Automatic Transmission Assembly – Remove and Install (2,9 V6 24V engine) (17 214 0)

Special Tools

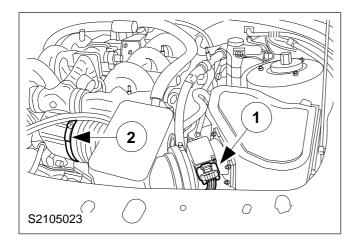
21-140 Engine support bar
21-140-01 Adaptor for 21-140
21-140-03 Adaptor for 21-140

Workshop Equipment

Transmission jack	
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Materials

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



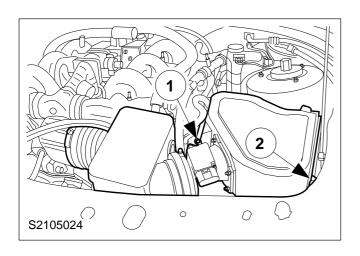
Remove

1. Standard preparatory operations

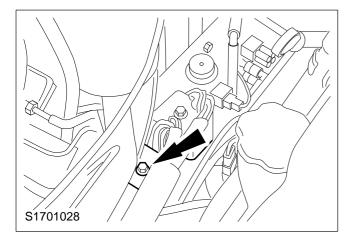
- Make a note of the preset radio stations.
- Make a note of the radio keycode.
- · Detach the battery cover if necessary.

CAUTION: Disconnect the battery negative lead.

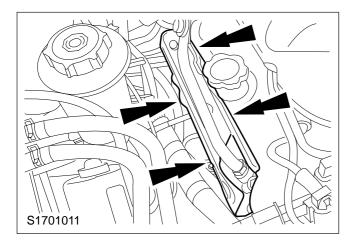
- Lay protective covers over the fenders.
- 2. Remove the air cleaner housing with the intake pipe.
- 1 Disconnect the multiplug from the mass air flow meter (MAF).
- 2 Release the clamp.



- 3. Remove the air cleaner housing with the intake pipe (continued).
- 1 Unhook the two rubber retainers.
- 2 Withdraw the housing from the fixture.

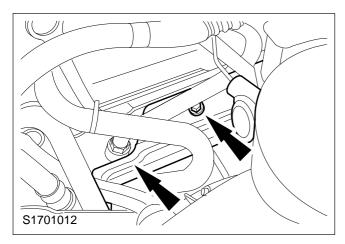


4. Separate the transmission central connector.



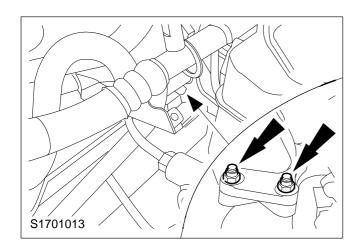
5. Detach the exhaust manifold heat shield on the right.

Four bolts.



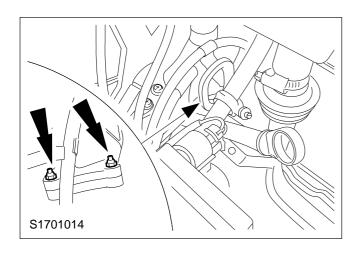
6. Detach the exhaust manifold heat shield on the left.

Four bolts.



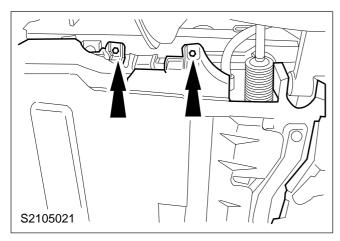
7. Release the left-hand catalytic converter.

Unscrew the two nuts from the top of the exhaust manifold.

