

## 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:

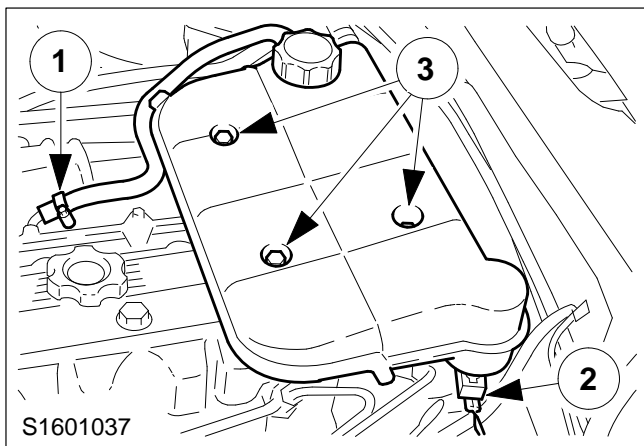
- Make a note of the radio keycode.
- Make a note of the preset radio stations.

**⚠ CAUTION:** Disconnect the battery negative lead.

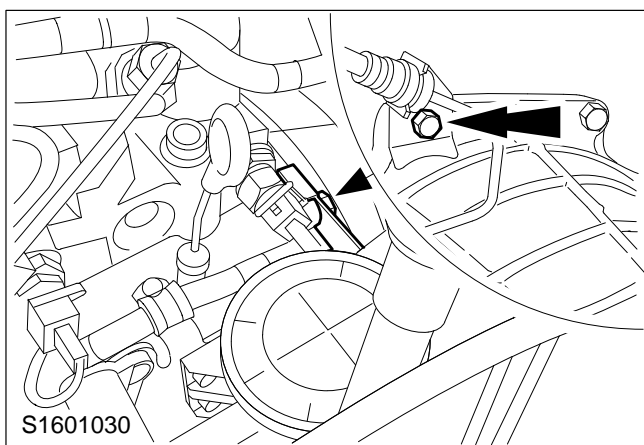
#### 2. Remove the battery cover.

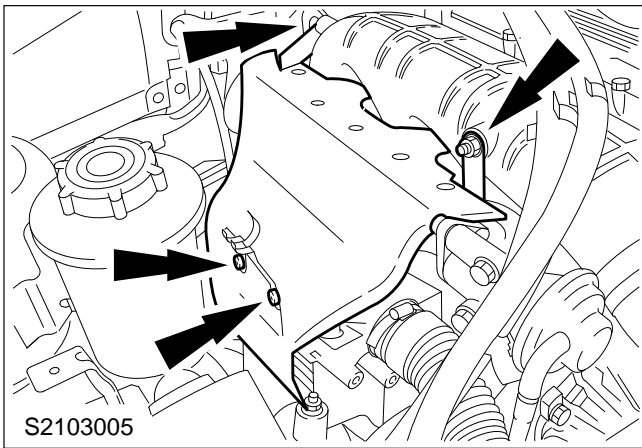
#### 3. Detach the coolant expansion tank.

- 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.



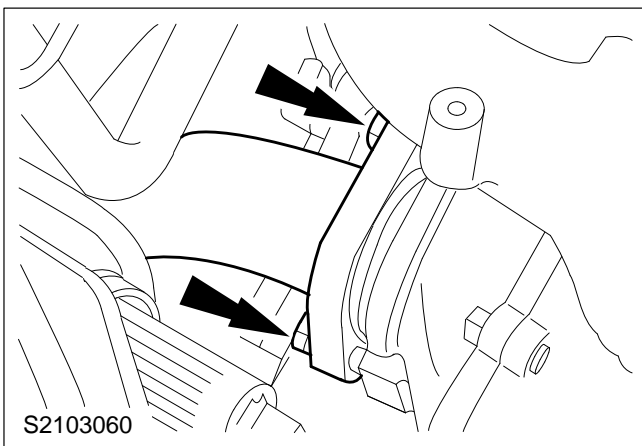
#### 4. Remove the bolt from the bracket for the clutch hydraulic line on the transmission flange.



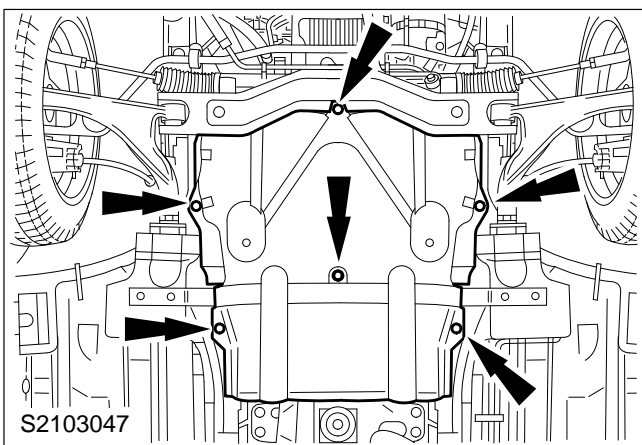


**5. Detach the turbocharger heat shield.**

Release the hoses from their clips.

