

Manual Transmission – Remove and Install (2,5I TCI Diesel Engine) (16 114 0)

Workshop Equipment

Transmission jack	
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Materials

Brake fluid (Super Dot 4)	ESD-M6C57-A
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Remove

1. Standard preparatory measures:

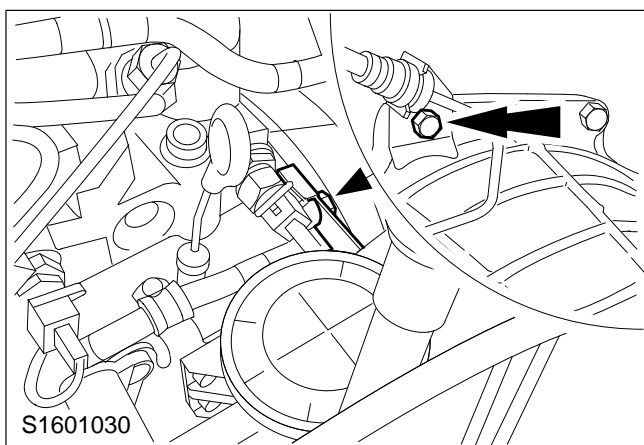
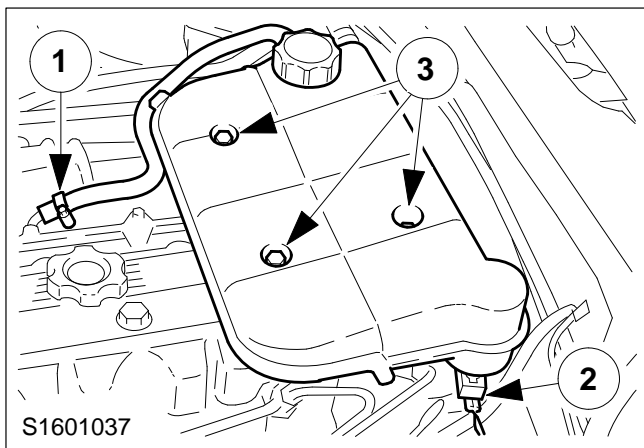
- Make a note of the radio keycode.
- Make a note of the preset radio stations.

⚠ CAUTION: Disconnect the battery negative lead.

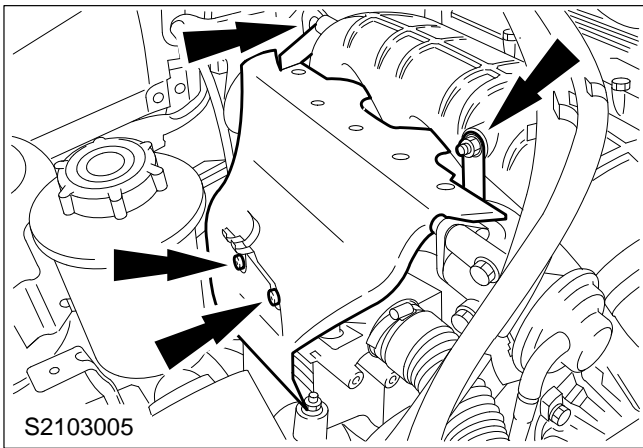
2. Remove the battery cover.

3. Detach the coolant expansion tank.

- 1 Disconnect the hose from the coolant collecting pipe.
- 2 Disconnect the engine coolant level sensor (ECL sensor).
- 3 Remove the bolts and place the tank to one side.

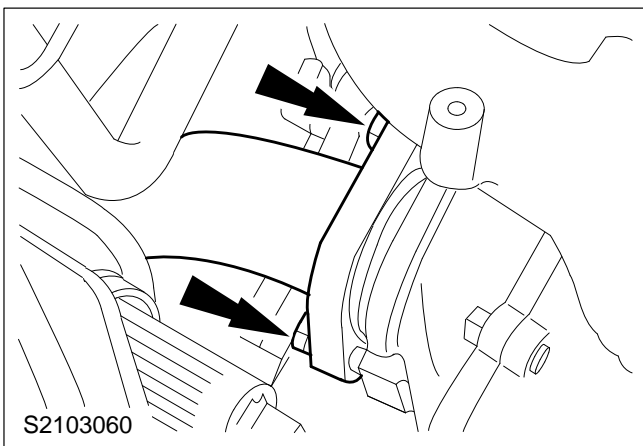


4. Remove the bolt from the bracket for the clutch hydraulic line on the transmission flange.

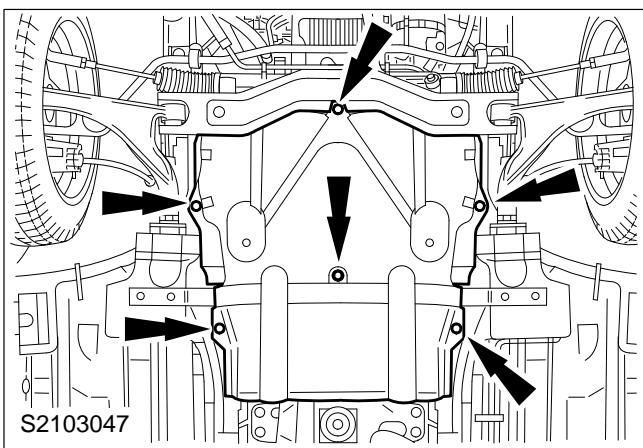


5. Detach the turbocharger heat shield.

Release the hoses from their clips.

