

Automatic Transmission Assembly – Remove and Install (2,9 V6 12V engine) (17 214 0)

Workshop Equipment

Transmission jack	
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Consumables

High-temperature grease	ESDM-1C220-A
Automatic transmission fluid (build date up to August '96)	ESP-M2C166-H
Automatic transmission fluid (build date from August '96 onwards)	WSS-M2C202-B
Automatic transmission fluid for vehicles with 2,3 DOHC 16V engine	WSS-M2C202-B

Remove

1. Standard preparatory measures:

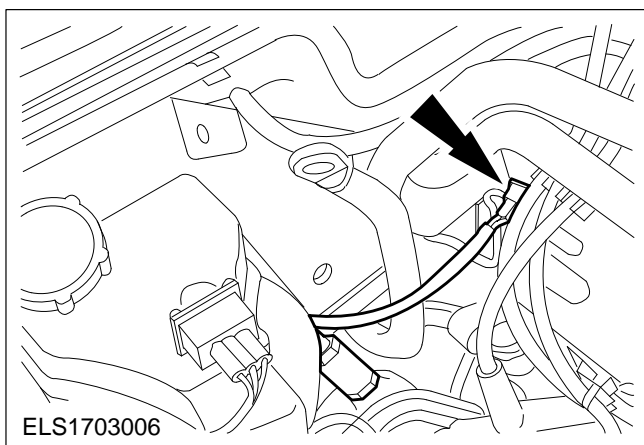
- Make a note of the radio keycode.
- Make a note of the preset radio stations.
- Remove the battery cover.

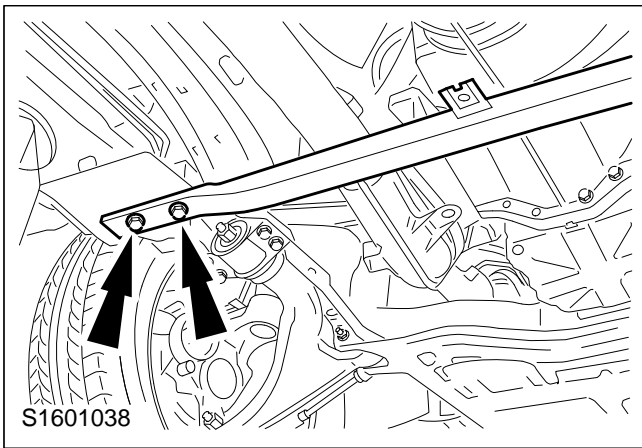
⚠ CAUTION: Disconnect the battery negative lead.

- Put protective covers on the wings.

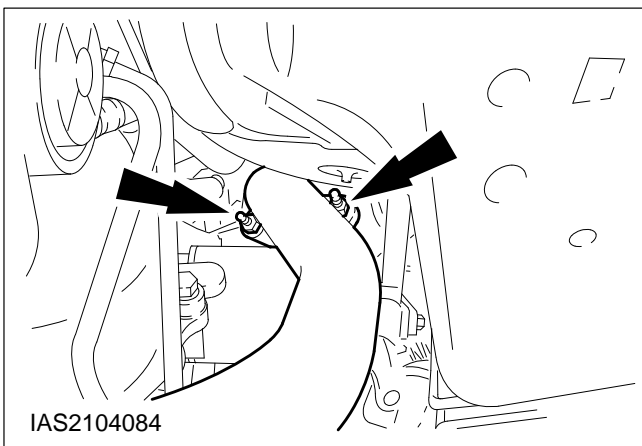
2. Disconnect the multiplugs of both oxygen sensors (O2S) (right-hand side shown).

3. Raise the vehicle.



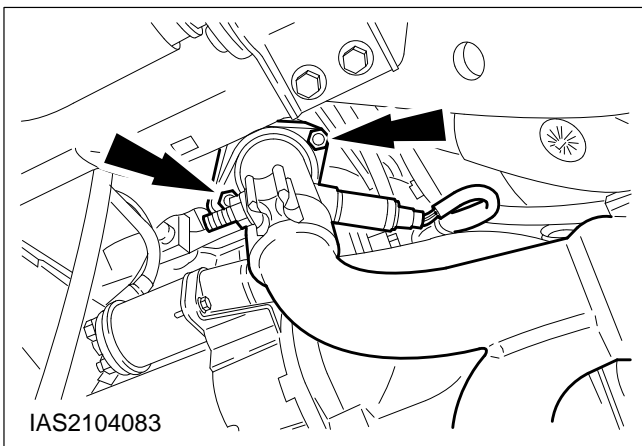


4. Detach the front axle crossbrace (left-hand side shown).

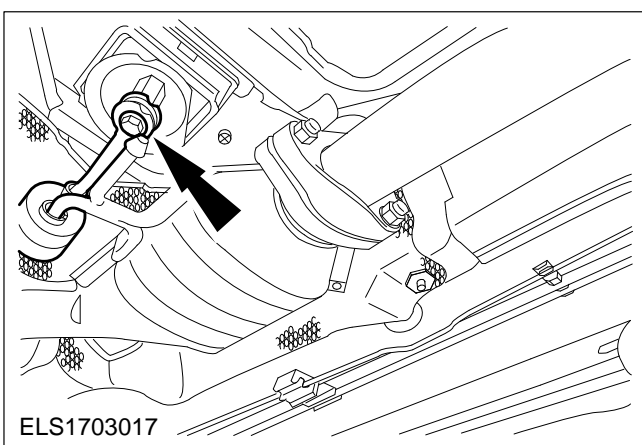


Remove complete exhaust system

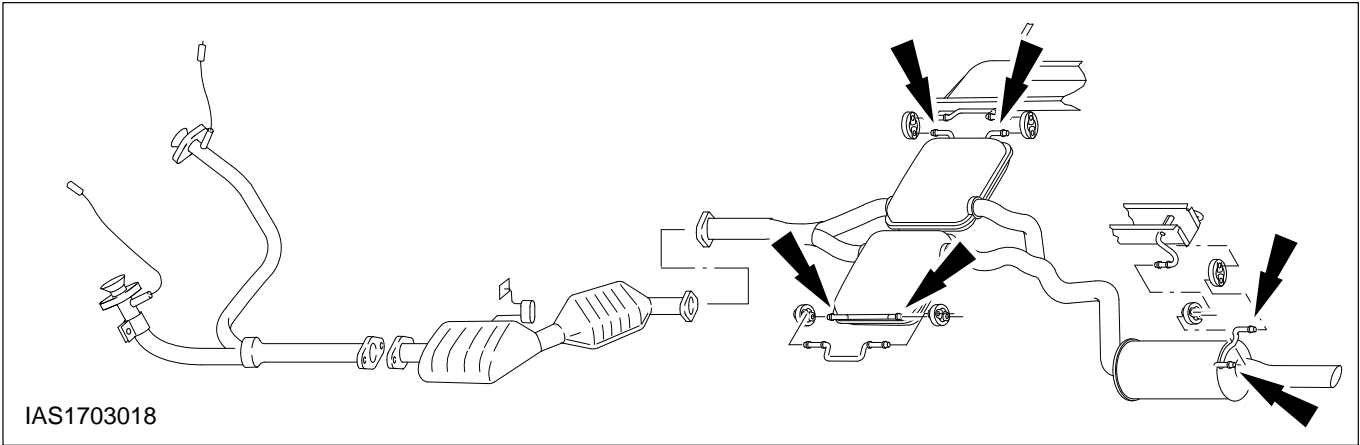
5. Unscrew the right-hand exhaust flange from the exhaust manifold.