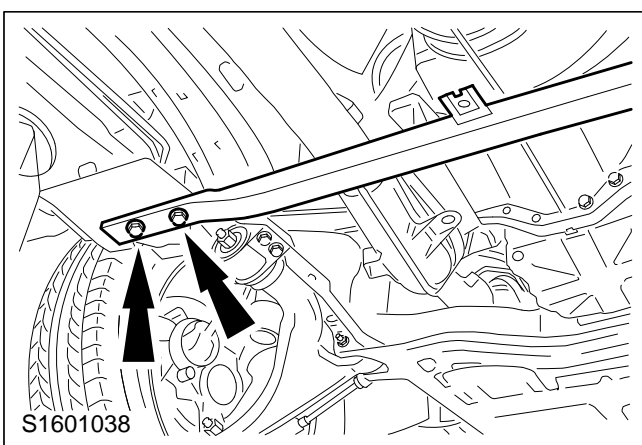


**6. Detach the front exhaust pipe from the turbocharger.**

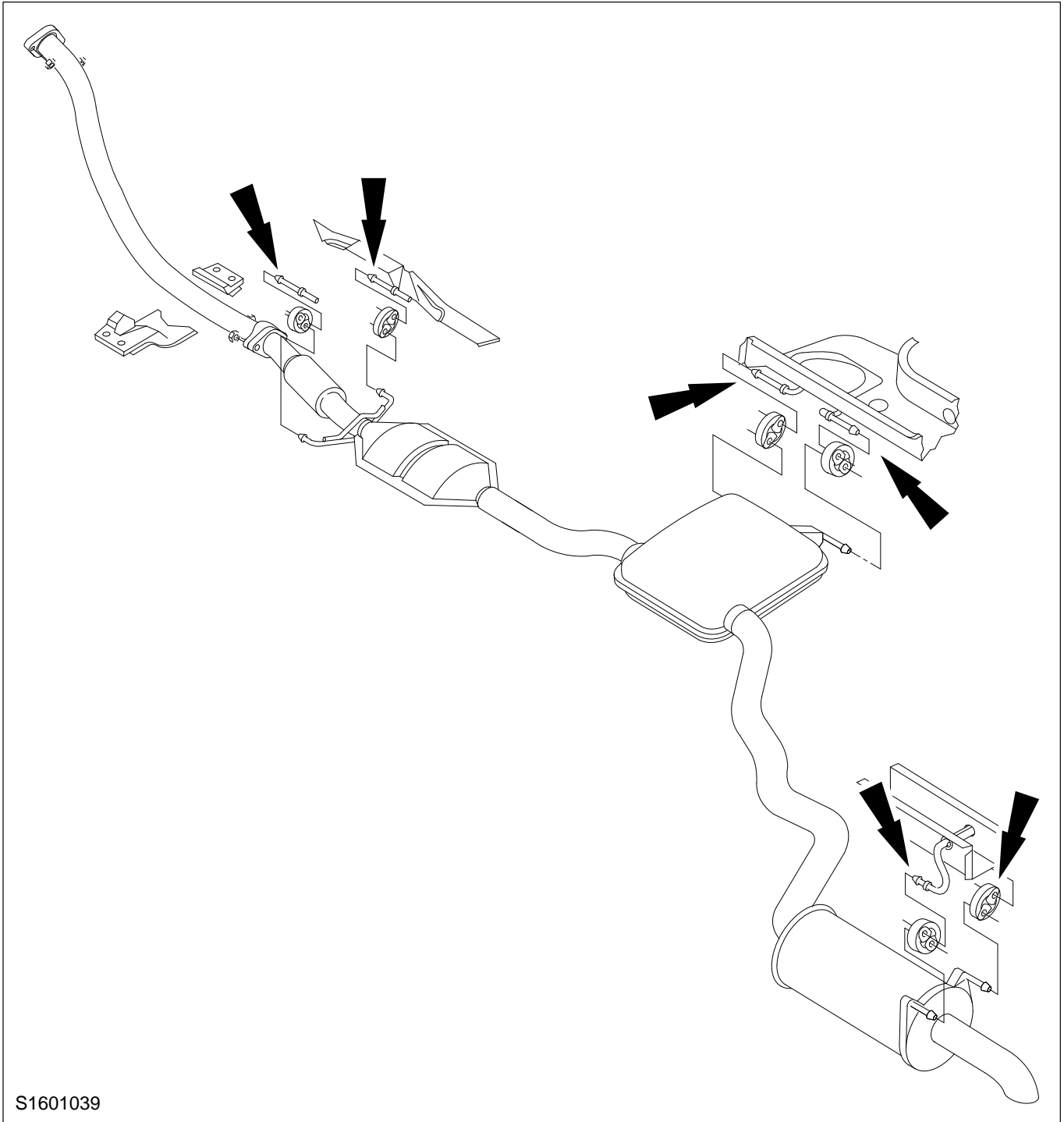


**7. Raise the vehicle.**

**8. Detach the rear engine undershield.**



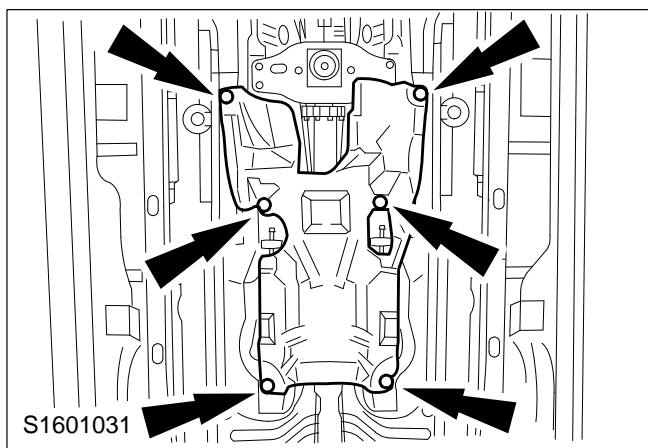
**9. Detach the front axle transverse brace from the side member (two bolts on each side).**



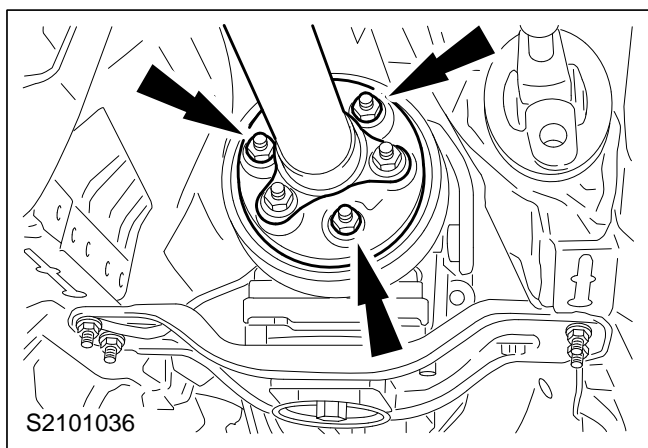
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**10. Remove the exhaust system.**

Unhook the exhaust system from the rubber mountings.