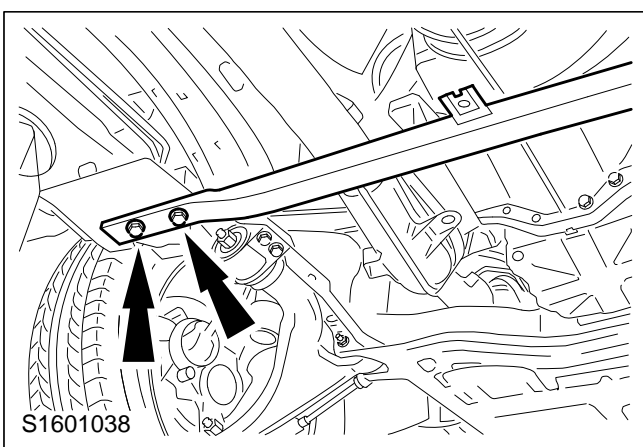


6. Detach the front exhaust pipe from the turbocharger.

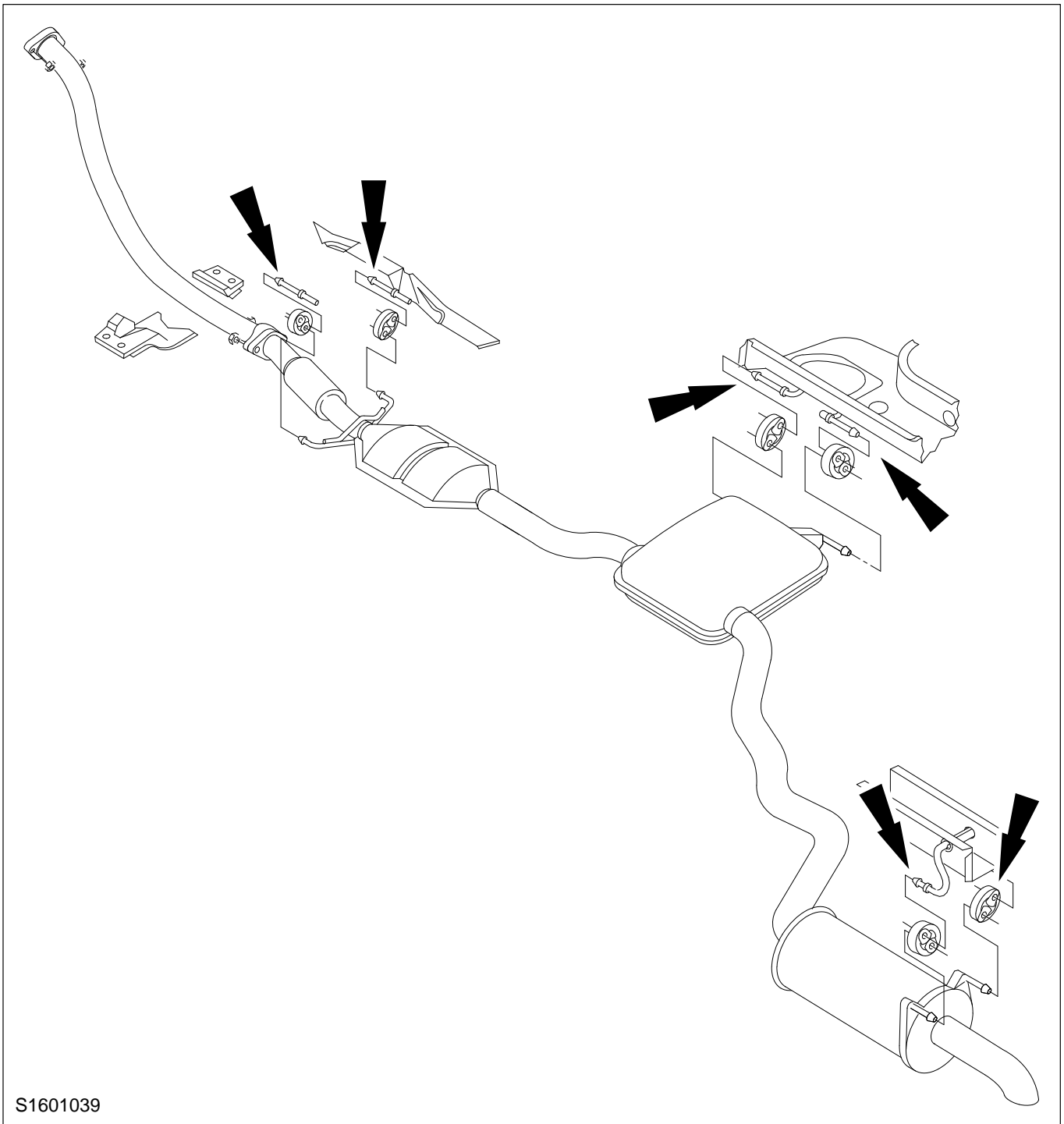


7. Raise the vehicle.

8. Detach the rear engine undershield.



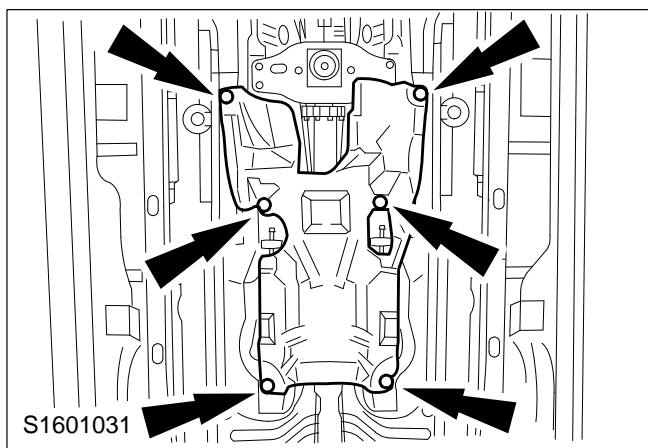
9. Detach the front axle transverse brace from the side member (two bolts on each side).



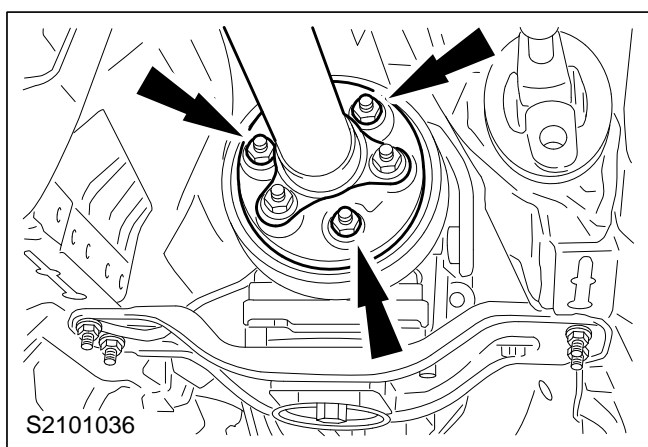
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10. Remove the exhaust system.

