

47.

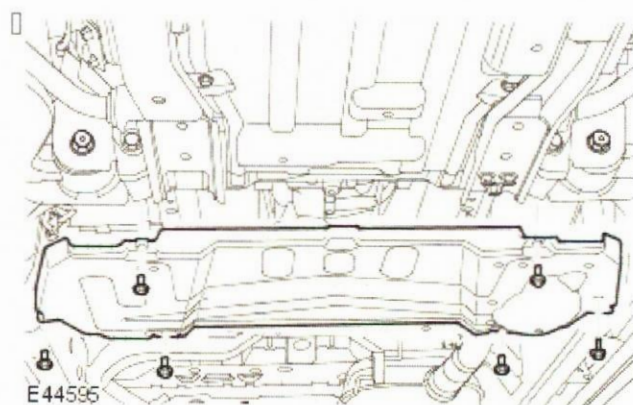
CAUTION:

Note the fitted position of the seal.



Release the parking brake emergency release cable.

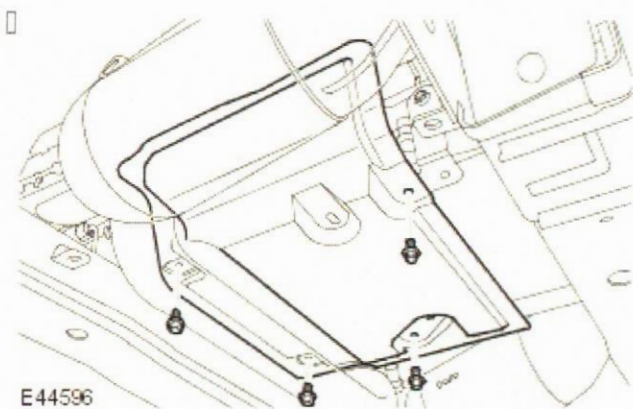
48.



Remove the transmission undershield.

- Remove the 6 bolts.

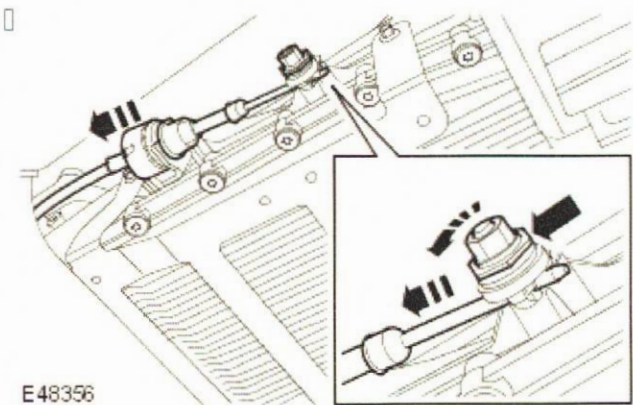
49.



Remove the transmission heat shield.

- Remove the 4 bolts.

50.



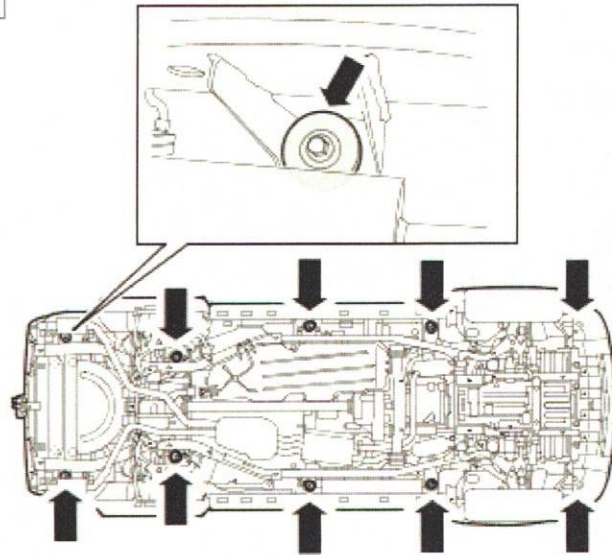
Release the selector lever cable.

-

Using an additional wrench, restrain the clamping bush and loosen the locknut.

