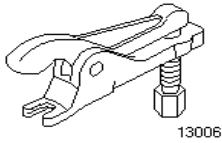
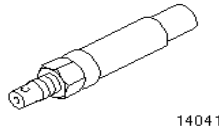


## Engine And Transmission Assembly - Remove And Install (21 132 0)

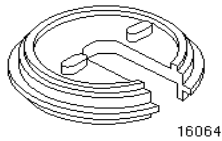
### Special Tools



13-006 Ball joint separator



14-041 Installer, front driveshaft



16-064 Aligner, gear lever

### Workshop Equipment

Description	
Assembly stand with retaining strap	GV-21342166
Auxiliary plugs	
Wooden blocks	

### Materials

Description	Specification
Cable ties	
Coolant	ESD-M97B-49A
Transmission fluid (MTX 75)	ESD-M2C186-A
2 split pins for track rod end	
6 self-tapping screws for radiator cover	Ø6X15

### Remove

#### Note:

Do not undo hydraulic pipes.

#### 1. General Notes.

- The position of the engine mounting and the engine roll restrictor is described looking from the transmission towards the engine.
- Steps which do not apply to all vehicles because of the different equipment levels are indicated

where appropriate.

2. Standard preparations.

- Ask for the radio keycode.
- Make a note of the programmed radio stations.



**CAUTION:**

**Disconnect the battery negative lead.**

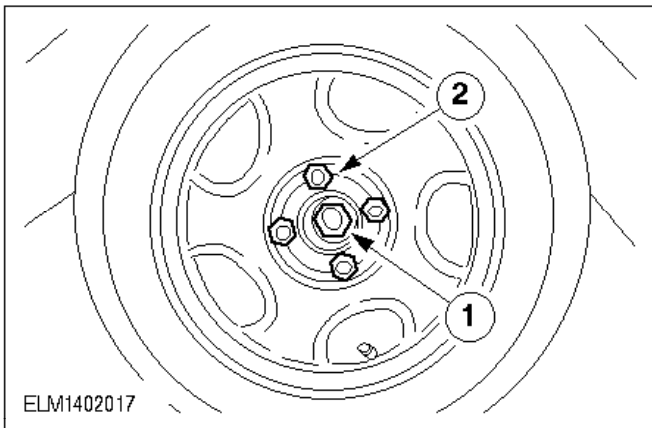
- Cut the cable ties if necessary and renew them on installation.
- Lay protective coverings on the fenders.



**WARNING:**

**BEFORE OPENING THE COOLING SYSTEM ON A HOT ENGINE, COVER THE CAP OF THE COOLANT EXPANSION TANK WITH A THICK CLOTH TO PREVENT THE RISK OF SCALDING.**

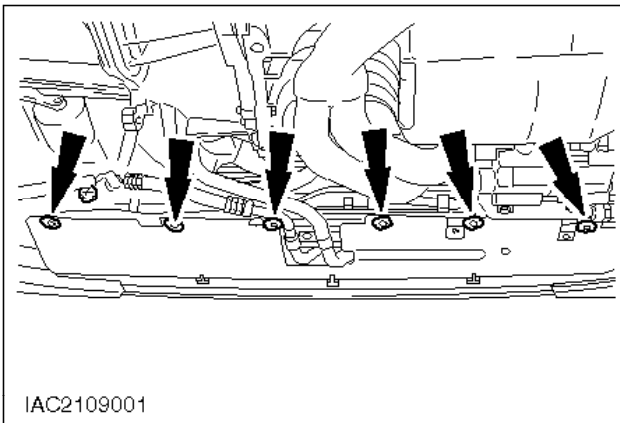
- Open the coolant expansion tank.



**Only vehicles with 4-wheel drive**

Ⓒ 3. Slacken the front wheel bolts.

- 1 Release and remove the right-hand driveshaft hub nut.
  - 2 Slacken the front wheels.
4. Raise the vehicle.
5. Drain off the coolant via the radiator drain plug and refit the drain plug.

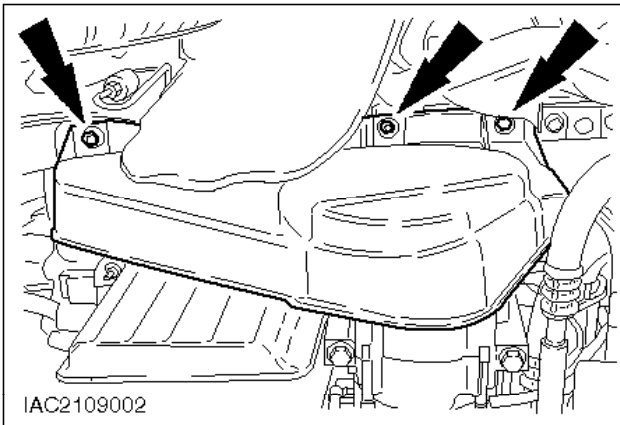


**Only vehicles with air conditioning.**

Note:

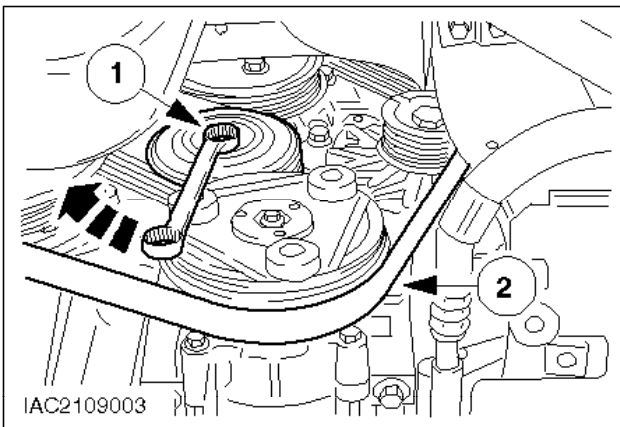
If necessary drill out the rivets on the radiator cover.

- 6. Remove the radiator cover.



**Only vehicles with air conditioning.**

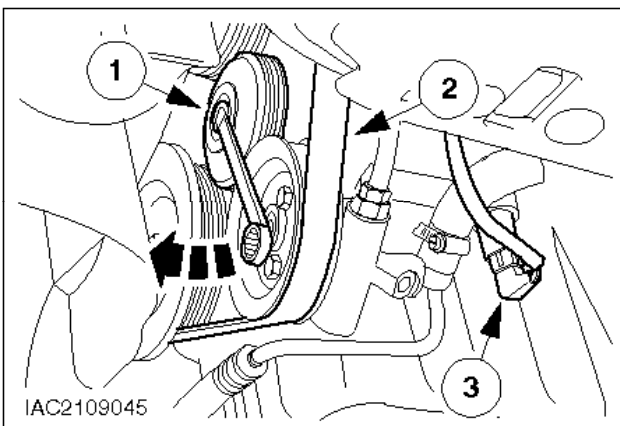
- 7. Remove the multi-groove belt cover.



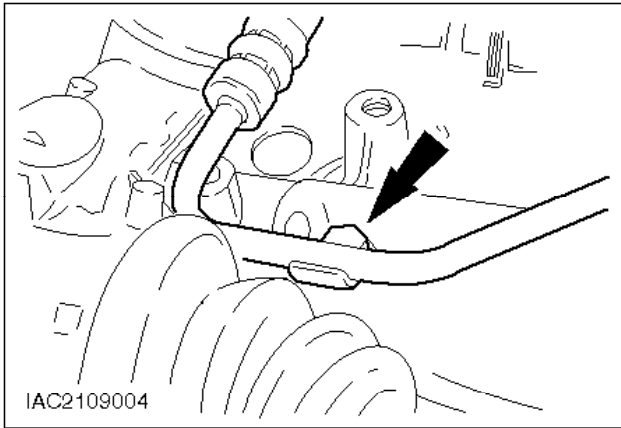
**Only vehicles with air conditioning.**

- 8. Remove the multi-groove belt.

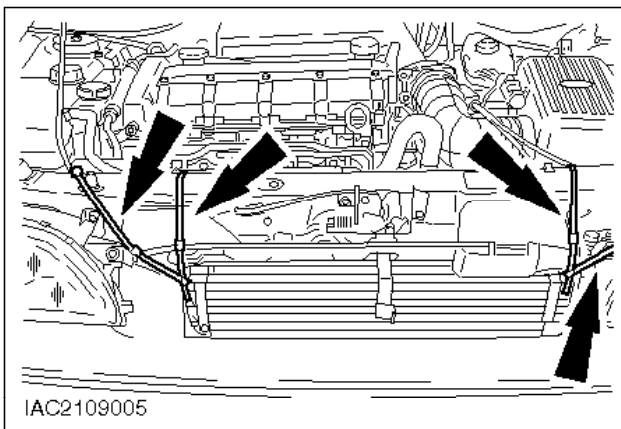
- 1 Tension the idler pulley (in the clockwise direction).
- 2 Take the multi-groove belt off the belt pulleys.



- ⌚ 9. Remove the multi-groove belt.
  - 1 Tension the idler pulley (in the clockwise direction).
  - 2 Take the multi-groove belt off the belt pulleys.
  - 3 Disconnect the plug of the power steering pressure switch (PSP switch).

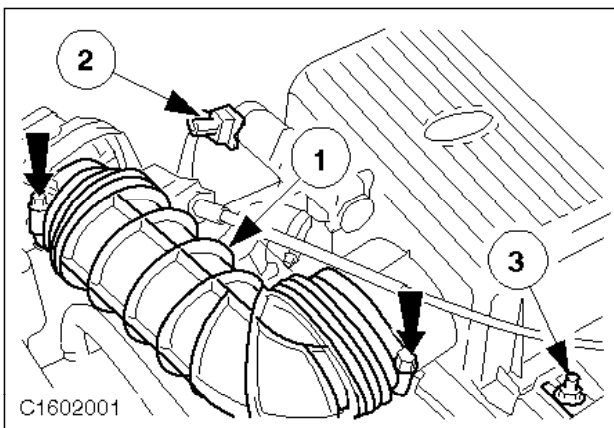


- ⌚ 10. Detach the power steering pipe from the cylinder block.
- 11. Lower the vehicle.