Unhook the exhaust system from the rubber mountings.

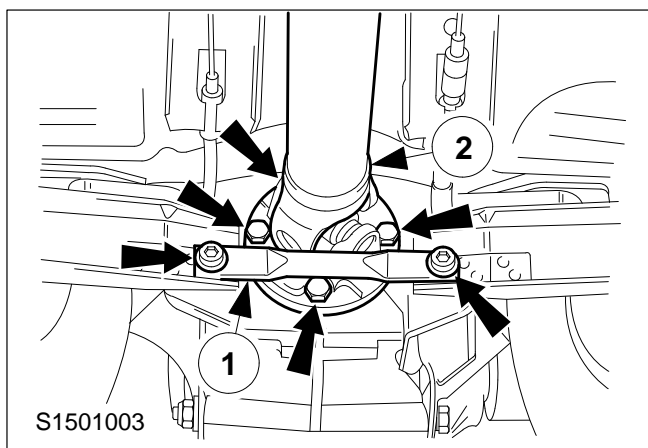


11. Detach the exhaust system heat shields.



NOTE: Do not disconnect the driveshaft from the rubber coupling.

12. Detach the driveshaft from the transmission.

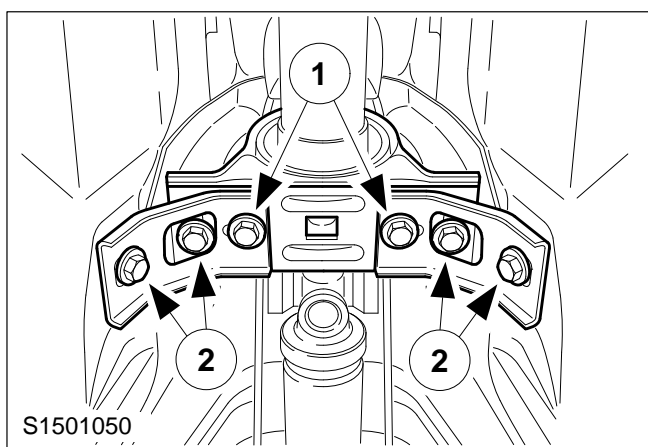


⚠ CAUTION: The driveshaft is precision-balanced by bolts of different lengths. Mark the position of the driveshaft and the bolts.

13. Detach the driveshaft from the rear axle.

NOTE: For vehicles built from Jan onwards. The transverse brace will not be installed from '96 onwards.

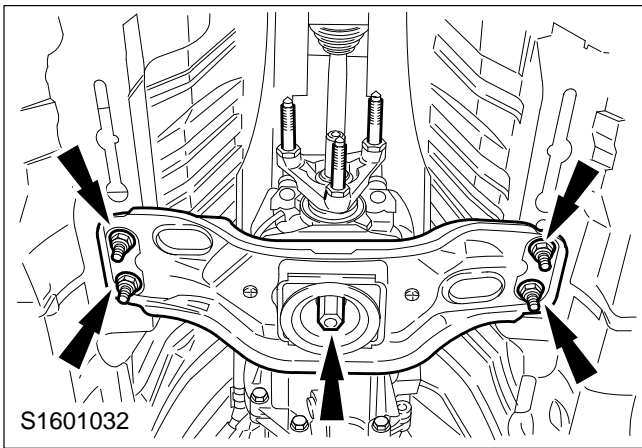
- 1 Detach the transverse brace from the rear axle.
- 2 Detach the driveshaft.



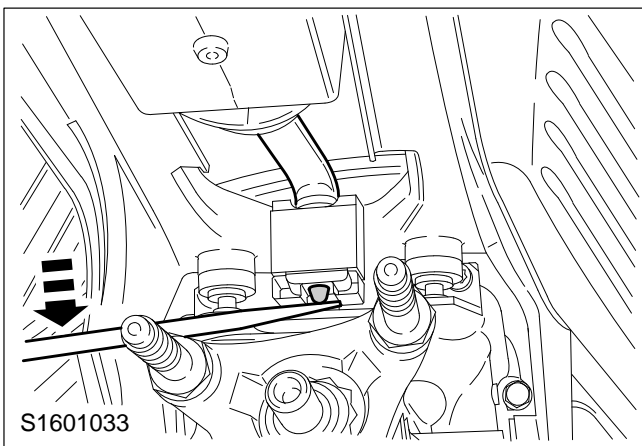
14. Detach the driveshaft centre bearing.