- Compress the latch and release the cable.

51.



E70765

Remove the body mount retaining bolts.

- Remove the 10 spacing washers.

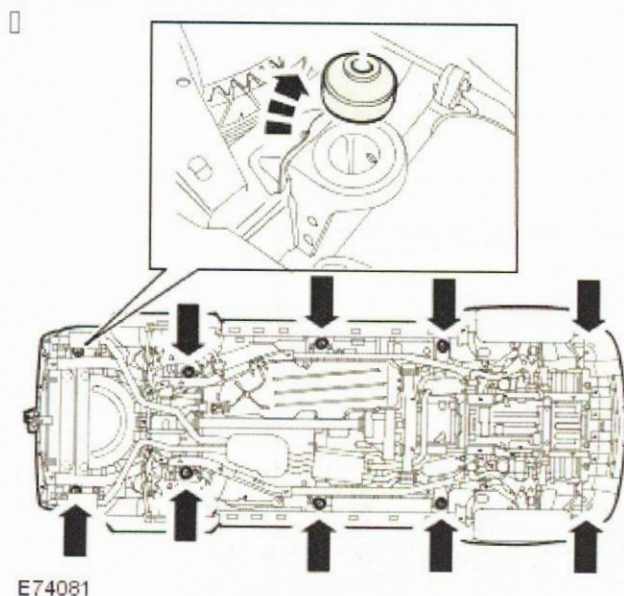
52.

WARNING:

Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

NOTES:

- Note the fitted position of the body mounts.
- The body mounts are color coded.



Raise and support the body.

- Remove the 10 body mounts.

INSTALLATION

1.

NOTES:

- The body mounts are color coded.
- Install the components to their original fitted positions.

Install the body mounts.

- Clean the component mating faces.

2.

CAUTION:

Carefully lower the body onto the integrated body frame. Make sure components do not get trapped. Pay particular attention to loose connections and the radiator area.

Install the body to the integrated body frame.

- Clean the component mating faces.
- With assistance align the body and integrated body frame mounts.
- Install the spacing washers.
- Install the bolts, but do not tighten fully at this stage.

3.

WARNING:

Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise the vehicle on the lift.

- Raise the vehicle with the supports under the integrated body-frame.

4. Tighten the integrated body frame to body bolts to 133 Nm (98 lb.ft).

5. Attach the selector cable.

6. Secure the parking brake emergency release cable.

- Clean the component mating faces.

7. LH side rear: Connect the suspension air compressor intake line.

- Clean the component mating faces.
- Secure the clip.

8. LH side rear: Connect the brake line.

- Lower the vehicle on the lift.
- Clean the component mating faces.
- Install the brake tube.
- Install the clip.
- Tighten the brake line union to 16 Nm (12 lb.ft).

9. LH side rear: Connect the 2 body harness electrical connectors.

10. RH side rear: Connect the brake line.

- Clean the component mating faces.
 - Install the brake tube.
 - Install the clip.
 - Tighten the brake line union to 16 Nm (12 lb.ft).
-
11. Secure the fuel filler neck.
- Tighten the bolt to 10 Nm (7 lb.ft).
-
12. Install the fuel filler door assembly.
- Clean the component mating faces.
 - Install the filler cap.
 - Close the fuel filler door.
-
13. Install the rear bumper cover.
- For additional information, refer to: [Rear Bumper Cover](#) (501-19 Bumpers, Removal and Installation).
-
14. LH side front: Connect the brake line.
- Clean the component mating faces.
 - Install the brake tube.
 - Secure the clip.
 - Tighten the brake line union to 16 Nm (12 lb.ft).
-
15. LH side front: Connect the integrated body frame ground cable.
- Connect the ground cables.
 - Tighten the nut to 25 Nm (18 lb.ft).
-
16. LH side front: Connect the 3 body harness electrical connectors.
-
17. LH side front: Secure the air lines to the clips.
-
18. LH side front: Connect the brake pad wear sensor electrical connector.
- Secure in the clips.
-
19. LH side front: Connect the ABS sensor lead.

- Connect the electrical connector.
- Secure in the clips.