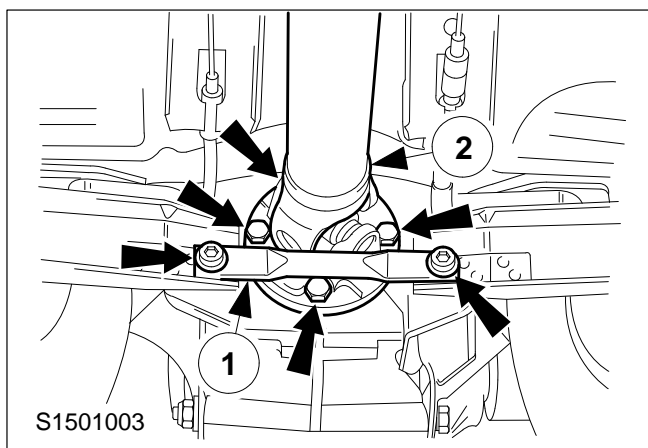


**11. Detach the exhaust system heat shields.**



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

**12. Detach the driveshaft from the transmission.**

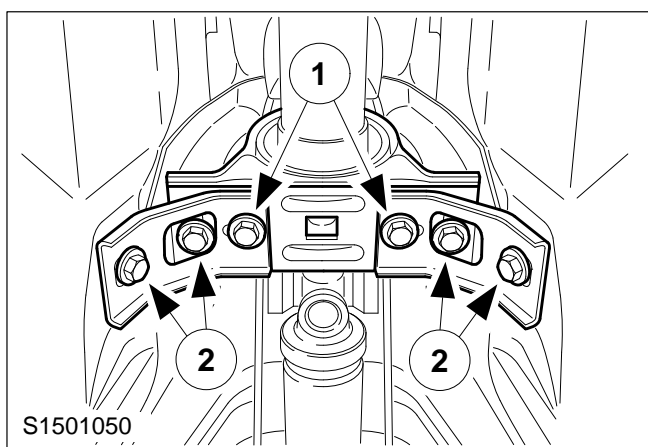


**CAUTION:** The driveshaft is precision-balanced by bolts of different lengths. Mark the position of the driveshaft and the bolts.

**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.

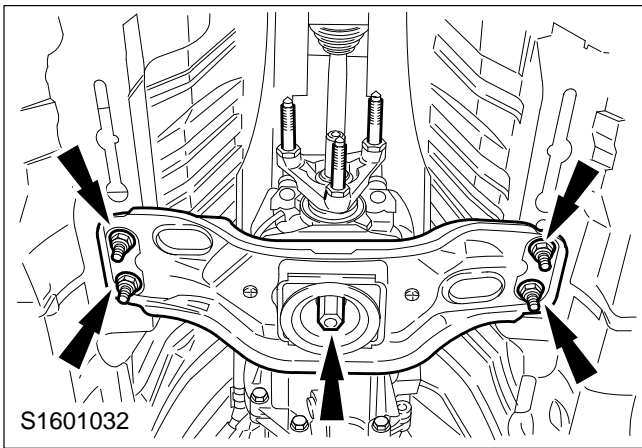
- 1 Detach the transverse brace from the rear axle.
- 2 Detach the driveshaft.



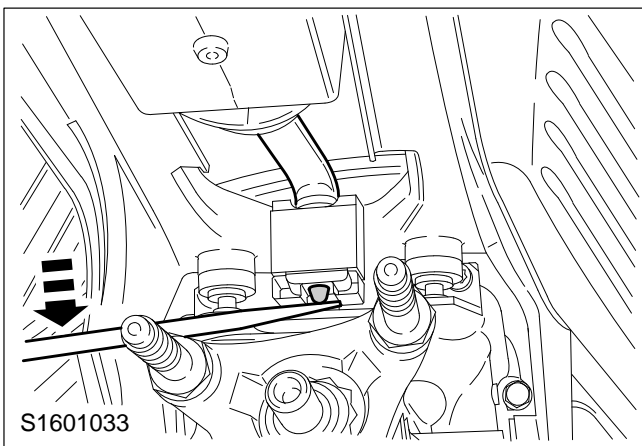
**14. Detach the driveshaft centre bearing.**