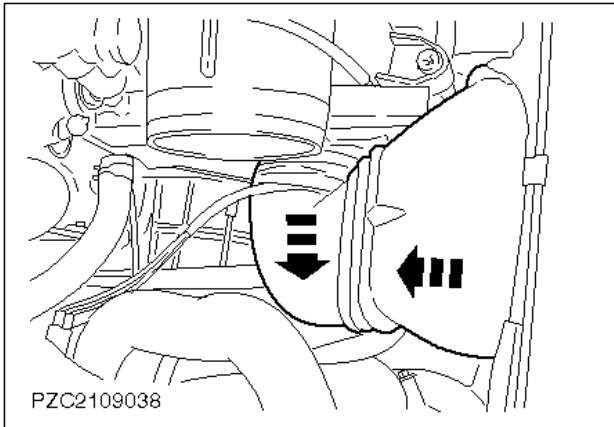
**Only vehicles with air conditioning.**

- ⌚ 12. Tie up the radiator and condenser to the lock panel.

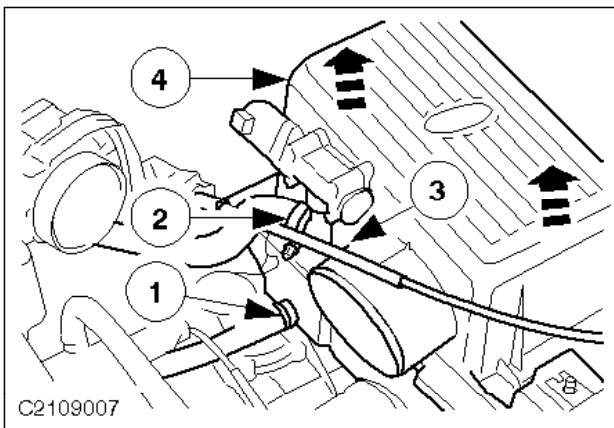


- ⌚ 13. Remove the air cleaner.

- 1 Remove the intake hose.
- 2 Disconnect the plug of the idle air control valve (IAC valve).
- 3 Unscrew the nut.

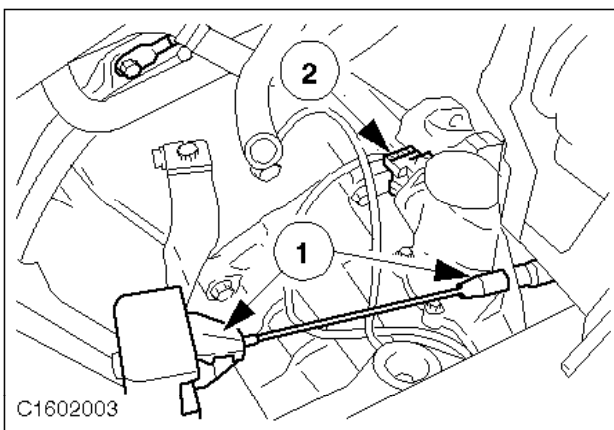


- 14. Detach the intake pipe from the lock panel.



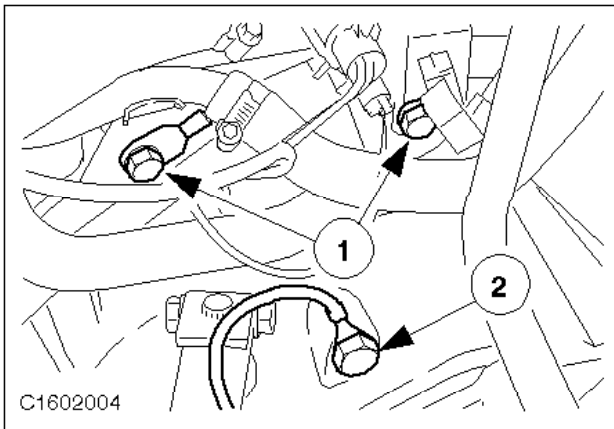
- 15. Remove the air cleaner (continued).

- 1 Disconnect the positive crankcase ventilation (PCV) hose.
- 2 Disconnect the air hose from the IAC valve.
- 3 Detach the accelerator cable.
- 4 Lift out the air cleaner.