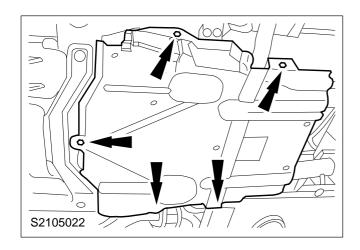


8. Release the right-hand catalytic converter.

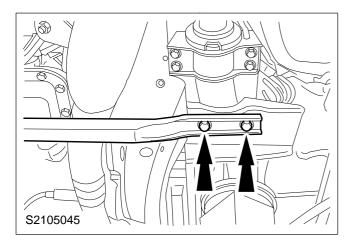
- Unscrew the two nuts from the top of the exhaust manifold.
- · Raise the vehicle.



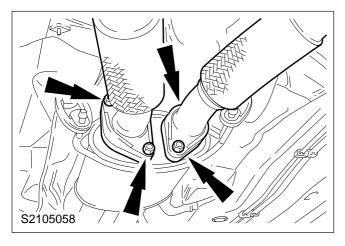
9. Detach the engine undershield (left-hand side shown).



10. Detach the transmission cover.

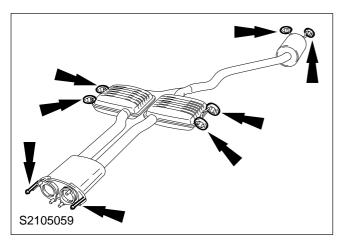


11. Detach the front axle transverse brace (left-hand side shown).



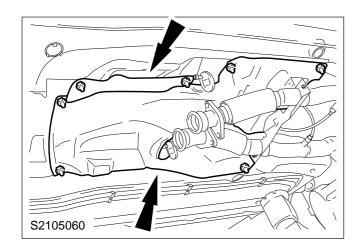
12. Release the rear part of the exhaust system.

Detach the exhaust pipes from the centre silencer (two nuts in each case).

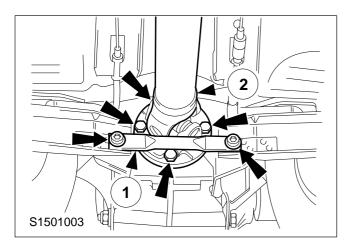


13. Remove the exhaust system.

Unhook the exhaust system from the rubber insulators.



14. Detach the two heat shields.

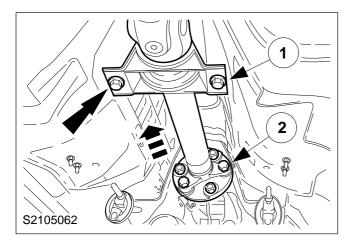


CAUTION: The driveshaft is finely balanced using bolts of different lengths. Mark the installation position of the driveshaft and bolts.

15. Remove the driveshaft.

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

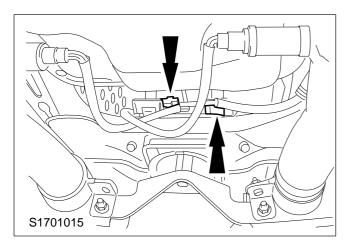
- 1 Detach the transverse brace from the rear axle.
- 2 Detach the driveshaft.



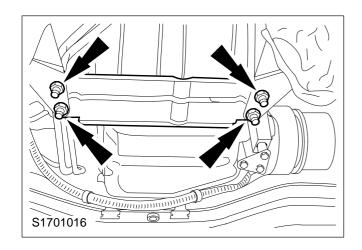
16. Remove the driveshaft (continued).

- 1 Detach the centre bearing from the floor assembly (two bolts).
- 2 Withdraw the driveshaft from the automatic transmission.

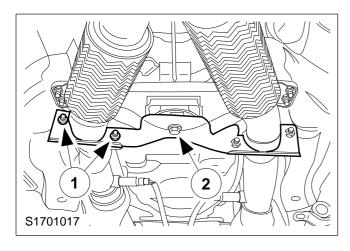
Fit a plug.