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

**15. Remove the driveshaft.**

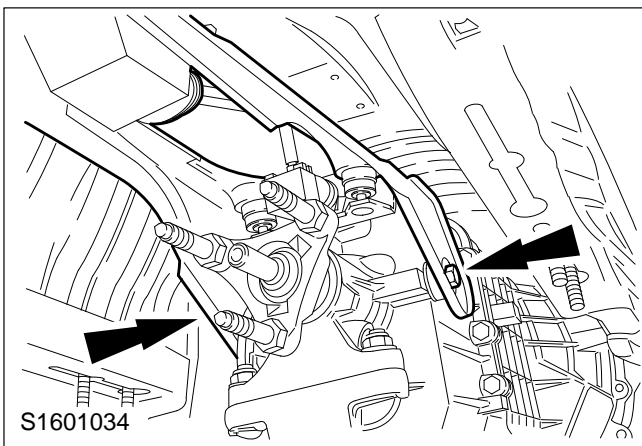


**16. Detach the transmission crossmember.**

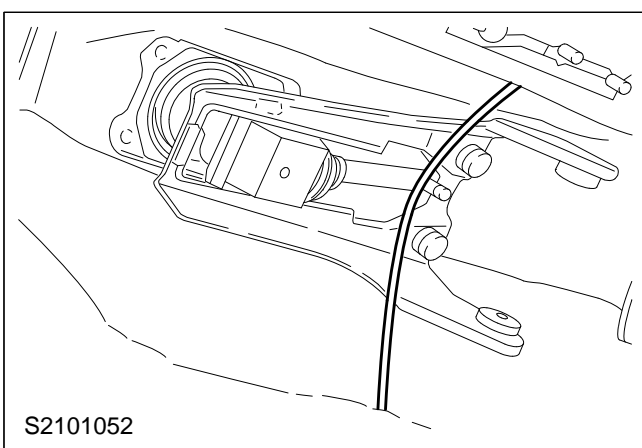


**17. Press the gearshift linkage out of the transmission.**

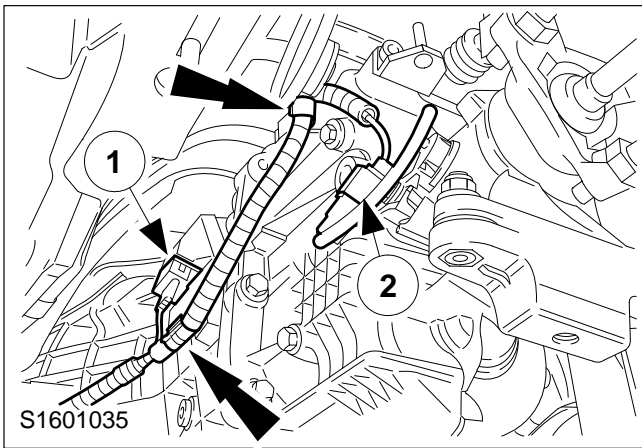
Raise the transmission slightly.



**18. Detach the gearshift support bracket from the transmission.**

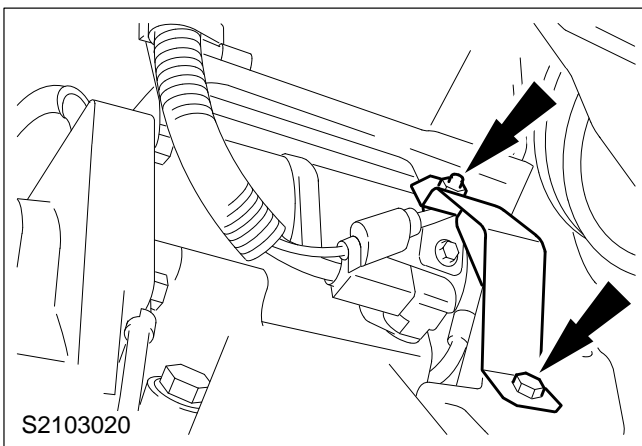


**19. Hold the gearshift support bracket against the floor assembly and support it with a length of round steel rod.**

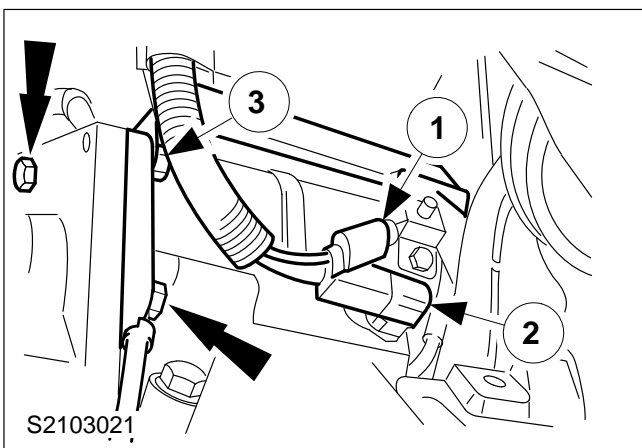


**20. Disconnect the multiplugs.**

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

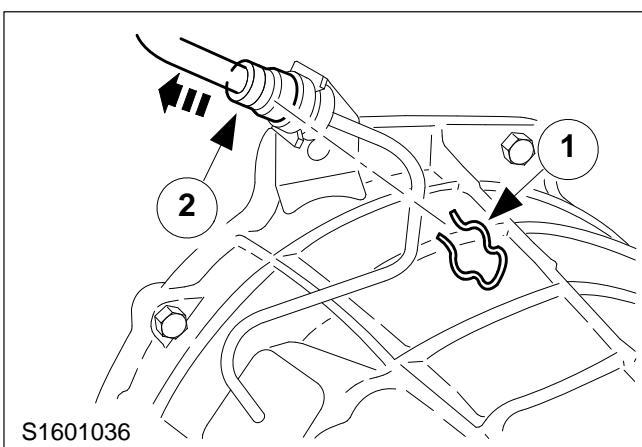


**21. Detach the heat shield bracket from the starter motor.**



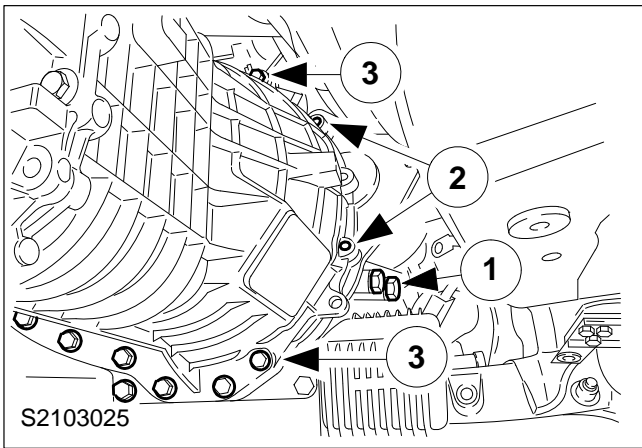
**22. Detach the starter motor from the transmission intermediate flange.**

- 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.