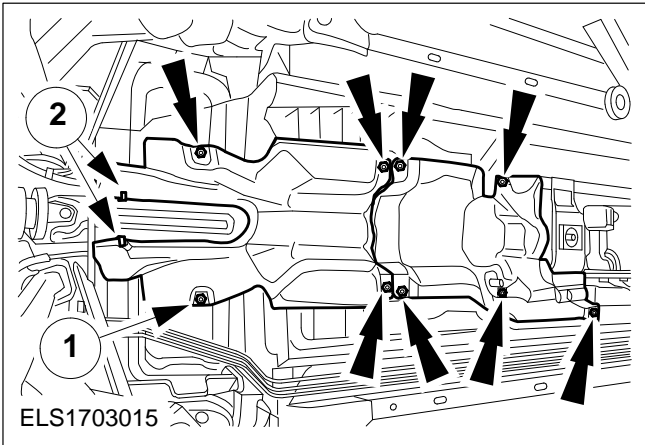
6. Unscrew the left-hand exhaust flange from the exhaust manifold.



7. Detach the exhaust mounting from the transmission crossmember.

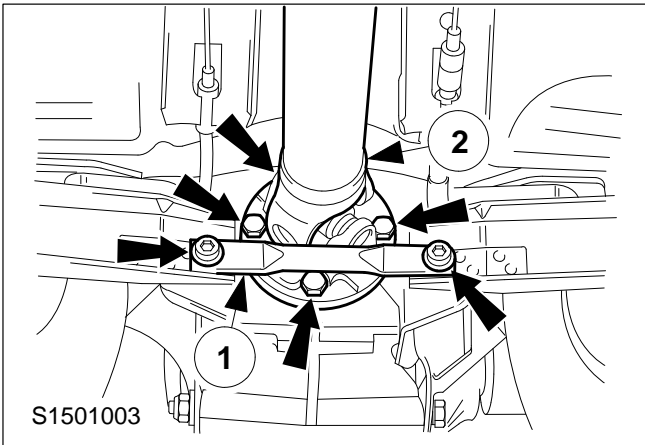


8. Unhook the rubber insulators and remove the exhaust system.



9. Detach the two heat shields (nine nuts, two clips).

- 1 Nuts
- 2 Clips

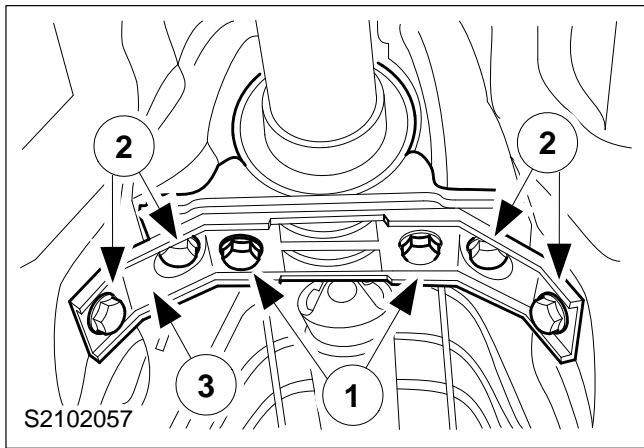


⚠ CAUTION: The driveshaft is finely balanced using bolts of different lengths. Mark the installation position of the driveshaft and bolts.

10. Detach the driveshaft from the rear axle.

NOTE: There is no transverse brace on vehicles from 01/96 onwards.

- 1 Detach the transverse brace from the rear axle.
- 2 Detach the driveshaft.



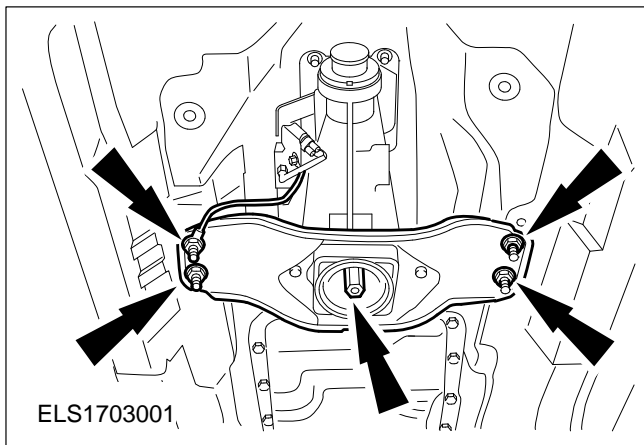
NOTE: There are spacer washers between the floor and the centre bearing.

11. Remove the driveshaft centre bearing.

- 1 Slacken the bolts.
- 2 Remove the bolts.
- 3 Turn both brackets through 90°.

12. Remove the driveshaft.

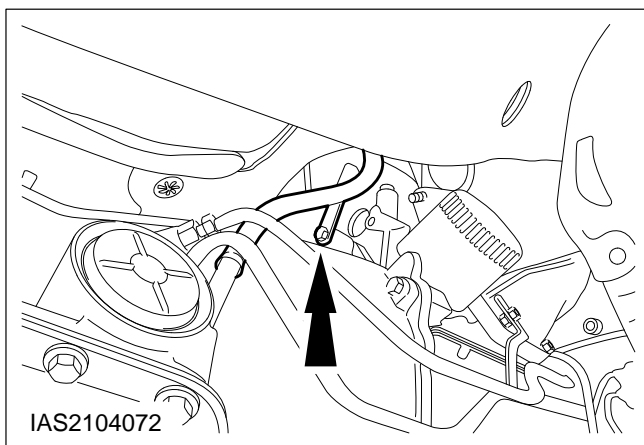
- Pull driveshaft out of the automatic transmission and remove it.
- Close off the transmission with auxiliary plugs.



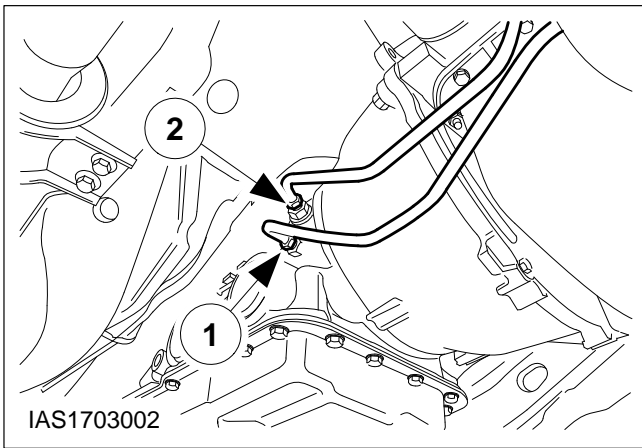
NOTE: Unscrew the ground cable (one nut).