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

15. Remove the driveshaft.

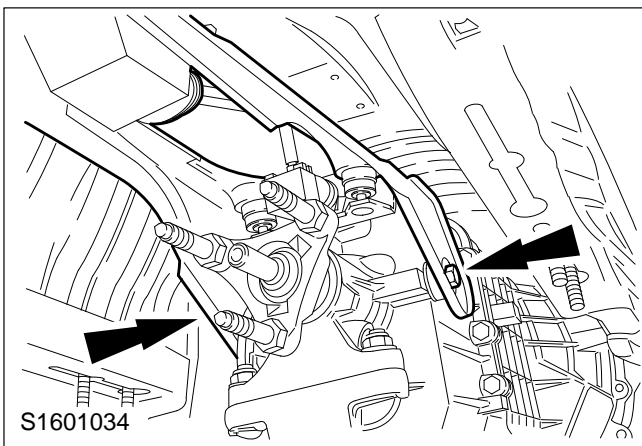


16. Detach the transmission crossmember.

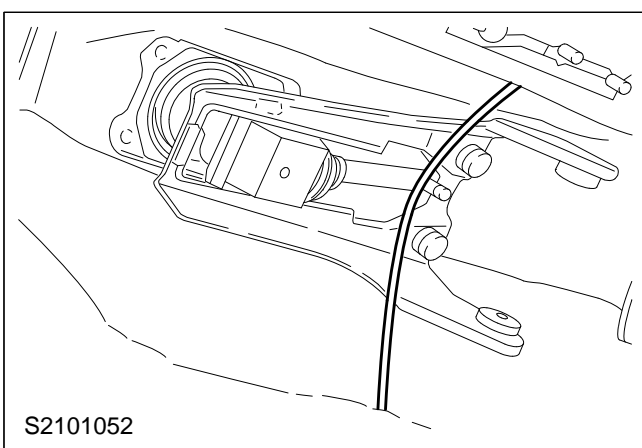


17. Press the gearshift linkage out of the transmission.

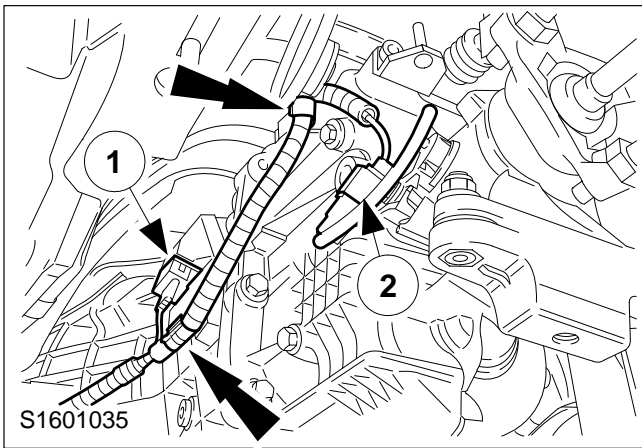
Raise the transmission slightly.



18. Detach the gearshift support bracket from the transmission.

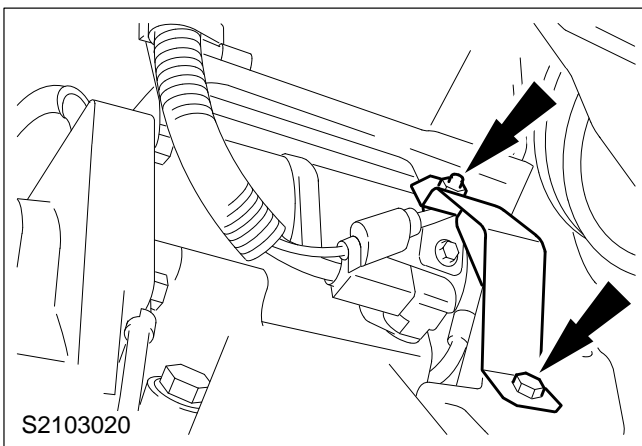


19. Hold the gearshift support bracket against the floor assembly and support it with a length of round steel rod.

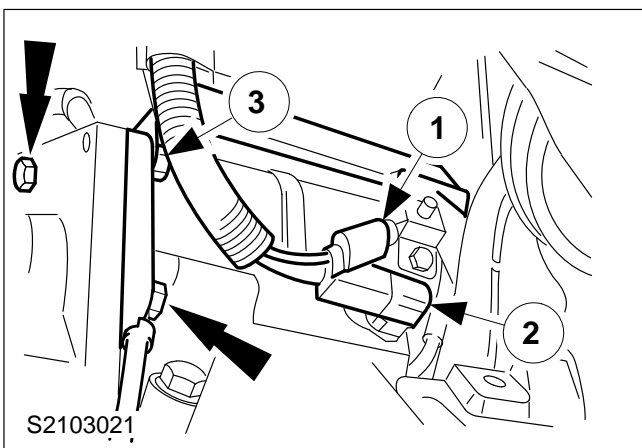


20. Disconnect the multiplugs.

- 1 Reversing light switch.
 - 2 Vehicle speed sensor (VSS).
- Unclip the wiring looms.

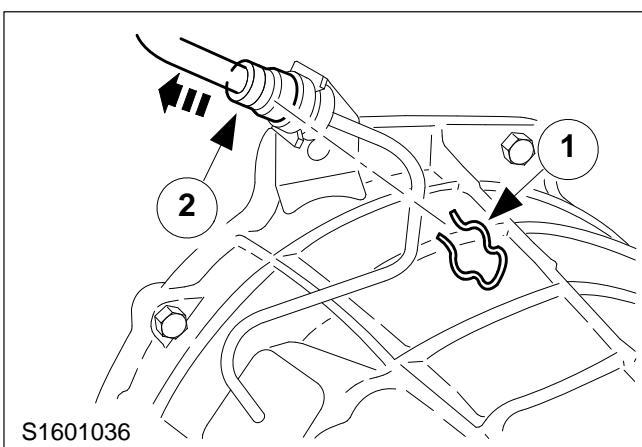


21. Detach the heat shield bracket from the starter motor.



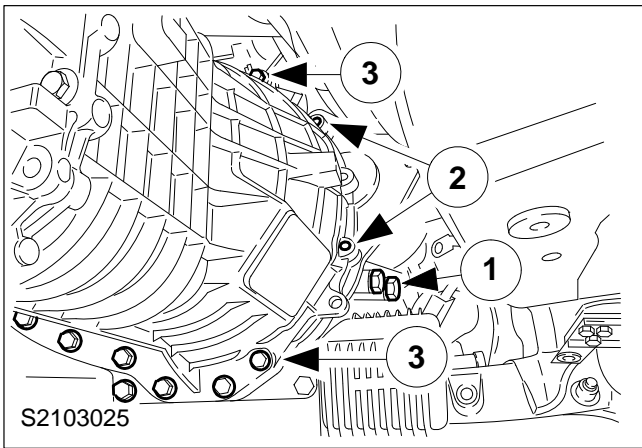
22. Detach the starter motor from the transmission intermediate flange.

- 1 Disconnect the multiplug.
- 2 Open the cover and disconnect the positive lead.
- 3 Detach the starter motor and heat shield.



23. Disconnect the hydraulic line from the clutch.

- 1 Remove the clip from the quick-release coupling.
- 2 Undo the quick-release coupling.