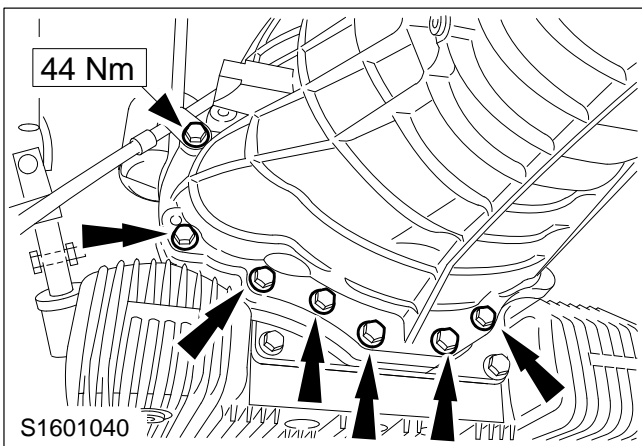


**24. Detach the transmission from the transmission intermediate flange.**

- 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.



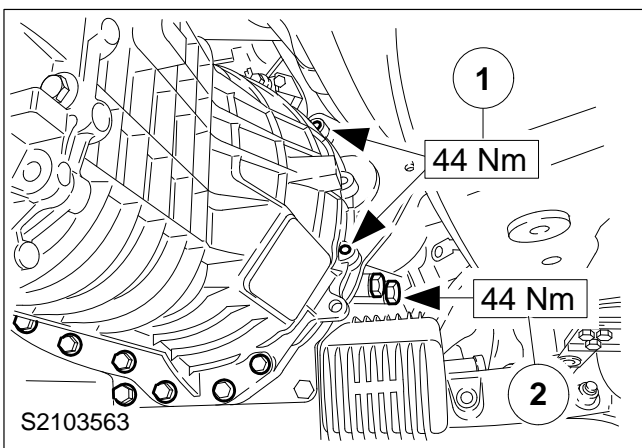
**Install**

**25. Install the transmission.**

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

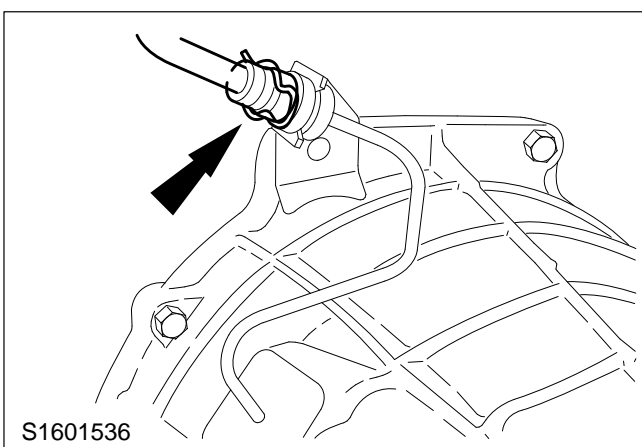
**NOTE:** Support the transmission.

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



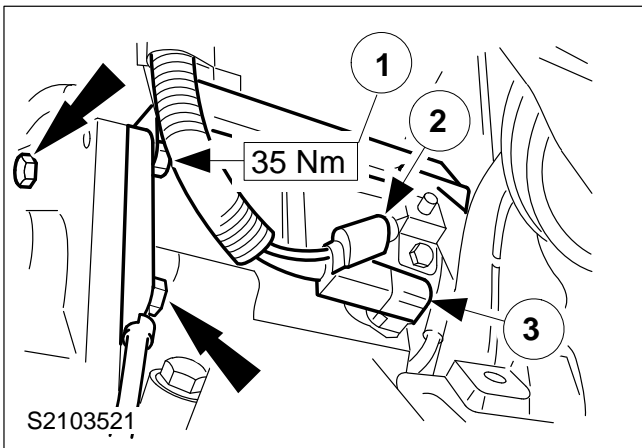
**26. Screw in the flange bolts on the engine side.**

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



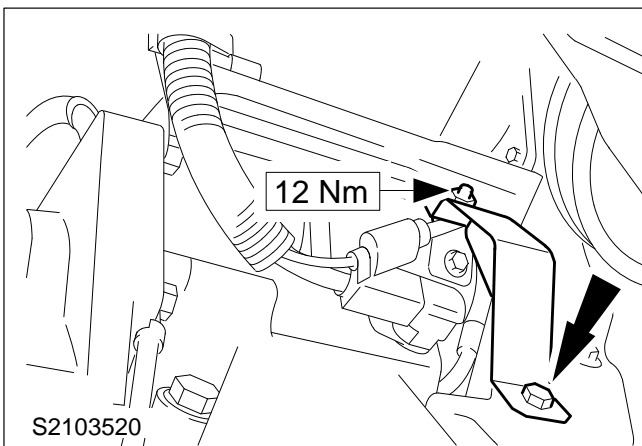
**27. Connect the hydraulic line to the clutch.**

Fasten and lock the quick-release coupling.