13. Detach the transmission crossmember.

Lower the automatic transmission with the transmission jack.

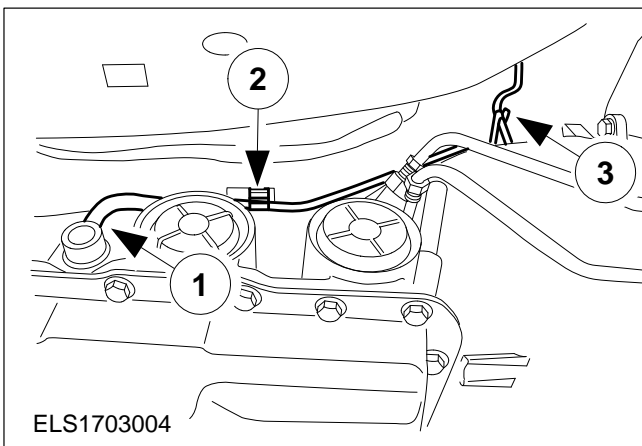


14. Remove the oil dipstick tube (one bolt).



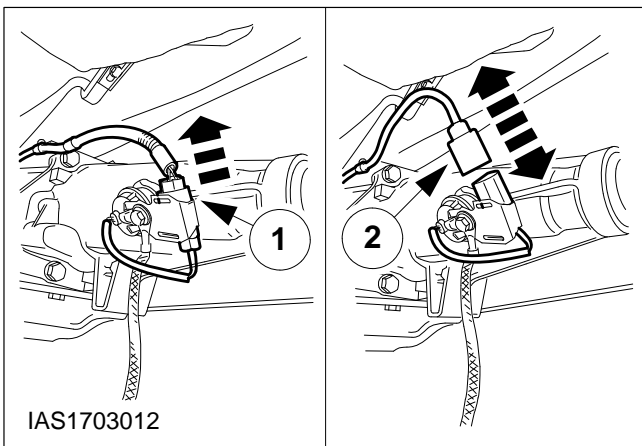
15. Detach the oil pipes from the transmission.

- 1 Return pipe
- 2 Feed pipe



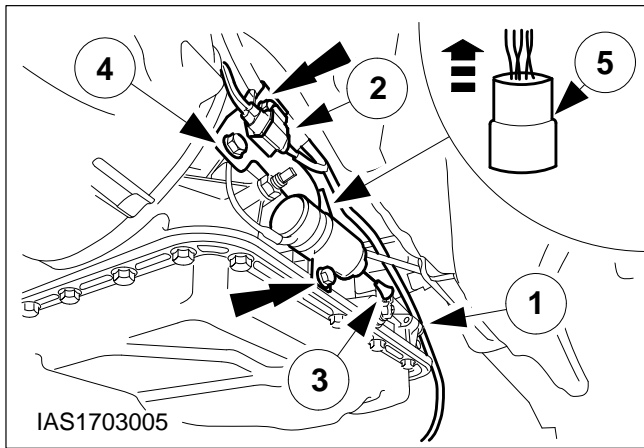
16. Release the vacuum line.

- 1 Disconnect the vacuum line from the throttle pressure diaphragm.
- 2 Unclip the vacuum line at the bottom.
- 3 Unclip the vacuum line at the top.



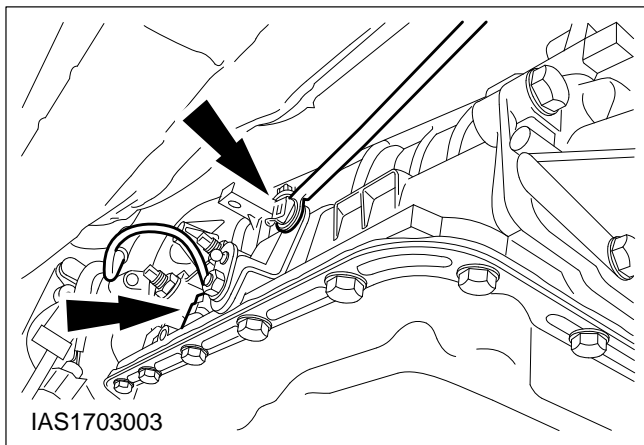
17. Disconnect the vehicle speed sensor (VSS) multiplug.

- 1 Slide it out of the retainer.
- 2 Disconnect the VSS multiplug.



18. Detach the automatic transmission wiring loom.

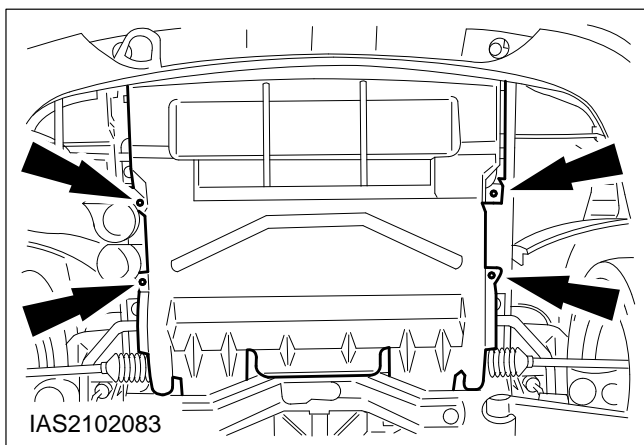
- 1 Unclip the wiring loom.
- 2 Release the kickdown solenoid multiplug from the bracket.
- 3 Unhook the kickdown solenoid cable ball socket.
- 4 Detach the kickdown solenoid with the bracket (three bolts).
- 5 Disconnect the reversing lamp/transmission inhibitor switch multiplug.



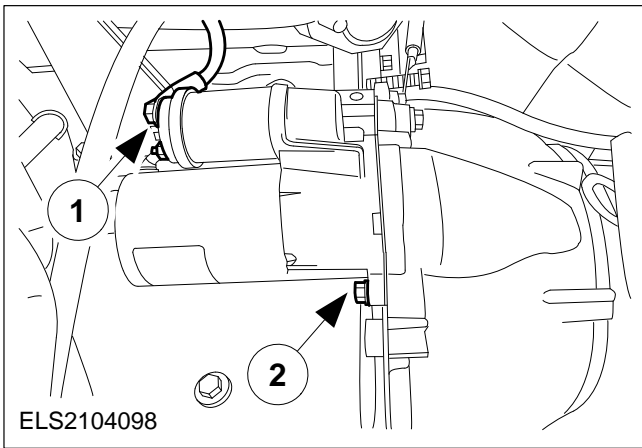
19. Disconnect the transmission control unit multiplug.