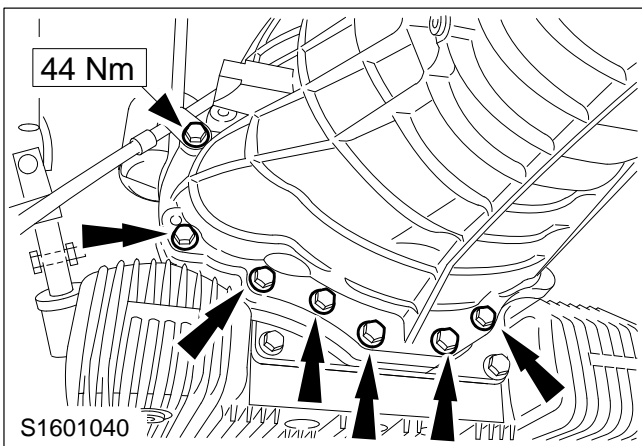


24. Detach the transmission from the transmission intermediate flange.

- 1 Release the two bolts on the transmission mounting bracket.

⚠ CAUTION: Support the transmission on a transmission jack.

- 2 Remove the two bolts on the engine side.
- 3 Remove the bolts on the transmission side.



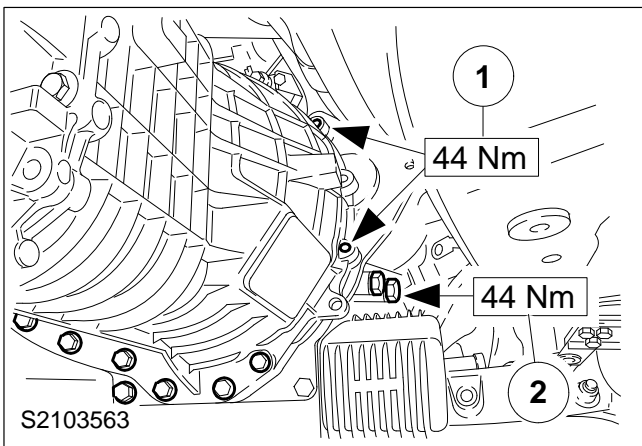
Install

25. Install the transmission.

- Position the transmission at 90° to its installation position and turn it clockwise into its final position.

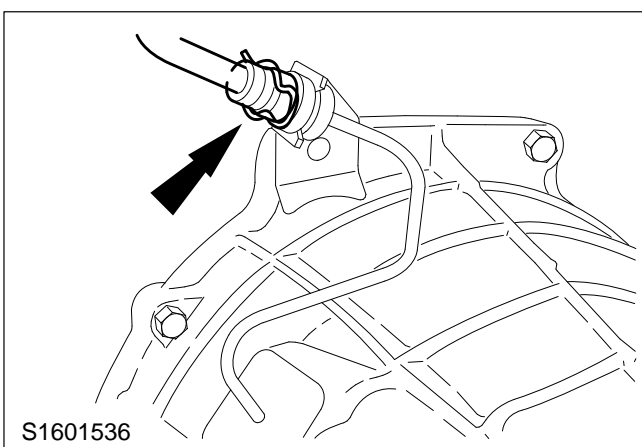
NOTE: Support the transmission.

- Screw in and tighten the flange bolts on the transmission side.



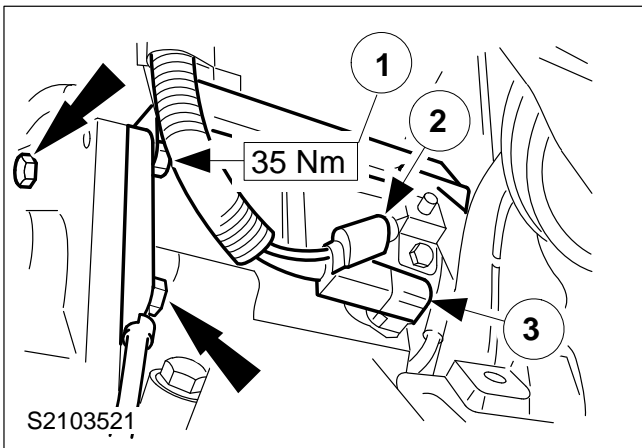
26. Screw in the flange bolts on the engine side.

- 1 Tighten the two bolts.
- 2 Tighten the bolts of the transmission mounting bracket.



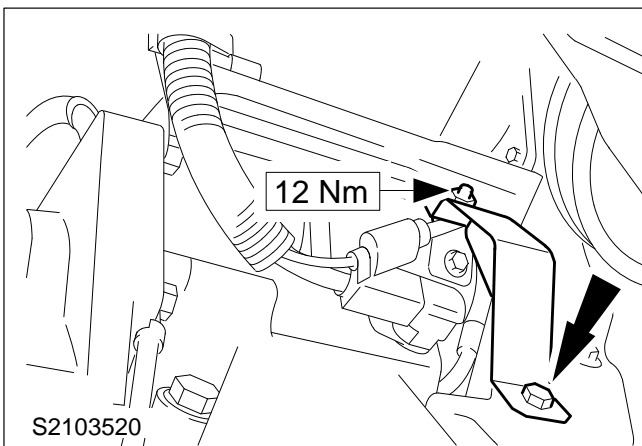
27. Connect the hydraulic line to the clutch.

Fasten and lock the quick-release coupling.

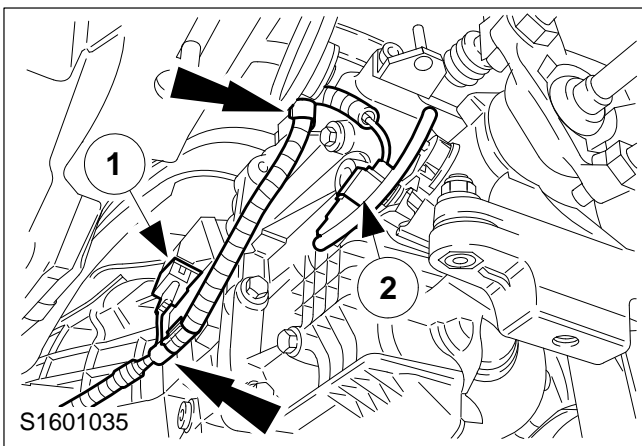


28. Attach the starter motor to the transmission intermediate flange.

- 1 Fit the starter motor with the heat shield.
- 2 Connect the multiplug.
- 3 Connect the positive lead and press the cover on.