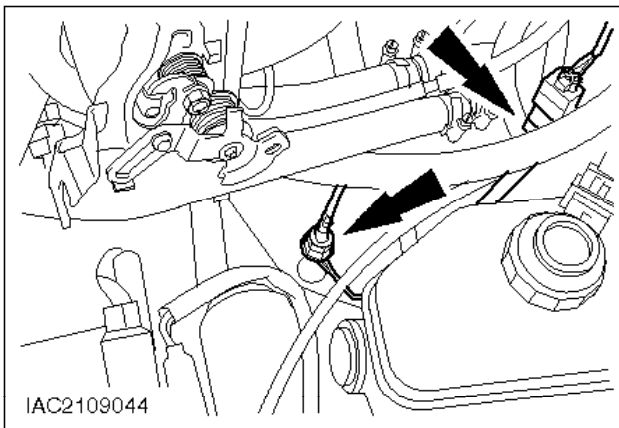
- 16. Unhook the clutch cable and disconnect the plug.

- 1 Unhook the clutch cable from the clutch release lever and withdraw it from the transmission mounting.
- 2 Disconnect the plug of the reversing lamp switch.



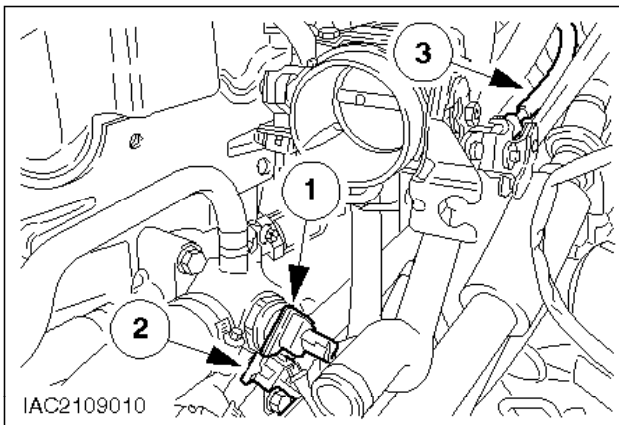
- ⌚ 17. Detach the ground cables and the bracket.

- 1 Detach the ground cable and the bracket from the transmission.
- 2 Detach the ground cable from the transmission.



- ⌚ 18. Remove the speedometer drive cable.

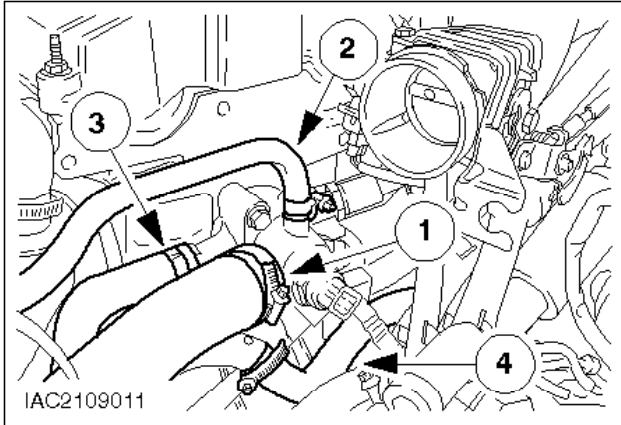
Disconnect the vehicle speed (VSS) sensor plug.



- ⌚ 19. Disconnect the plug and the vacuum hose.

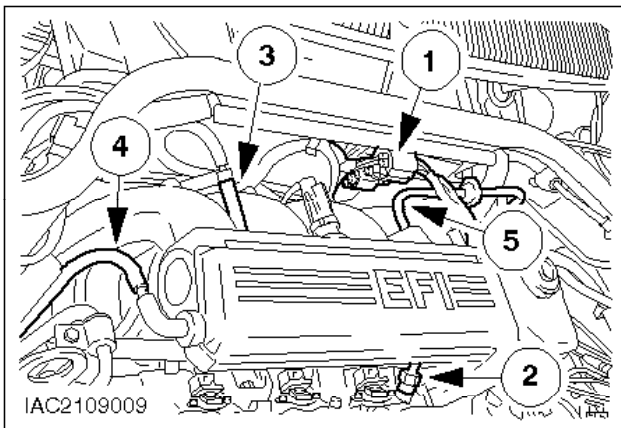
- 1 Disconnect the plug of the coolant temperature switch (CTS).

- 2 Disconnect the plug of the engine coolant temperature sensor (ECT sensor).
- 3 Disconnect the vacuum hose from the throttle body.



- ☛ 20. Disconnect the coolant hoses at the thermostat housing.

- 1 From the radiator.
- 2 From the vent.
- 3 From the heater.
- 4 From the coolant pipe.