20. Detach the selector rod from the transmission.

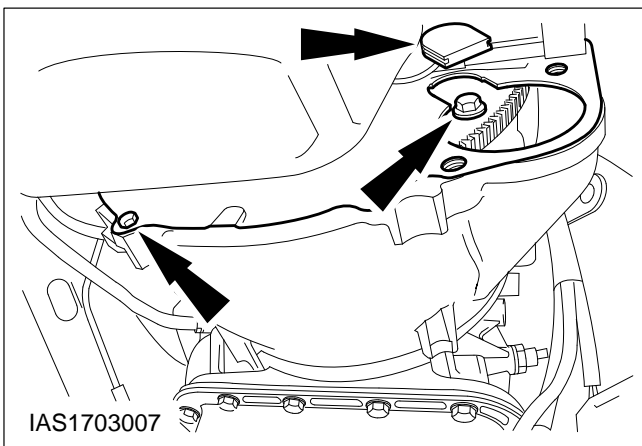
Remove the clip.



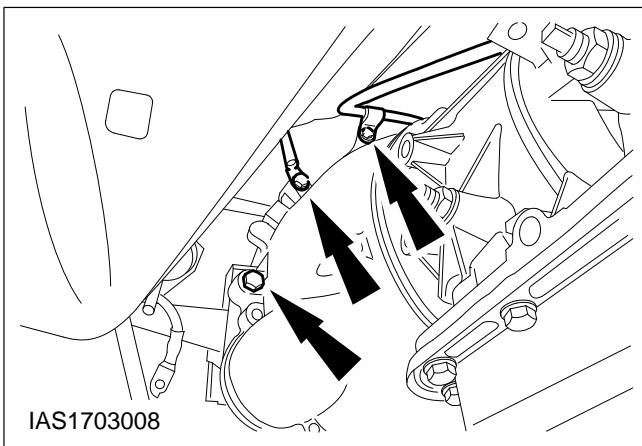
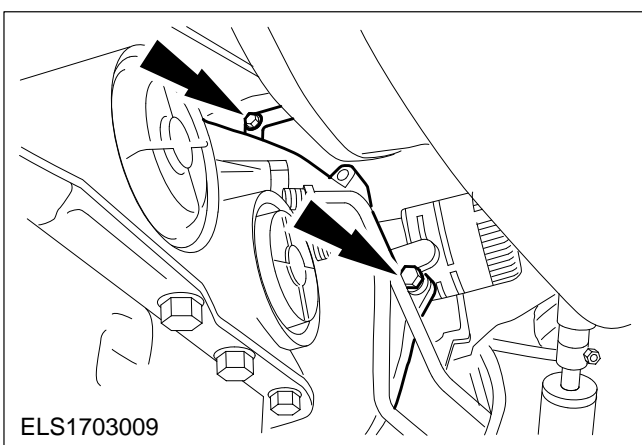
21. Detach the engine undershield.

**22. Remove the starter motor.**

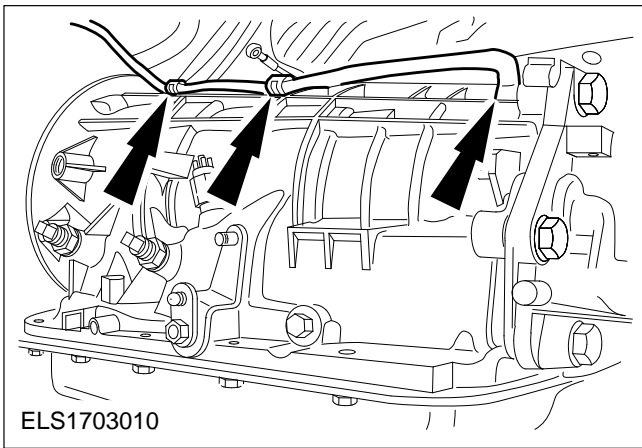
- 1 Disconnect the starter motor.
- 2 Remove the two bolts.

**23. Release the torque converter.**

- Remove the rubber cover.
- Remove the four bolts.

24. Remove the bolt from the transmission adaptor plate.**25. Unscrew the three transmission flange bolts on the left-hand side.****26. Unscrew the two transmission flange bolts on the right-hand side.**

Unscrew and remove two transmission flange bolts. Remove the bracket for the oil pipes.



⚠ WARNING: The torque converter can drop out of the automatic transmission.

27. Detach the vent hose from the transmission.

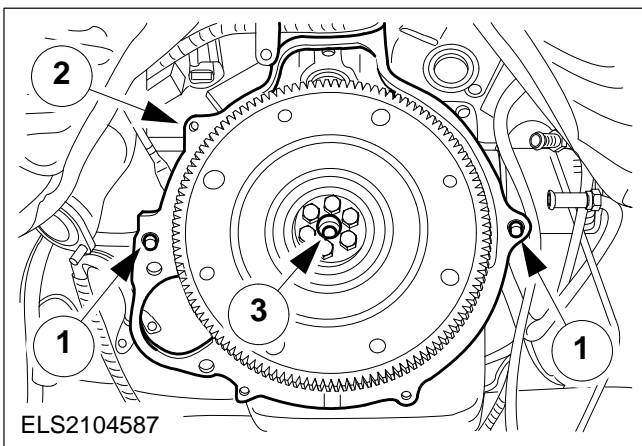
- Separate the transmission from the engine and lower it slightly with the transmission jack.
- Take the vent hose out of the two clips and pull it off.

28. Lower the transmission with the transmission jack.

Install

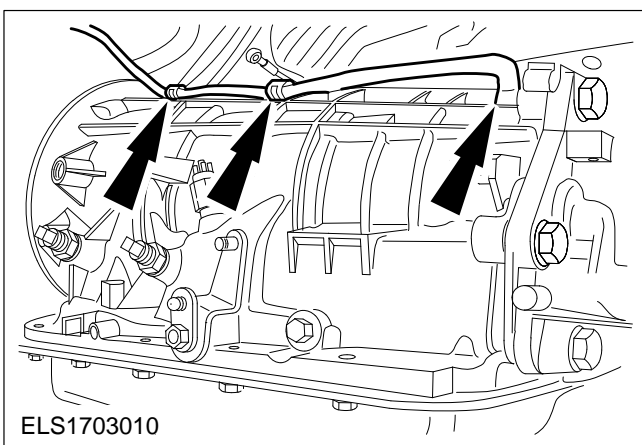
29. General note.

Renew the self-locking nuts.



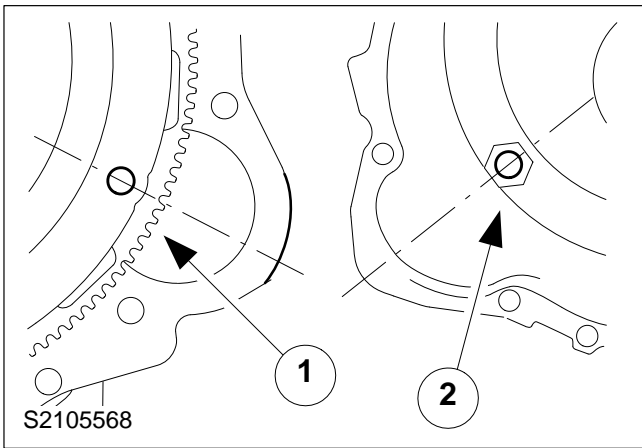
30. Align the adaptor plate.