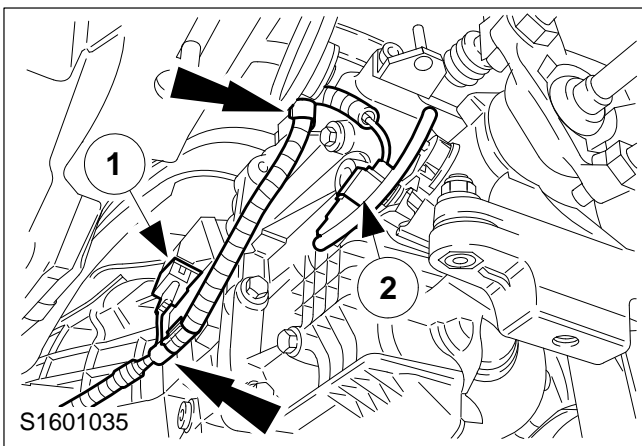


**28. Attach the starter motor to the transmission intermediate flange.**

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

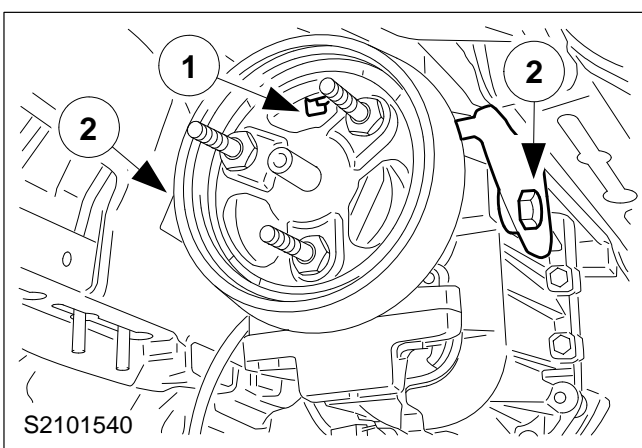


**29. Fit the heat shield bracket to the starter motor.**



**30. Connect the multiplugs.**

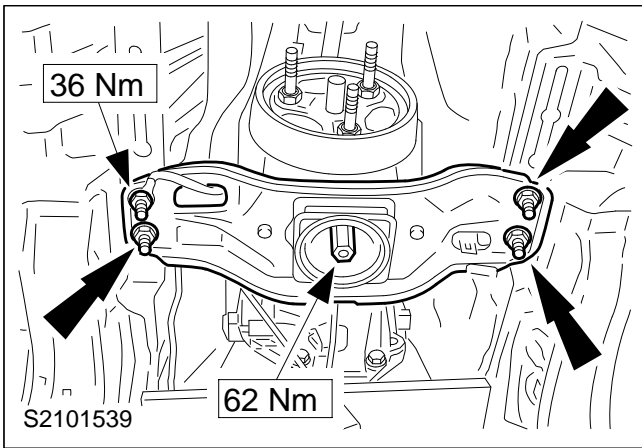
- 1 Reversing light switch
  - 2 Vehicle speed sensor (VSS).
- Clip the wiring looms in place.



**31. Attach the gearshift support bracket to the transmission.**

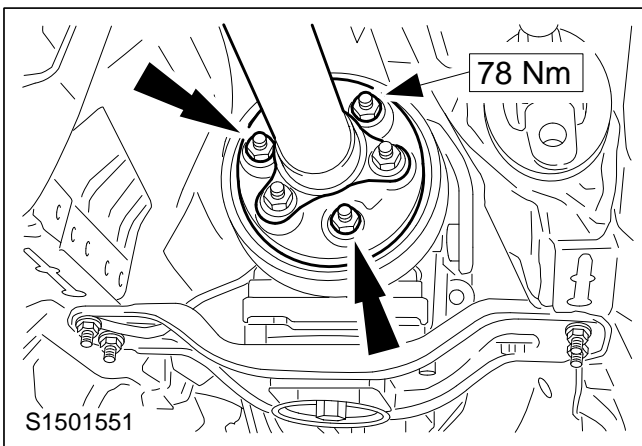
- 1 Locate the gearshift linkage in position and attach it to the coupling.
- 2 Tighten the two bolts to 11 Nm.



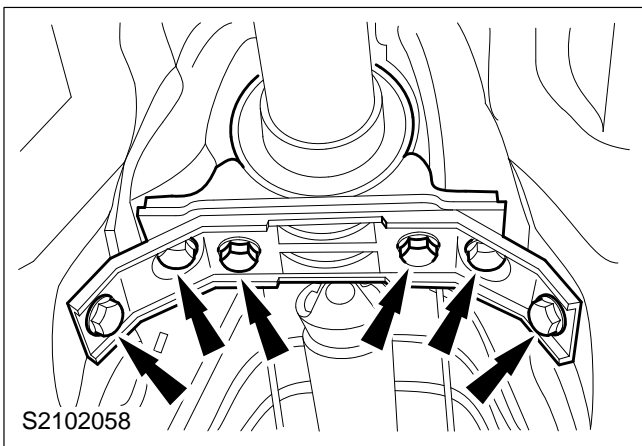


**32. Attach the transmission crossmember.**

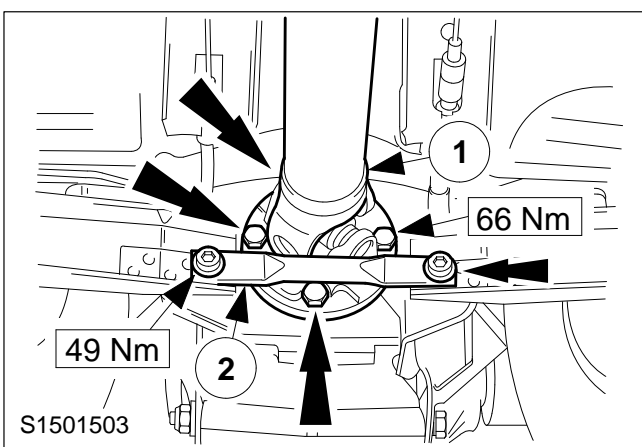
Remove the transmission jack.



**33. Attach the driveshaft to the transmission flange.**



**34. Fit the centre bearing loosely.**



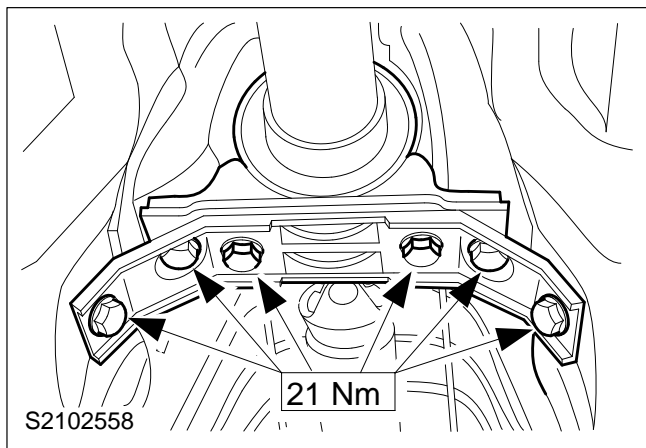
**CAUTION:** The driveshaft is precision-balanced by bolts of different lengths. Mark the position of the driveshaft and the bolts.