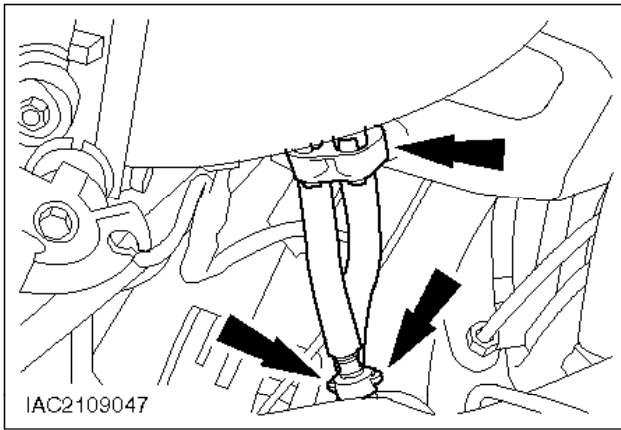


**WARNING:**

**FUEL WILL ESCAPE. OBSERVE THE SAFETY REGULATIONS FOR HANDLING FUEL.**

- ☛ 21. Disconnect the plugs, detach the fuel pipe and disconnect the vacuum hoses.

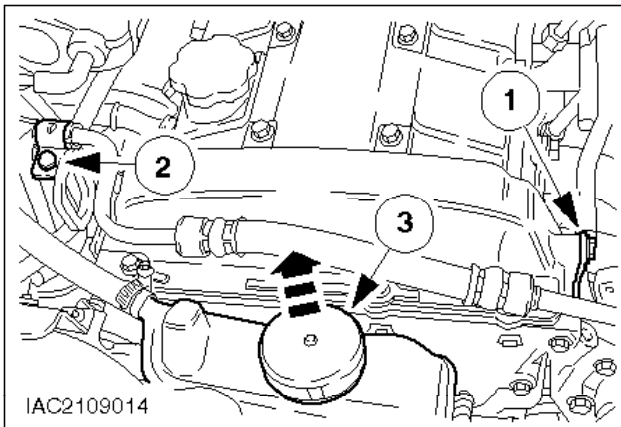
- 1 Disconnect and separate the engine wiring loom plugs (x 2).
- 2 Detach the fuel feed pipe.
- 3 Disconnect the pulse air system vacuum hose.
- 4 Disconnect the vacuum hose from the manifold absolute pressure sensor (MAP sensor).
- 5 Disconnect the brake servo vacuum pipe.



**WARNING:**

**FUEL WILL ESCAPE. OBSERVE THE SAFETY REGULATIONS FOR HANDLING FUEL.**

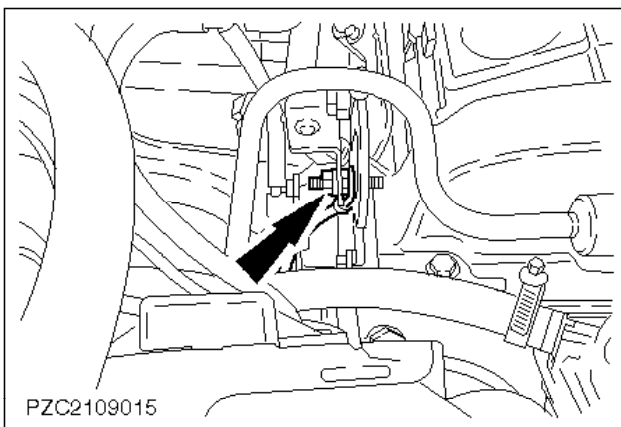
- ⦿ 22. Disconnect the fuel return pipe and detach from bracket.



**Only vehicles with air conditioning.**

- ⦿ 23. Disconnect the power steering pipe.

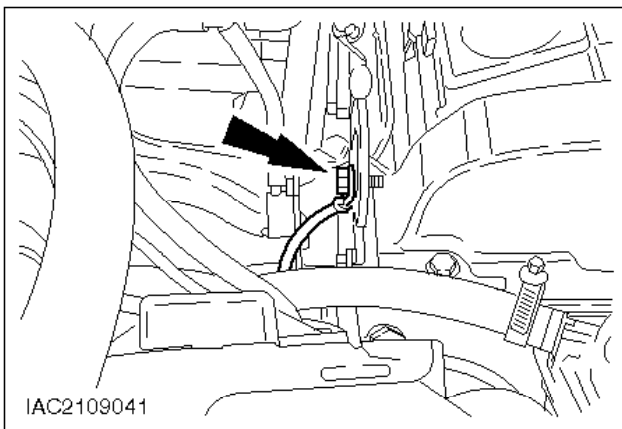
- 1 From the cylinder head cover.
- 2 From the bracket of the engine lifting eye.
- 3 Separate the power steering reservoir from the coolant expansion tank.



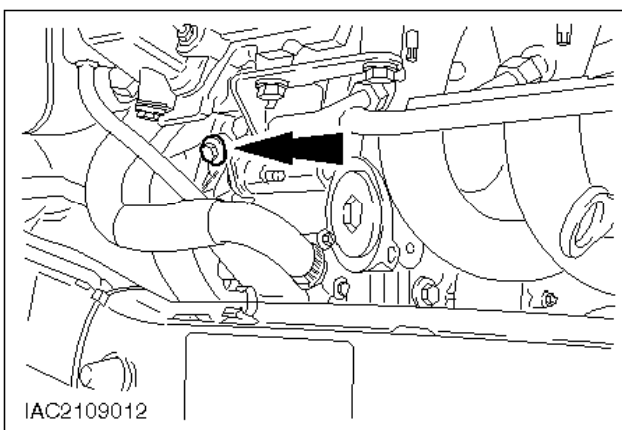
**Only vehicles with air conditioning.**



- ⌚ 24. Detach the bracket for the power steering pipe.