- 1 Fit the guide sleeves.
- 2 Align the adaptor plate.
- 3 Apply high-temperature grease (ESDM-1C220-A) to the bore for the torque converter spigot.



31. Fit the transmission vent hose.

Raise the transmission, connect the hose and clip it into the two clips.



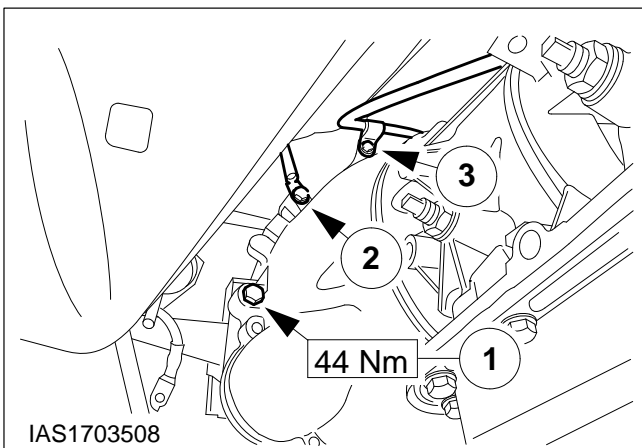
32. Align the torque converter and drive plate.

- 1 Drive plate
- 2 Torque converter

33. Apply high-temperature grease (ESDM-1C220-A) to the bore for the torque converter spigot.

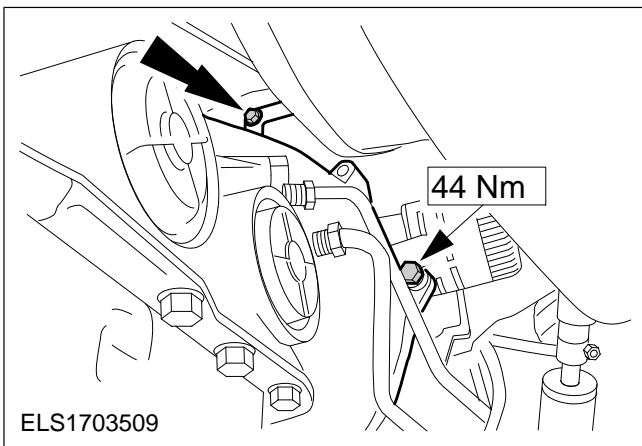
34. Install the automatic transmission.

Move the transmission into position.



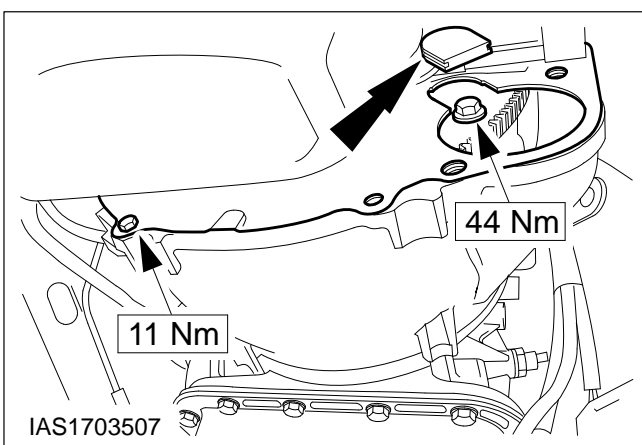
35. Secure the transmission flange bolts on the left-hand side.

- 1 Bolt.
- 2 Bolt with ground lead.
- 3 Bolt with wiring clamp.



36. Secure the transmission flange bolts on the right-hand side.

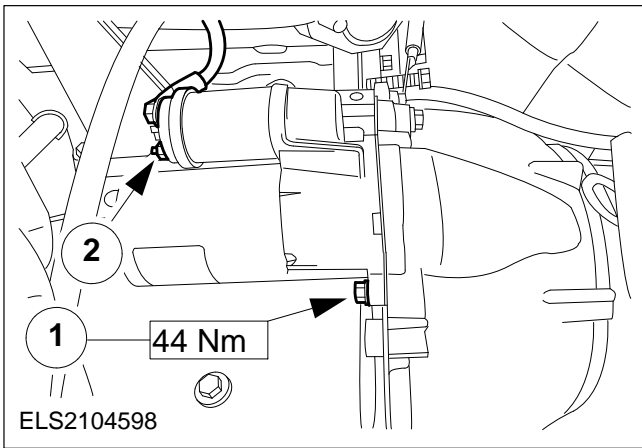
Attach the bracket for the oil pipes.



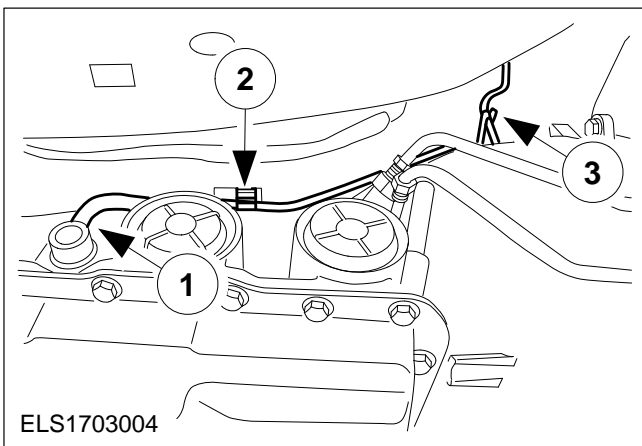
37. Secure the torque converter (four bolts).

Fit the rubber cover.

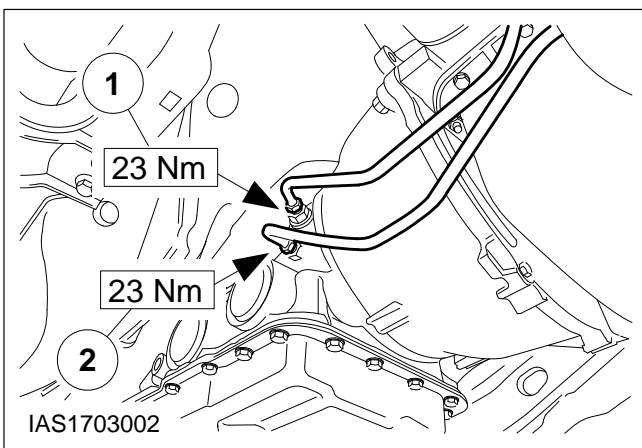
38. Screw on the transmission adaptor plate.

**39. Install the starter motor.**

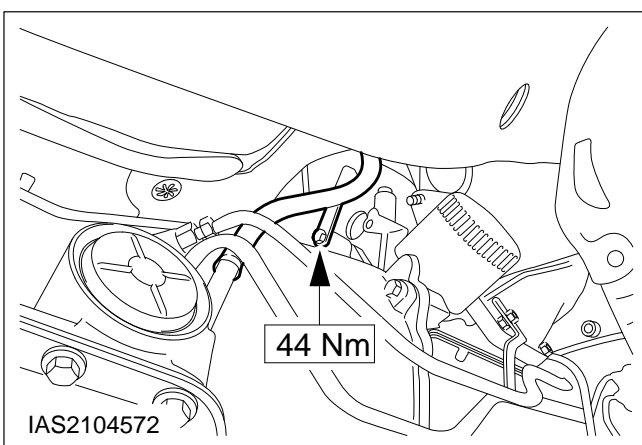
- 1 Secure the starter motor.
- 2 Connect the starter motor.