17. Disconnect the multiplugs of the oxygen sensors (HO2S sensors).

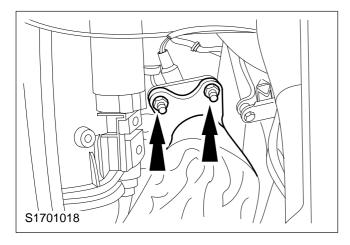


18. Detach the brackets of the catalytic converters.



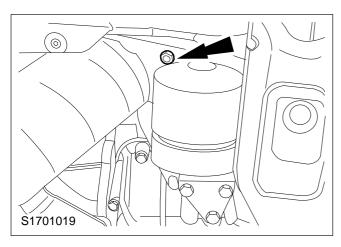
19. Release the exhaust mounting bracket.

- 1 From the left-hand exhaust pipe.
- 2 From the transmission crossmember.



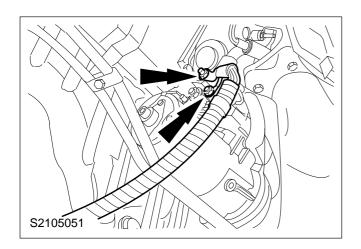
20. Remove the left-hand catalytic converter.

Unscrew the two nuts from the manifold at the bottom.

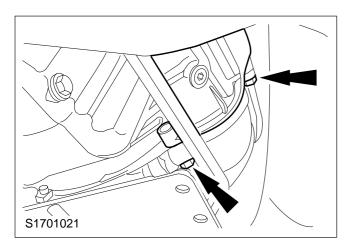


21. Remove the right-hand catalytic converter.

Unscrew the single nut from the bottom of the exhaust manifold.

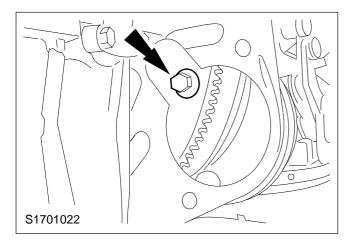


22. Disconnect the starter motor wiring.



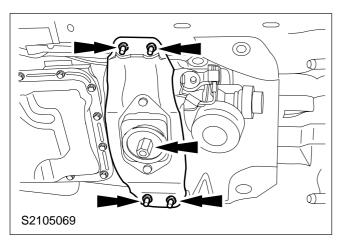
23. Remove the starter motor.

Remove the rubber cover.



24. Release the torque converter.

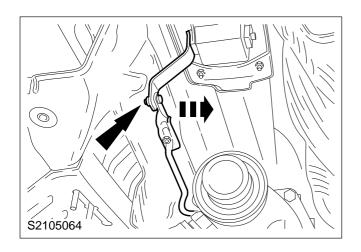
Remove the four bolts.



NOTE: Do not lower the automatic transmission.

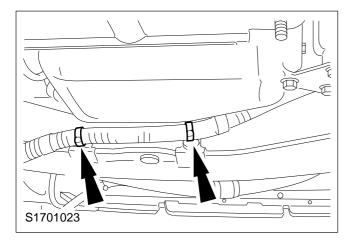
25. Detach the transmission crossmember.

Position a transmission jack underneath.



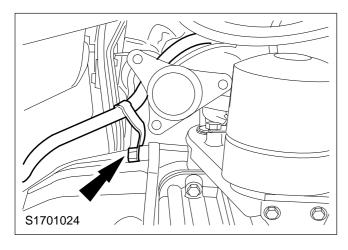
26. Detach the shift rod from the selector lever.

- Remove the retaining clip and press out the shift rod.
- Lower the automatic transmission.



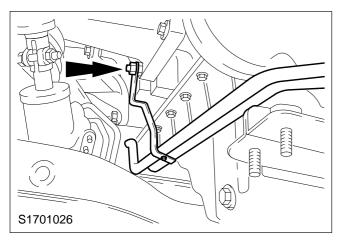
27. Detach the wiring loom from the engine bearer.

Remove the cable ties.