**35. Install the driveshaft (continued).**

1 Attach the driveshaft to the rear axle flange.

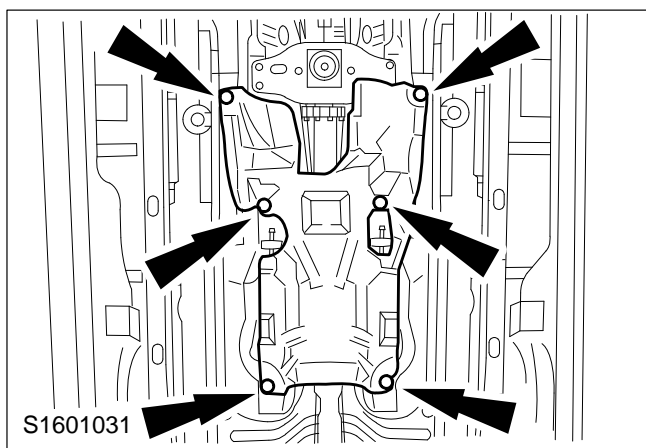
**NOTE:** For vehicles built from Jan onwards. The transverse brace will not be installed from '96 onwards.

2 Attach the transverse brace.

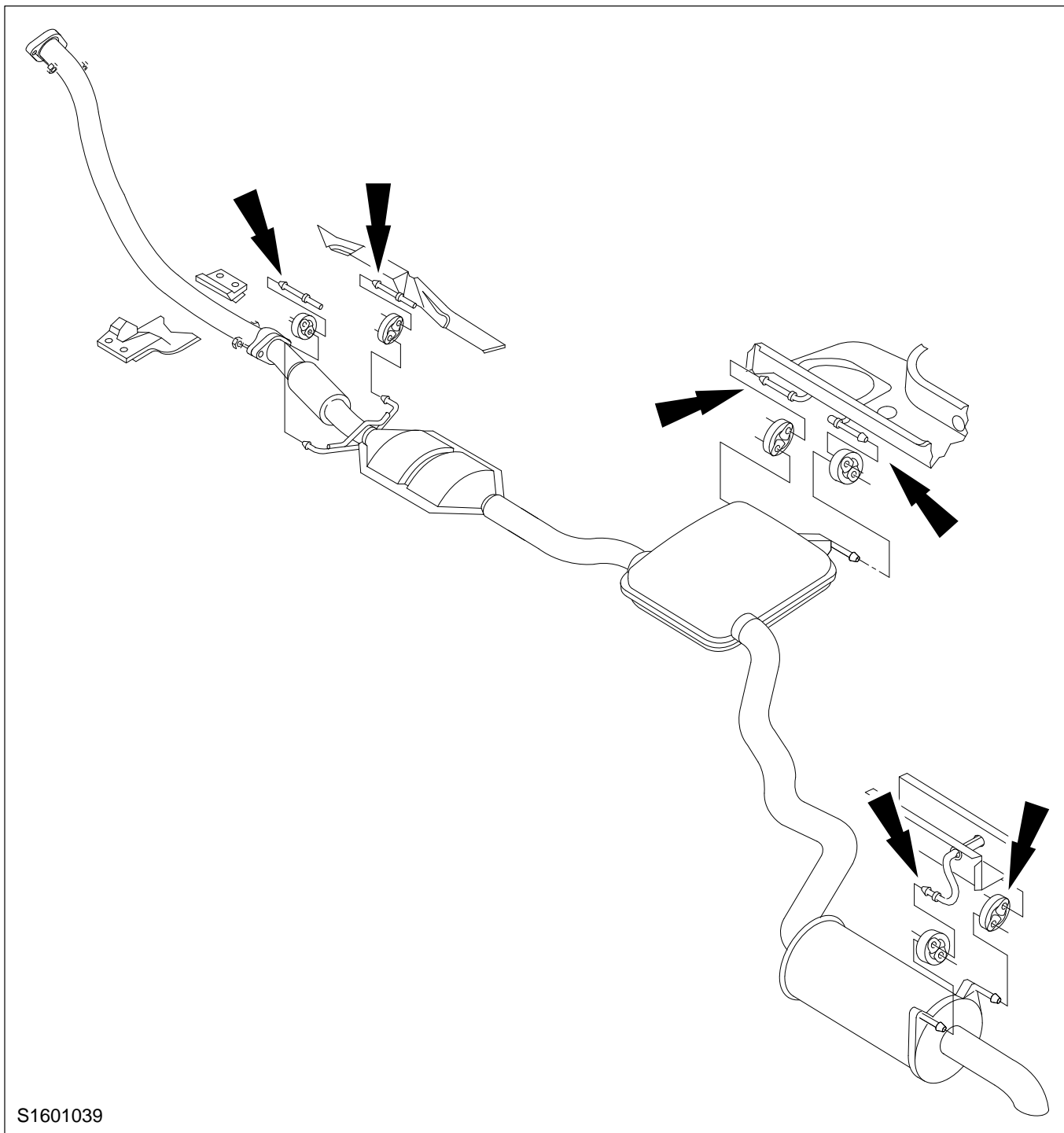


**NOTE:** In each case a spacer washer must be positioned between the floor assembly and the centre bearing.

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



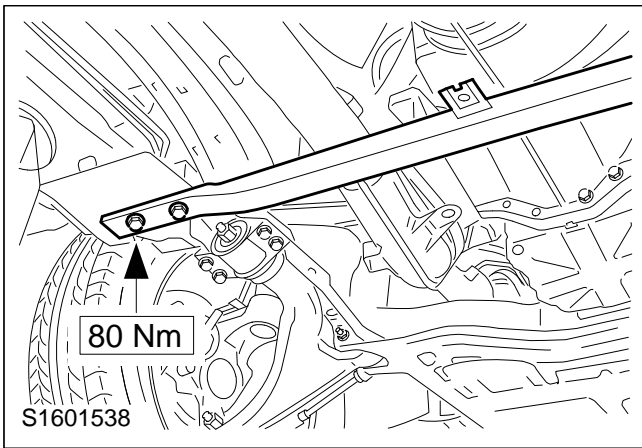
**37. Fit the exhaust system heat shields.**



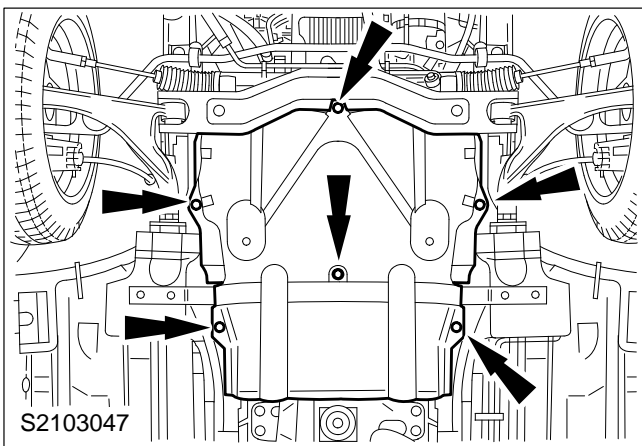