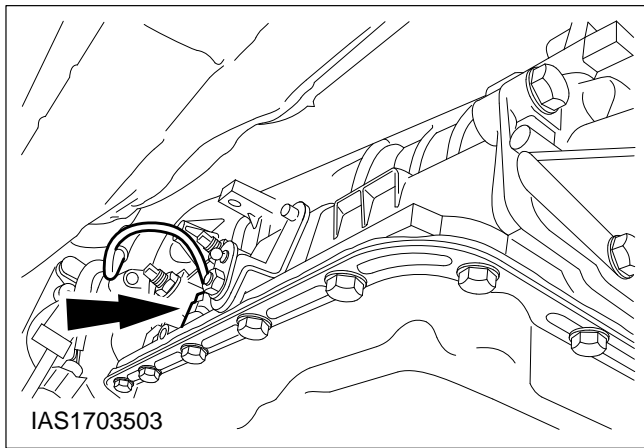
**40. Fit the vacuum line.**

- 1 Clip the vacuum pipe in at the top.
- 2 Clip the vacuum pipe in at the bottom.
- 3 Connect the vacuum hose to the throttle pressure diaphragm.

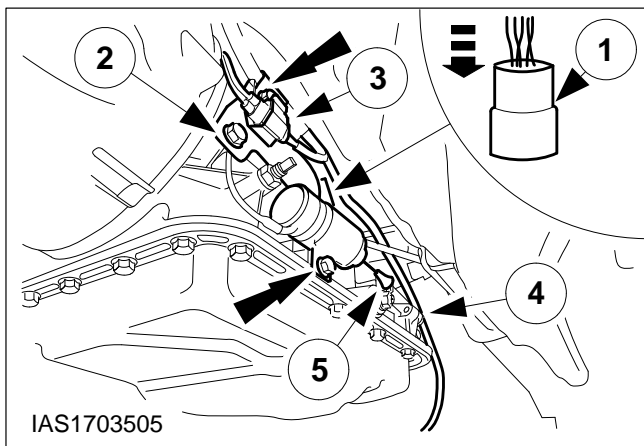
**41. Fit the transmission oil pipes.**

- 1 Return pipe
- 2 Feed pipe

**42. Fit the oil dipstick tube (one bolt).**

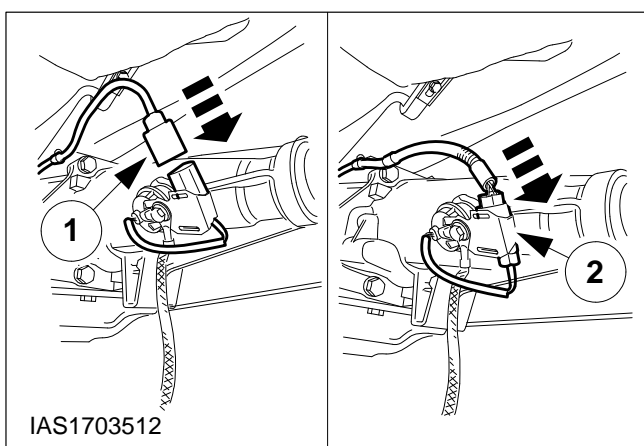


43. Connect the multiplug to the transmission control unit.

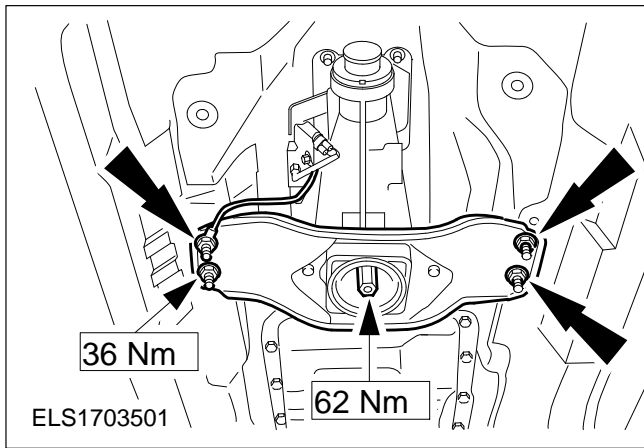


44. Fit the transmission wiring harness.

- 1 Connect the reversing lamp/transmission inhibitor switch multiplug.
- 2 Fit the kickdown solenoid with the bracket.
Screw in the bolts.
- 3 Clip the wiring loom in place.
- 4 Connect the kickdown magnet multiplug and fit it in the bracket.
- 5 Hook the ball socket of the kickdown solenoid cable in place.



45. Push on the VSS connector and position it correctly in the bracket.

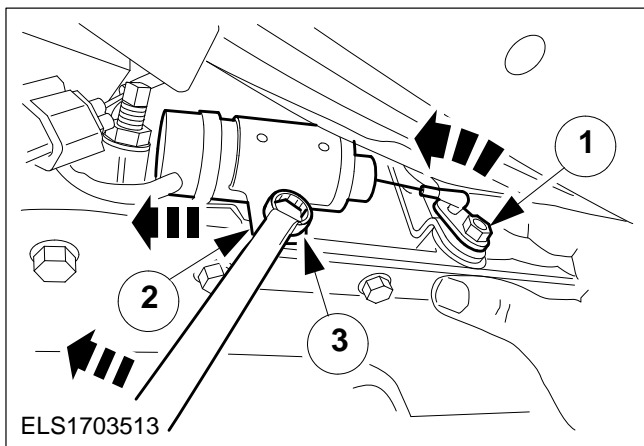


NOTE: Secure the ground lead with the nut.

46. Attach the transmission crossmember.

- Raise the transmission using a transmission jack.
- Fit the bolts.
- Remove the transmission jack.

47. Lower the vehicle.

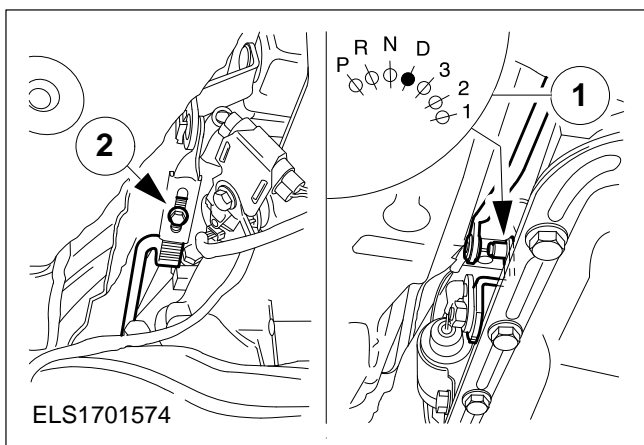


NOTE: It should be possible, with the kickdown solenoid tightened, to turn the kickdown lever 0,3 - 0,8 mm anticlockwise.