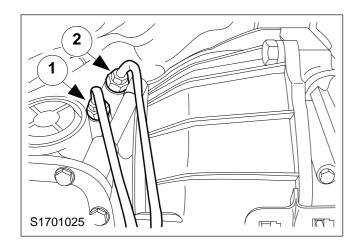


28. Remove the transmission fluid dipstick tube.

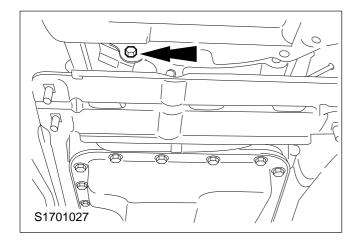
Lay the ground lead to one side.



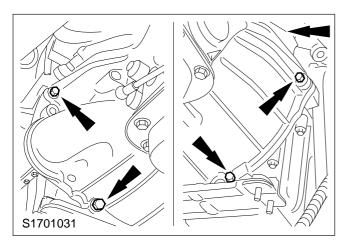
29. Detach the bracket for the transmission fluid pipes from the left-hand engine mounting.



- 30. Disconnect the transmission fluid pipes.
 - 1 Return pipe
- 2 Feed pipe



31. Detach the adaptor plate.



NOTE: Support the automatic transmission with the transmission jack.

- 32. Detach the automatic transmission from the engine.
- · Remove the flange bolts.
- Lay the transmission wiring loom on the transmission.

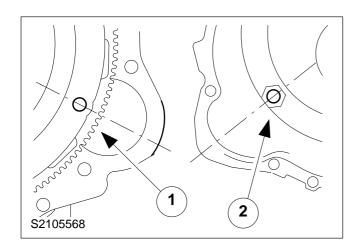
WARNING: The torque converter can drop out of the transmission.

33. Separate the automatic transmission from the engine and lower it with the transmission jack.

Install

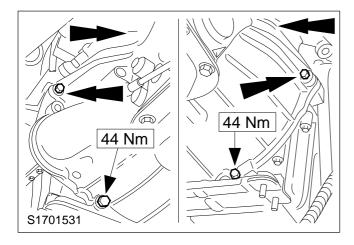
34. General note.

Renew all self-locking nuts, gaskets and oil seals.



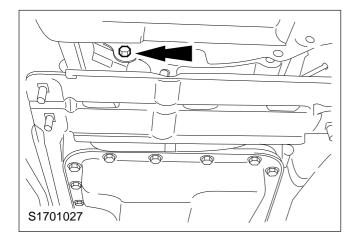
NOTE: Make sure the intermediate plate is positioned correctly.

- 35. Locate the torque converter and drive plate in position.
 - 1 Drive plate.
 - 2 Torque converter
- 36. Apply high-temperature grease (ESDM-1C220-A) to the bore for the torque converter spigot.

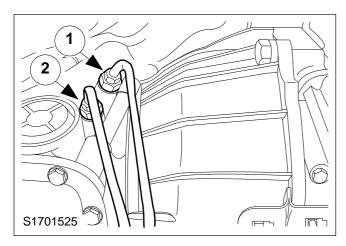


NOTE: Holes in the torque converter and the drive plate.

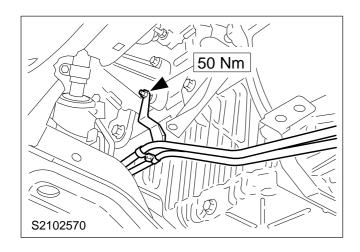
- 37. Position the transmission on the engine.
- Secure the torque converter with a single bolt.
- Screw in the transmission flange bolts.
- · Lay the transmission wiring loom.



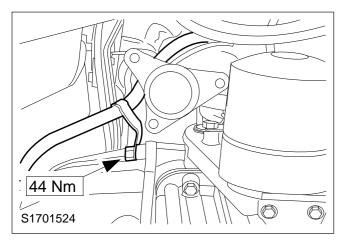
38. Tighten the intermediate plate bolt (one bolt).