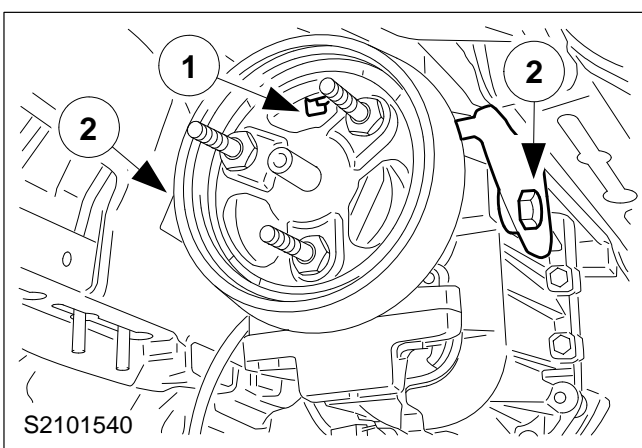


29. Fit the heat shield bracket to the starter motor.



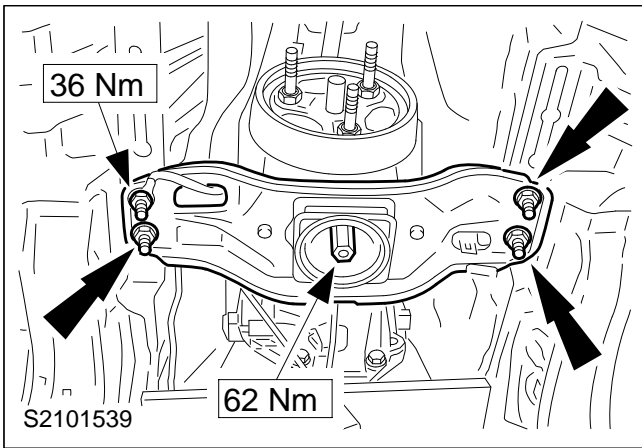
30. Connect the multiplugs.

- 1 Reversing light switch
 - 2 Vehicle speed sensor (VSS).
- Clip the wiring looms in place.



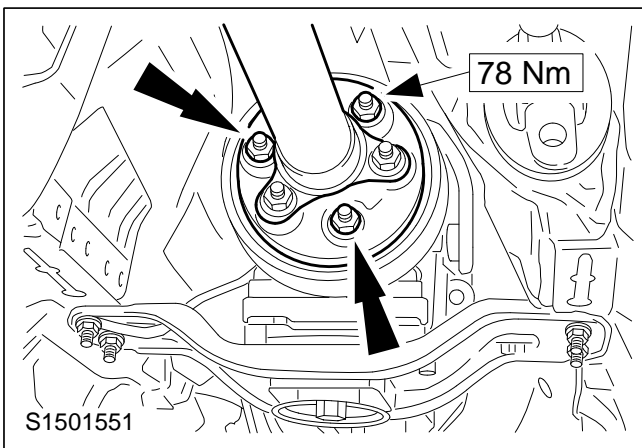
31. Attach the gearshift support bracket to the transmission.

- 1 Locate the gearshift linkage in position and attach it to the coupling.
- 2 Tighten the two bolts to 11 Nm.

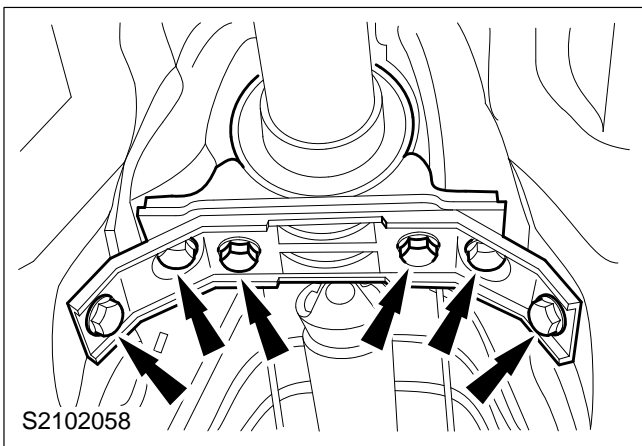


32. Attach the transmission crossmember.

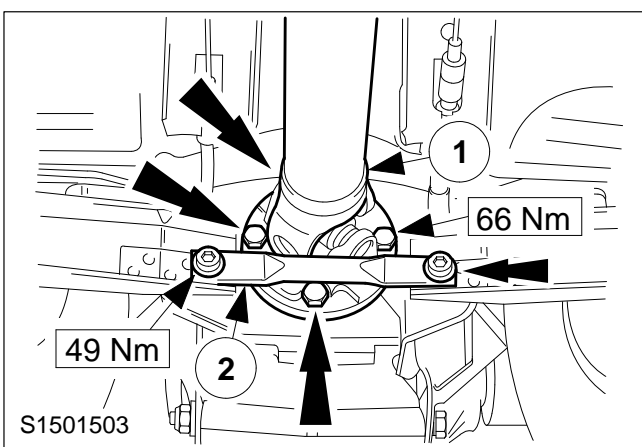
Remove the transmission jack.



33. Attach the driveshaft to the transmission flange.



34. Fit the centre bearing loosely.



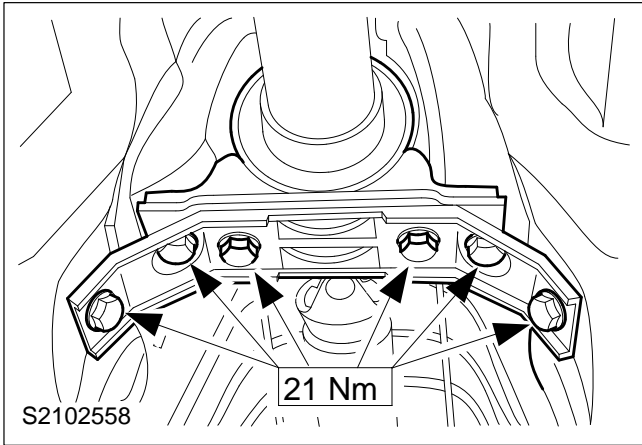
⚠ CAUTION: The driveshaft is precision-balanced by bolts of different lengths. Mark the position of the driveshaft and the bolts.