48. Adjust the cable of the kickdown solenoid.

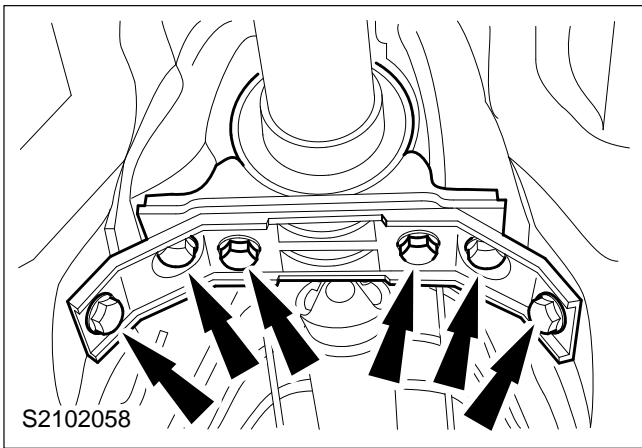
- Connect the battery negative lead.
- Switch on the ignition, depress the accelerator pedal fully and fix it there.
- Raise the vehicle.

- 1 Turn the kickdown lever anticlockwise until it reaches the stop and hold it in this position.
- 2 Push the kickdown solenoid forwards until the cable is under slight tension.
- 3 Push back the solenoid approx. 0,5 mm (with the kickdown lever at the stop) and tighten the bolts (x3).



49. Fit the selector rod and adjust it.

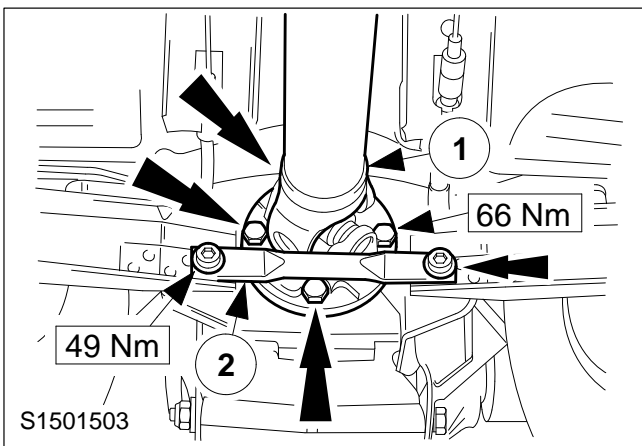
- Move the selector lever in the vehicle to position "D".
- 1 Move the selector lever on the transmission to position "D" (two clicks from the rear stop).
 - 2 Slacken the clamp bolt.
- Slide the selector rod onto the selector lever.
 - Tighten the clamp bolt.
 - Secure the selector rod with the clip.



NOTE: A spacer washer must be placed between the floor assembly and the centre bearing in each case.

50. Fit the driveshaft.

- Pull the auxiliary plugs out of the transmission.
- Guide the driveshaft into the transmission.
- Attach the centre bearing to the floor assembly (do not tighten the bolts yet).



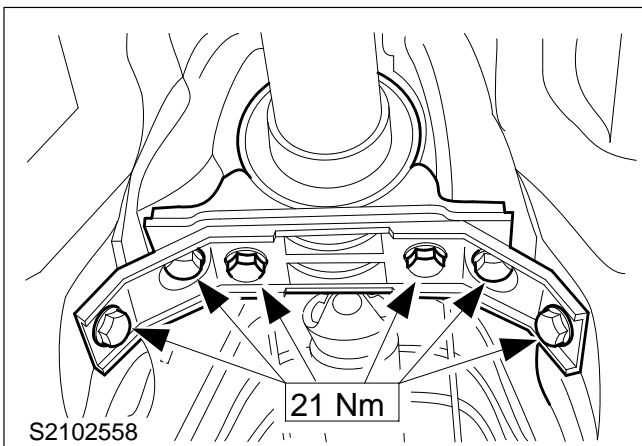
CAUTION: The driveshaft is finely balanced using bolts of different lengths. Note the marks showing the installation position of the driveshaft and bolts.

51. Install the driveshaft (continued).

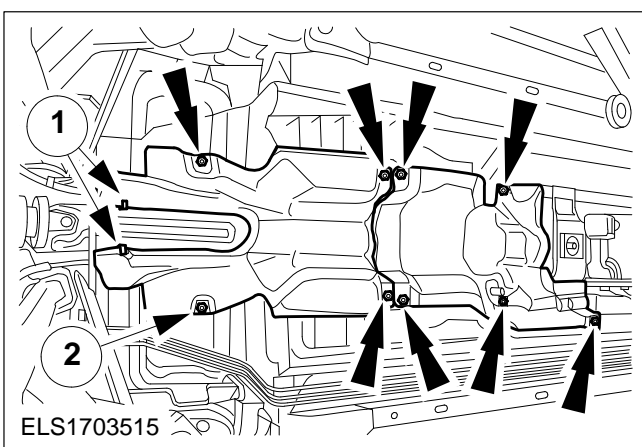
- 1 Attach the driveshaft to the rear axle flange.

NOTE: There is no transverse brace on vehicles from 01/96 onwards.

- 2 Attach the transverse brace.