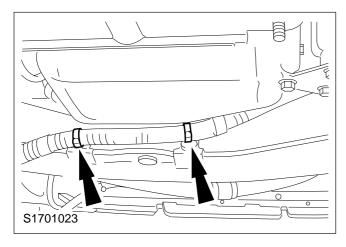
- 39. Connect the transmission fluid pipes.
 - 1 Feed pipe
- 2 Return pipe



40. Attach the bracket for the transmission fluid pipes to the left-hand engine mounting.

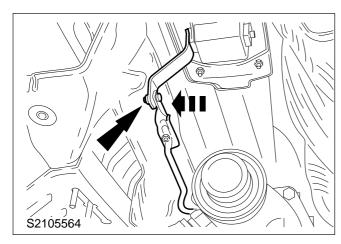


41. Attach the transmission fluid filler pipe and connect the ground lead.



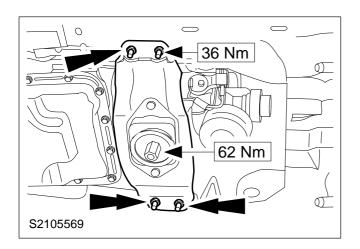
42. Secure the wiring harness.

- Secure the loom to the engine bearer with cable ties.
- Raise the automatic transmission.

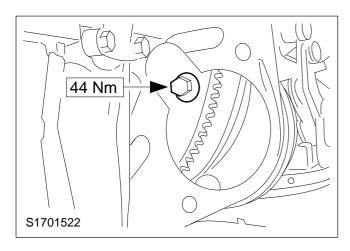


43. Attach the shift rod.

Insert the shift rod in the selector unit and secure it.

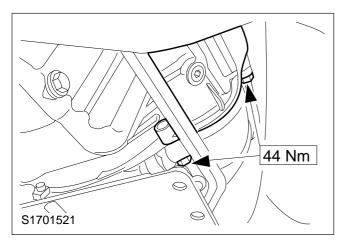


44. Attach the transmission crossmember.



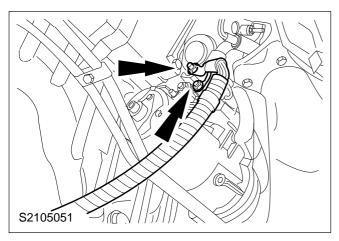
45. Screw in the four torque converter bolts.

Fit the rubber cover.

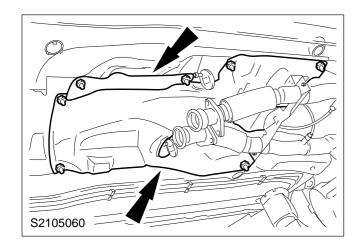


46. Install the starter motor.

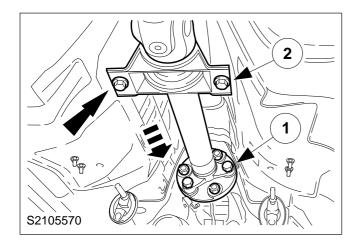
Fit the rubber cover.



47. Connect the starter motor wiring.

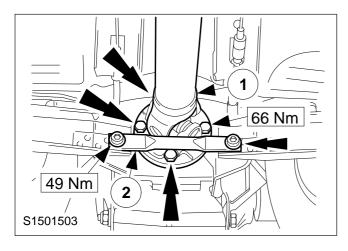


48. Fit the two heat shields.



49. Install the driveshaft.

- 1 Insert the driveshaft in the transmission.
- 2 Attach the centre bearing loosely.



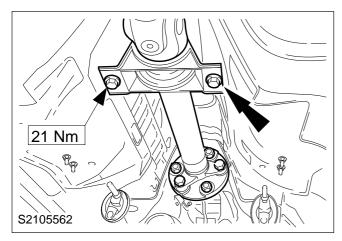
CAUTION: The driveshaft is finely balanced using bolts of different lengths. Note the marks showing the installation position of the driveshaft and bolts.