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**38. Fit the exhaust system.**

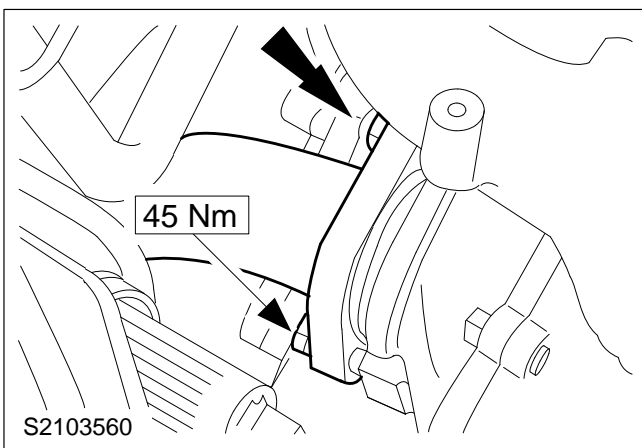
Hook the exhaust system into the six rubber mountings.



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

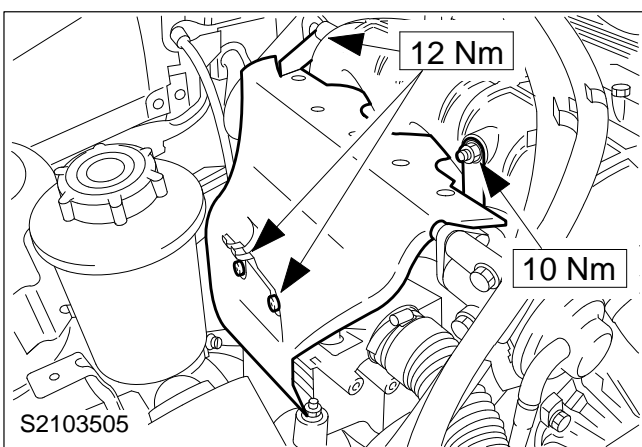


**40. Fit the rear engine undershield.**



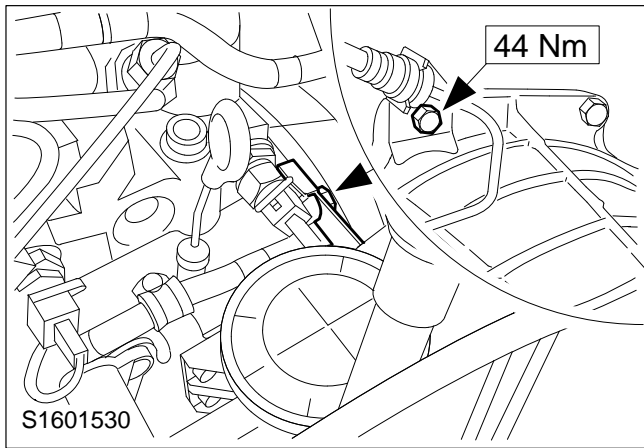
**41. Lower the vehicle.**

**42. Attach the front exhaust pipe to the turbocharger.**

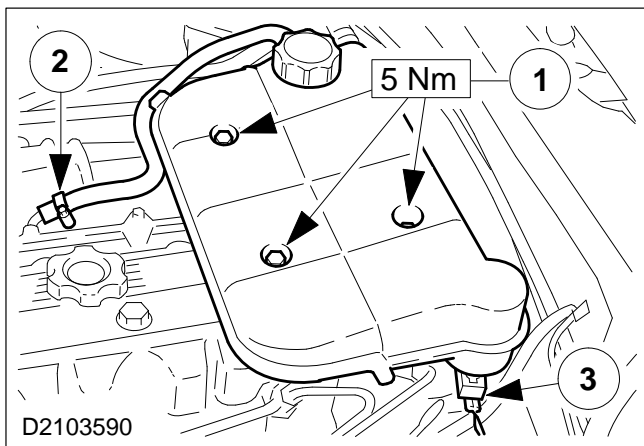


**43. Fit the turbocharger heat shield.**

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.