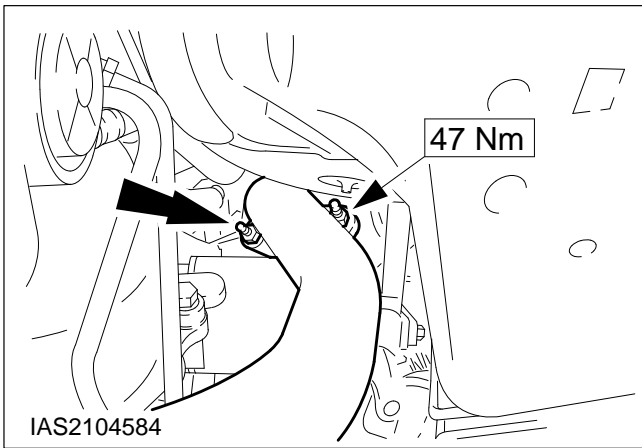


52. Align the centre bearing free of strain and tighten it.



53. Fit the two heat shields (new nuts, two clips).

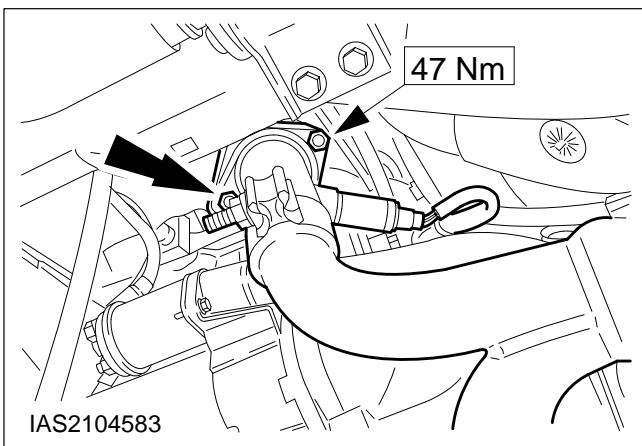
- 1 Clips
- 2 Nuts



Install complete exhaust system

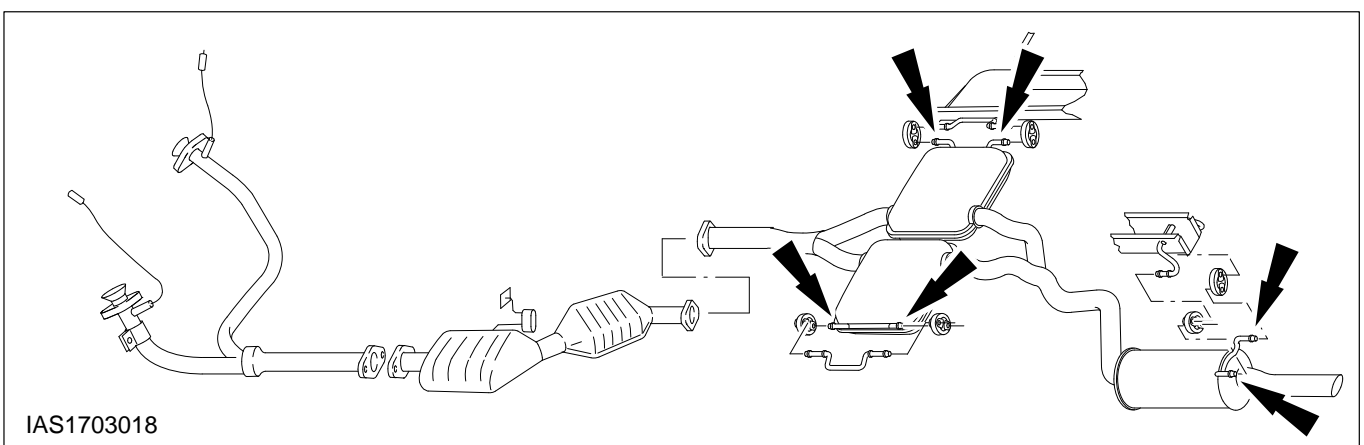
54. Attach the right-hand exhaust flange to the exhaust manifold.

Route the HO2S cable upwards.



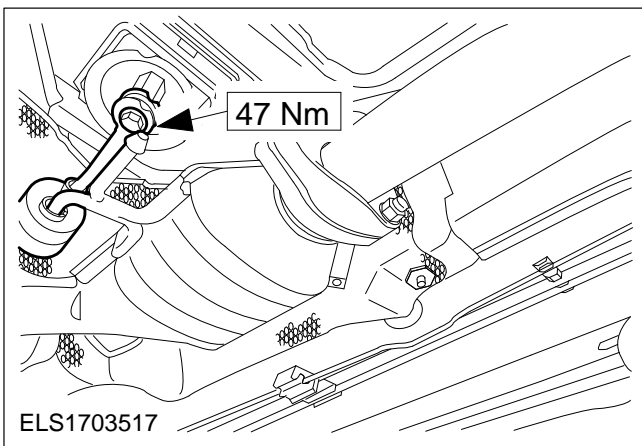
55. Attach the left-hand exhaust flange to the exhaust manifold.

Route the HO2S cable upwards.

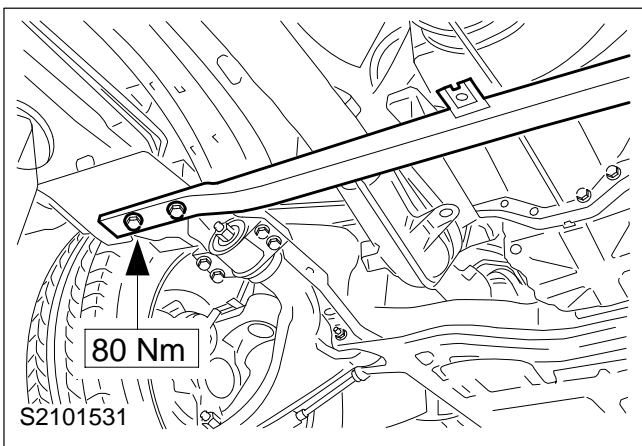


56. Hook the exhaust system into the rubber insulators.

57. Attach the exhaust mounting to the transmission crossmember.

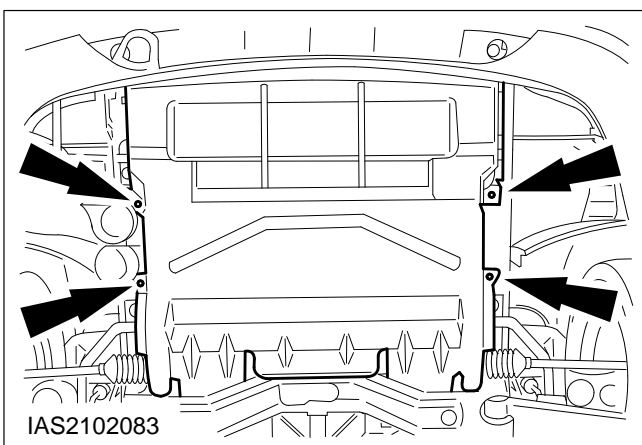


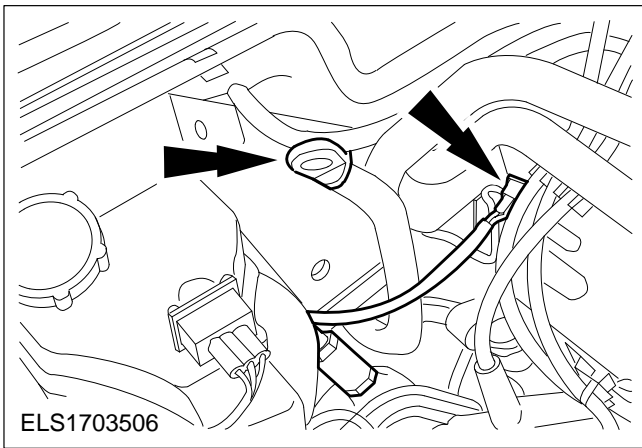
58. Attach the front axle crossbrace (left-hand side shown).



59. Fit the engine cover.

Lower the vehicle.





60. Push on both HO2S connectors (left-hand side shown).

61. Check the automatic transmission fluid according to the specifications (see VSTM).

62. Standard finishing operations:

- Check the fluid levels and rectify as necessary.
- Check the routing of the wiring and secure it with cable ties.
- Take off the protective covers.
- Connect the battery negative lead.
- Fit the battery cover.
- Enter the radio keycode.
- Reprogramme the preset radio stations.
- Reset the clock.
- Carry out a road test to allow the PCM (EEC V) to collect data.
- Check the fluid levels after the road test and correct them as necessary.