- ⌚ 25. Detach the ground cable from the engine lifting eye.

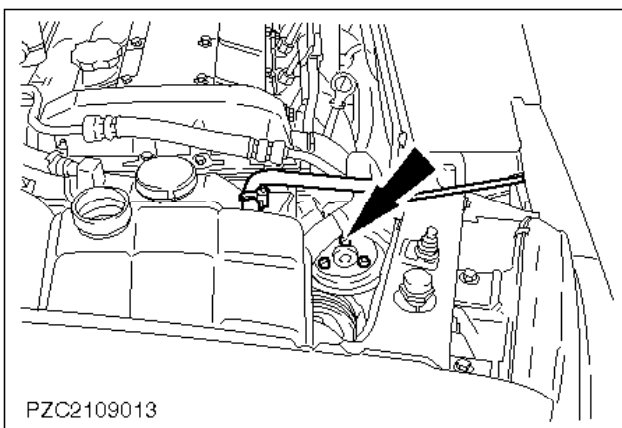


**Only vehicles with air conditioning.**

Note:

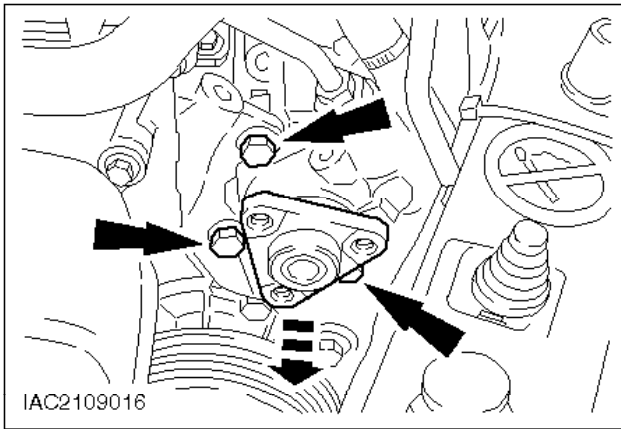
The belt cover cannot be removed yet.

- ⌚ 26. Detach the belt pulley cover from the power steering pump.



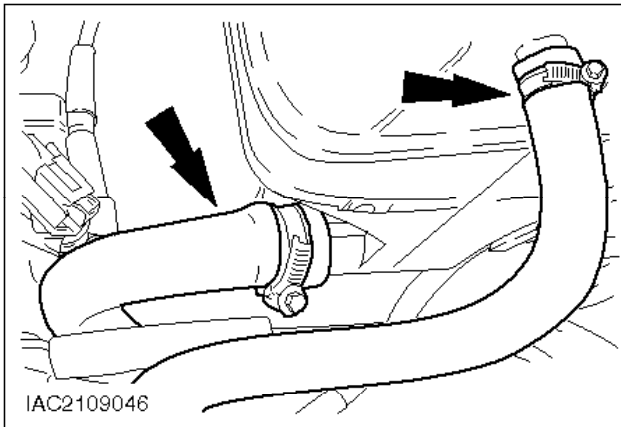
**Only vehicles with air conditioning.**

- ⌚ 27. Detach the belt pulley from the power steering pump and remove it together with the cover and the multi-groove belt.

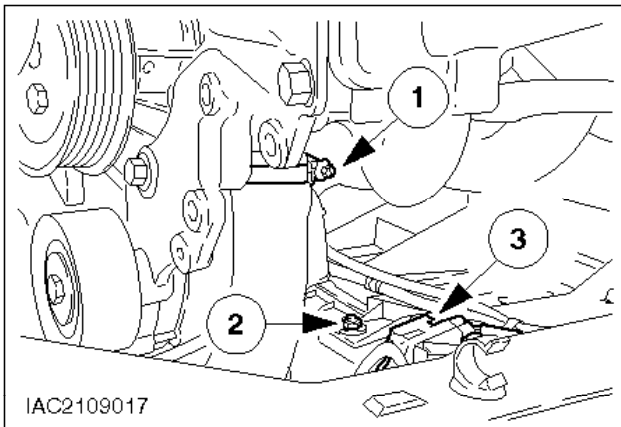


**Only vehicles with air conditioning.**

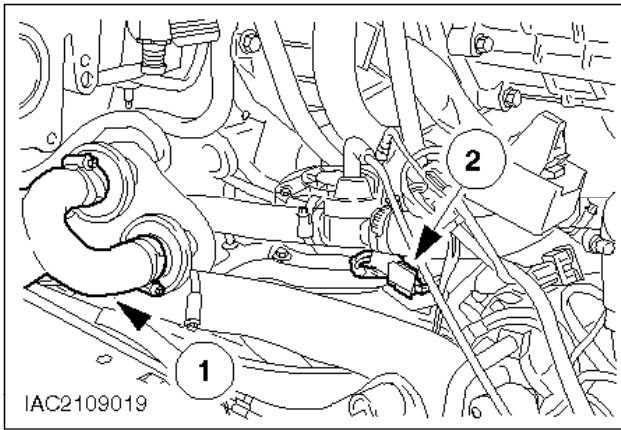
- ⦿ 28. Detach the power steering pump and lay it to one side with the power steering reservoir.