50. Install the driveshaft (continued).

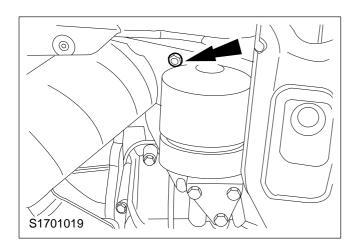
1 Attach the driveshaft to the rear axle flange.

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

2 Attach the transverse brace.

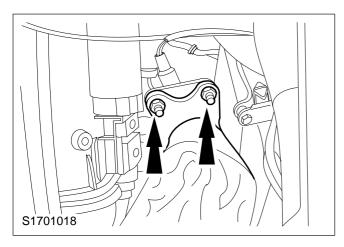


51. Align the centre bearing free of stress and secure it.



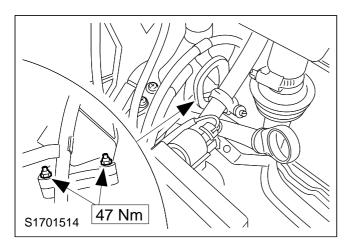
52. Attach the right-hand catalytic converter loosely.

Attach it to the exhaust manifold with one nut from below.



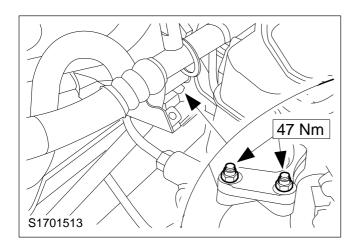
53. Attach the left-hand catalytic converter loosely.

- Attach it to the exhaust manifold with two nuts from below.
- Lower the vehicle.



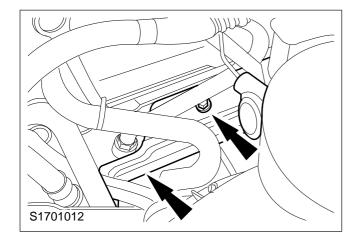
54. Tighten the nuts on the right-hand catalytic converter.

Tighten the two nuts at the top of the exhaust manifold.

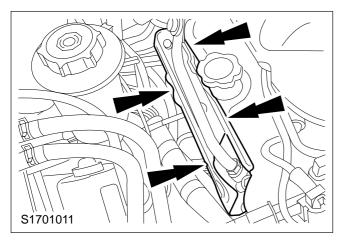


55. Tighten the nuts on the left-hand catalytic converter.

Tighten the two nuts at the top of the exhaust manifold.

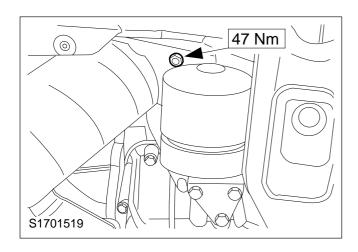


56. Attach the heat shield for the left-hand catalytic converter.

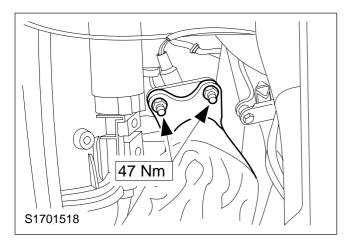


57. Attach the heat shield for the right-hand catalytic converter.

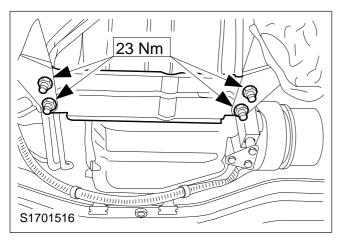
Raise the vehicle.



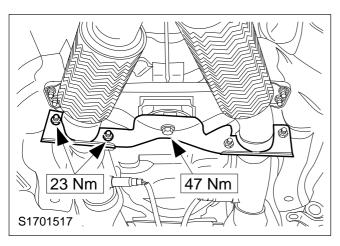
58. Tighten the nuts on the right-hand catalytic converter.



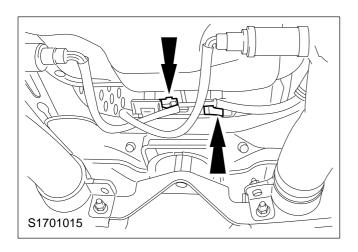
59. Tighten the nuts on the left-hand catalytic converter.