35. Install the driveshaft (continued).

1 Attach the driveshaft to the rear axle flange.

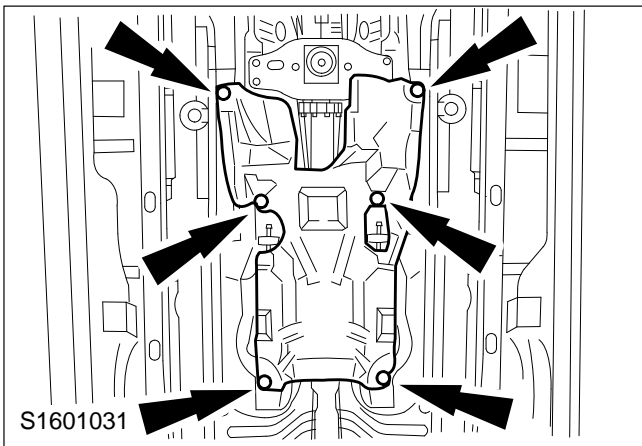
NOTE: For vehicles built from Jan onwards. The transverse brace will not be installed from '96 onwards.

2 Attach the transverse brace.

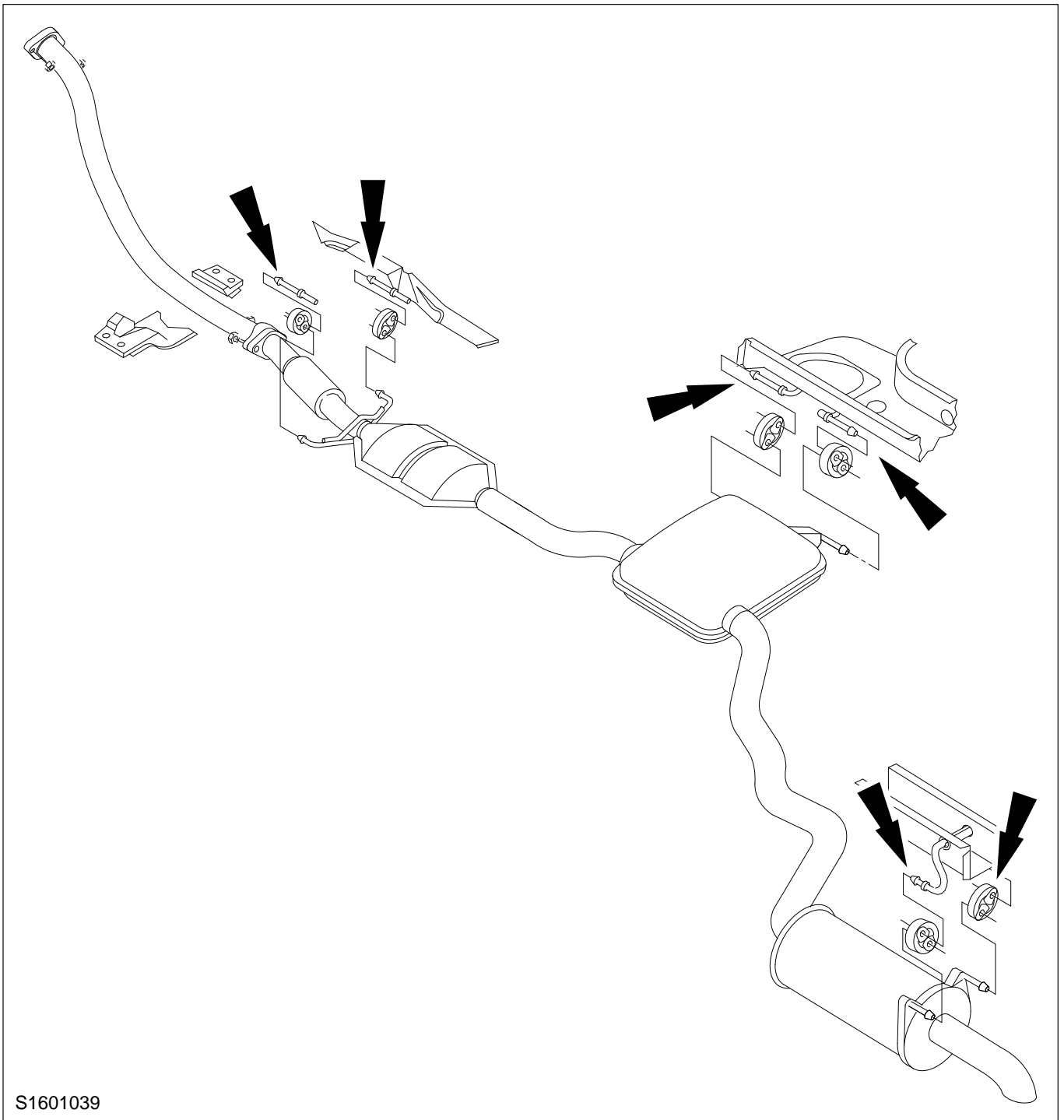


NOTE: In each case a spacer washer must be positioned between the floor assembly and the centre bearing.

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



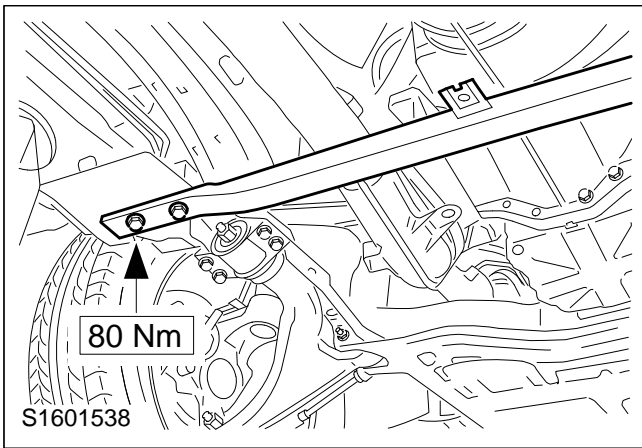
37. Fit the exhaust system heat shields.