- ⦿ 29. Disconnect the hoses from the expansion tank.

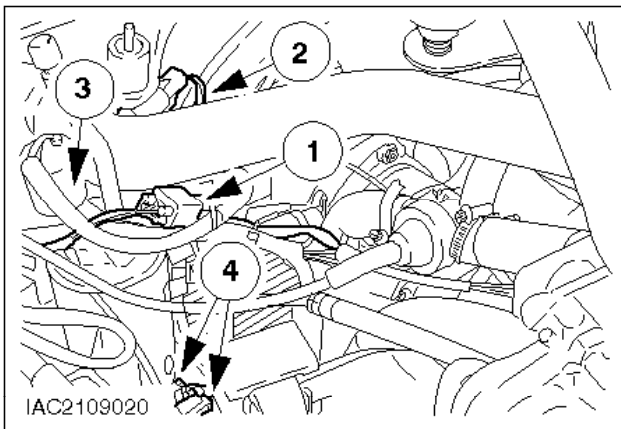


- ⦿ 30. Detach the cooling fan shroud.
  - 1 Disconnect the coolant hose.
  - 2 Unscrew the nut of the cooling fan shroud.
  - 3 Disconnect and remove the plugs from the heated oxygen sensor (HO2S).



31. Detach the cooling fan shroud (continued)

- 1 Detach the pulse air system air hose.
- 2 Disconnect the plug of the cooling fan resistor.



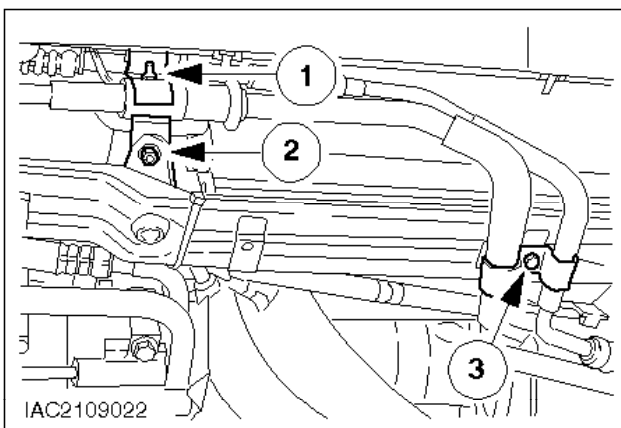
Note:

The shroud cannot be removed until a later stage.

32. Detach the cooling fan shroud (continued).

- 1 Disconnect the plug of the cooling fan motor.
- 2 Disconnect the plug at the top of the cooling fan.
- 3 Unscrew the nut of the cooling fan shroud.
- 4 Detach the plug from the radiator and disconnect it.

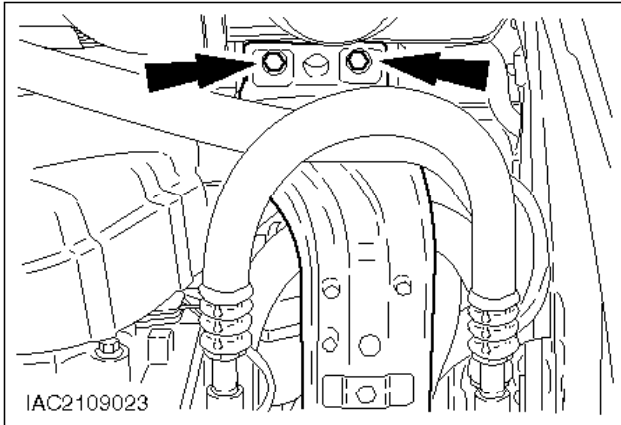
33. Raise the vehicle.



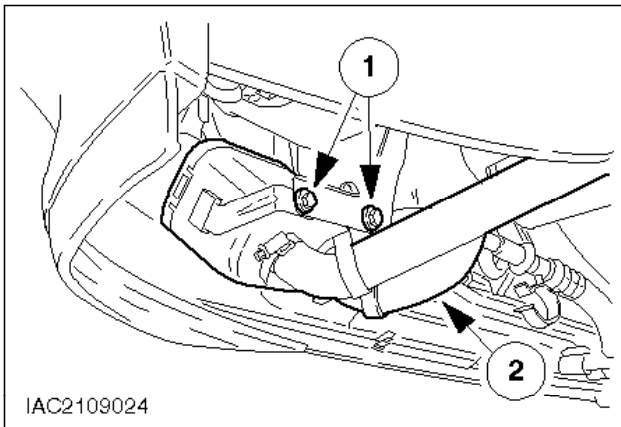
**Only vehicles with air conditioning.**

🔩 34. Detach the air conditioning lines.