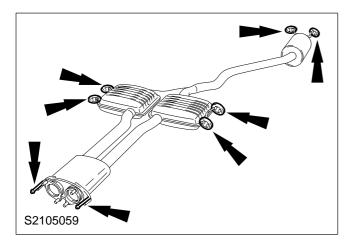
60. Attach the brackets of the catalytic converters.



61. Attach the exhaust mounting bracket.

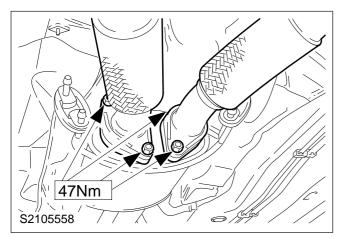


62. Connect the multiplugs of the oxygen sensors (HO2S sensors).

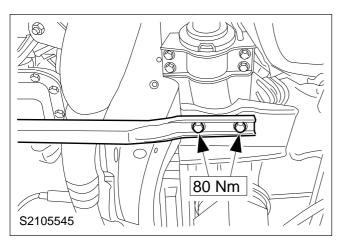


63. Install the rear part of the exhaust system.

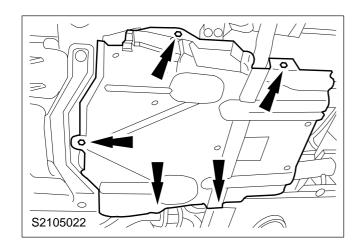
Suspend the exhaust system in the rubber insulators.



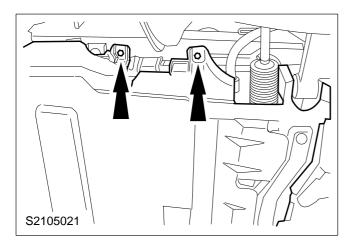
64. Secure the exhaust flange.



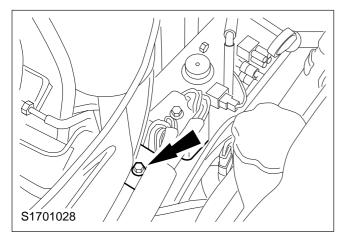
65. Fit the front axle transverse brace (left-hand side shown).



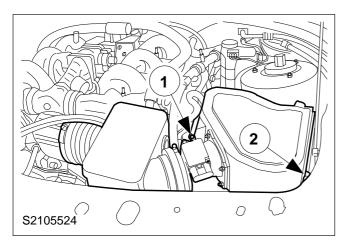
66. Fit the transmission cover.



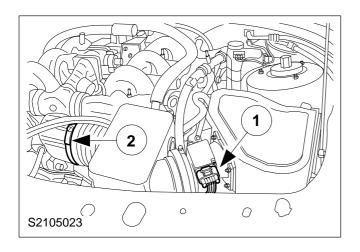
67. Fit the engine undershield (left-hand side shown).



68. Join the transmission central connector.



- 69. Fit the air cleaner housing with the intake pipe.
 - 1 Press it into the fixture.
 - 2 Attach the two rubber retainers.



70. Fit the air cleaner housing with the intake pipe (continued).

- 1 Connect the multiplug to the mass air flow meter (MAF).
- 2 Secure the clip.

71. Check the automatic transmission fluid as described in the Vehicle Systems Test Manual.

72. Finishing operations:

- Check the fluid levels and rectify as necessary.
- Connect the battery negative lead.
- Fit the battery cover if necessary.
- Remove the protective covers.
- Enter the radio keycode.
- Reprogramme the preset radio stations.
- · Reset the clock.
- Check the routing of the vacuum hoses and the wiring and secure them using cable ties as required.
- Carry out a road test to enable the PCM (EEC V) to gather data.
- After the road test check the fluid levels and correct them if necessary.