20. RH side front: Connect the 2 body harness electrical connectors.

21. RH side front: Secure the body-frame harness.

- Secure with the 2 clips.

22. RH side front: Connect the brake line.

- Clean the component mating faces.
- Install the brake tube.
- Secure the clip.
- Tighten the brake line union to 16 Nm (12 lb.ft).

23. RH side front: Connect the engine ground strap to the body.

- Tighten the nut to 25 Nm (18 lb.ft).

24. RH side front: Connect the ABS sensor lead.

- Connect the electrical connector.
- Secure the clips.

25. RH side front: Install the air suspension line to the wiring harness clip.

26. Connect the ambient air temperature sensor harness.

- Connect the electrical connector.
- Secure the clip.

27.

NOTE:

Install the components to their original fitted positions.

Connect the washer pump hoses.

28. Connect the washer reservoir electrical connectors.

29.

CAUTION:

Lubricate the new seals with clean refrigerant oil.

Connect the high and low-pressure A/C lines.

- Clean the component mating faces.
- Install new O-ring seals.
- Tighten the bolt to 6 Nm (4 lb.ft).

30. Connect the fuel fired booster heater coolant hoses.

- Secure with the clips.

31. Connect the cooling fan electrical connector.

32. Connect the A/C low-pressure switch electrical connector.

- Secure the wiring harness.

33. Connect the brake booster vacuum hose to the intake manifold.

- Clean the component mating faces.

34. Install the radiator securing pegs.

35. Install the front bumper cover.

For additional information, refer to: [Front Bumper Cover \(501-19 Bumpers, Removal and Installation\)](#).

36. Install both front fender splash shields.

For additional information, refer to: [Fender Splash Shield \(501-02 Front End Body Panels, Removal and Installation\)](#).

37.

NOTE:

Make sure the steering is in the straight ahead position.

Connect the steering column lower shaft.

- Clean the component mating faces.
- Install a new patchlock bolt and tighten to 25 Nm (18 lb.ft).

-
38. Align the engine, transmission harness and cassettes.
-
39. Connect the 2 engine harness electrical connectors.
-
40. Connect the 2 transmission harness electrical connectors.
-
41. Install the engine and transmission harness cassettes.
-
42. Install the TCM.
For additional information, refer to: [Four-Wheel Drive Control Module](#) (308-07A Four-Wheel Drive Systems, Removal and Installation).
-
43. Install the battery compartment side wall extension.
-
44. Install the battery compartment side wall.
 - Secure the clips.
-
45. Install the battery positive cable.
 - Connect the battery positive cable to the BJB.
 - Tighten the nut to 25 Nm (18 lb.ft).
 - Install the grommet.
 - Install the BJB cover.
-
46. Connect the heater coolant hoses.
 - Secure the clips.
-
47. Install the air cleaner assembly.
For additional information, refer to: [Air Cleaner](#) (303-12C Intake Air Distribution and Filtering - TDV6 2.7L Diesel, Removal and Installation).
-
48. Install the coolant expansion tank.
For additional information, refer to: [Coolant Expansion Tank](#) (303-03C Engine Cooling - TDV6 2.7L Diesel, Removal and Installation).
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49. Connect the battery ground cable.
For additional information, refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).
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50. Recharge the A/C system.
For additional information, refer to: [Air Conditioning System Recovery, Evacuation and Charging](#) (412-00 Climate Control System - General Information, General Procedures).
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51. Bleed the brake system.
For additional information, refer to: [Brake System Bleeding](#) (206-00 Brake System - General Information, General Procedures).
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52. Adjust the selector cable.
For additional information, refer to: [Selector Lever Cable Adjustment](#) (307-05A Automatic Transmission/Transaxle External Controls - V6 N/A 4.0L Petrol, General Procedures).
-
53. Install the transmission heat shield.
- Tighten the bolts to 10 Nm (7 lb.ft).
-
54. Install the transmission undershield.
- Tighten the bolts to 10 Nm (7 lb.ft).
-
55. Check and top-up the coolant.
-
56. Secure the fuel fired booster heater exhaust bracket.