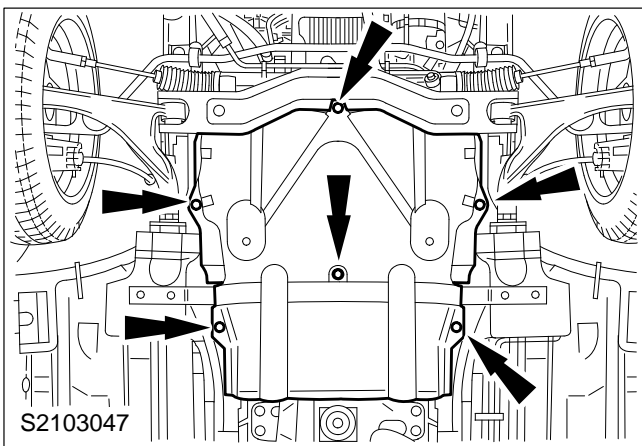
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38. Fit the exhaust system.

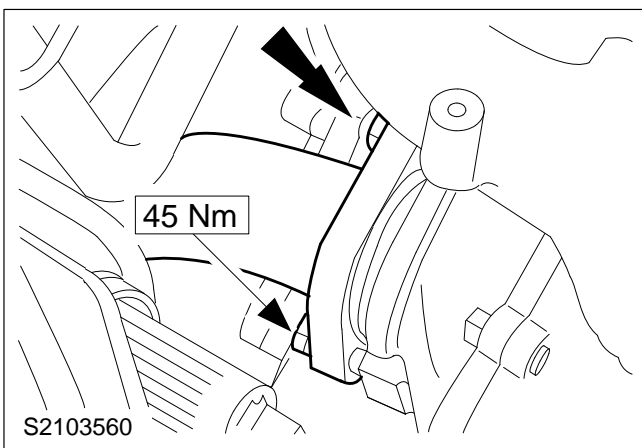
Hook the exhaust system into the six rubber mountings.



39. Attach the front axle crossmember to the side members (two bolts on each side).

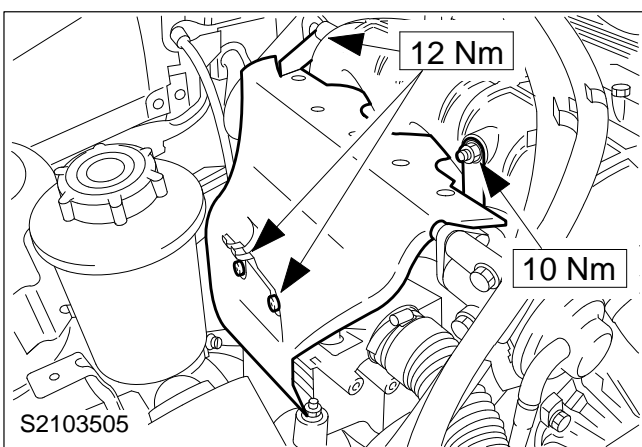


40. Fit the rear engine undershield.



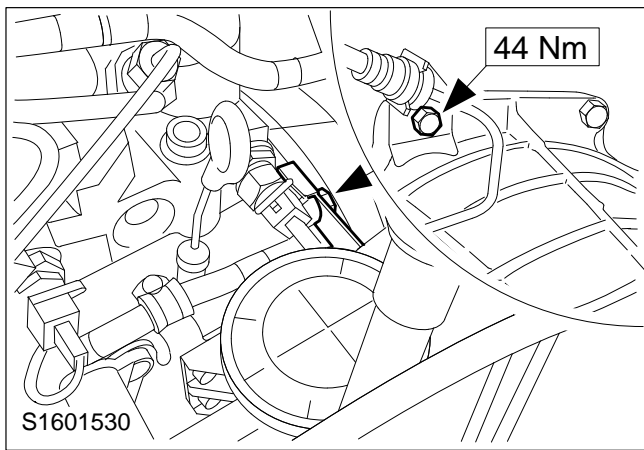
41. Lower the vehicle.

42. Attach the front exhaust pipe to the turbocharger.

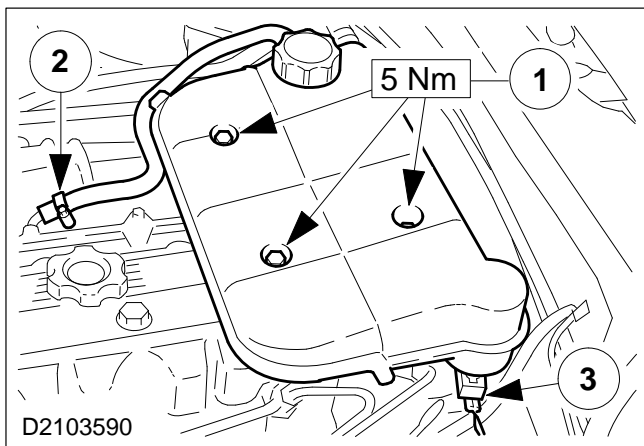


43. Fit the turbocharger heat shield.

Clip the hoses in place.



44. Tighten the bolt of the bracket for the clutch hydraulic line.



45. Fit the coolant expansion tank.

- 1 Tighten the bolts.
- 2 Connect the hose to the coolant collecting pipe.
- 3 Connect the multiplug to the engine coolant level sensor (ECL sensor).

46. Check the transmission fluid level.

- Top up the fluid to the lower edge of the level check bore.
- Tighten the oil filler plug to 35 Nm.

47. Bleed the hydraulic system as described in Operation No. 16 843 0.

48. Standard finishing operations:

- Connect the battery negative lead and fit the battery cover.
- Enter the radio keycode.
- Reprogramme the preset radio stations.
- Reset the clock.