- 1 From the bracket.
- 2 Detach the bracket from the radiator crossmember.
- 3 From the radiator crossmember.

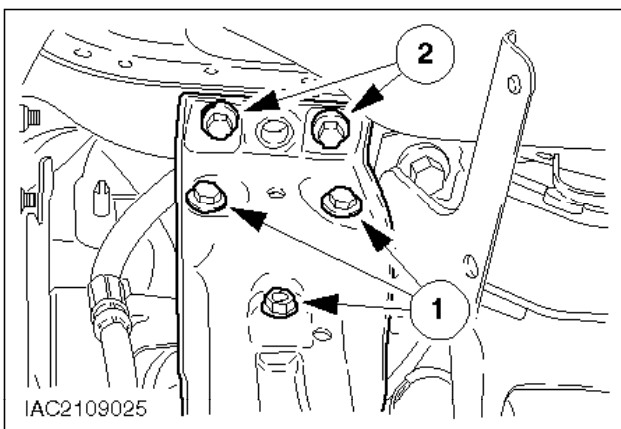


🔩 35. Disconnect the right-hand radiator crossmember.



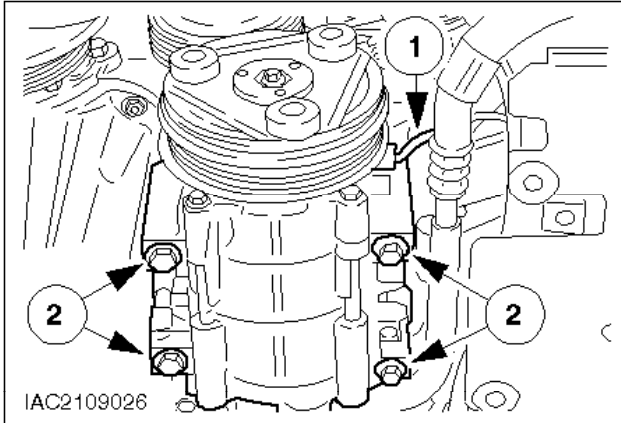
🔩 36. Detach the left-hand radiator crossmember.

- 1 Detach the air cleaner of the pulse air system.
- 2 Unscrew the nut of the air conditioning condenser.



⦿ 37. Detach the left-hand radiator crossmember (cont.).

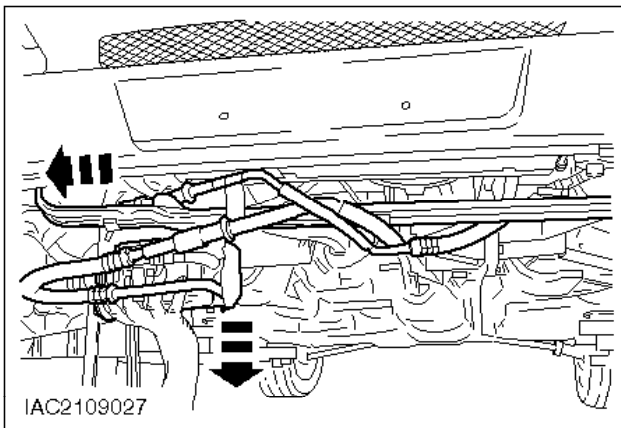
- 1 Detach the bracket for the pulse air cleaner and the air conditioning dehydrator
- 2 Unscrew the radiator crossmember bolts.



**Only vehicles with air conditioning. 09-40">**

⦿ 38. Remove the air conditioning compressor.

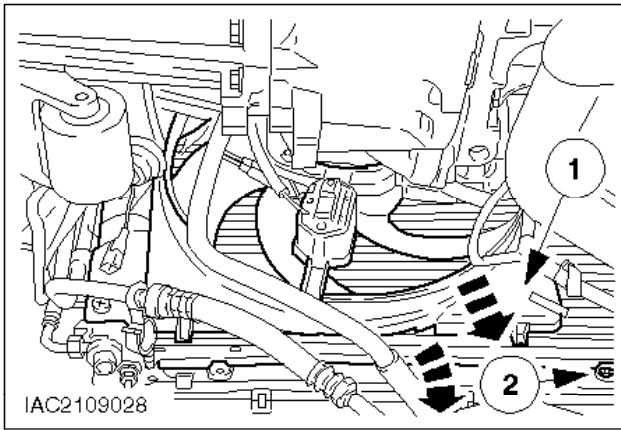
- 1 Disconnect the plug of the air conditioning clutch.
- 2 Remove the bolts.



**Only vehicles with air conditioning.**

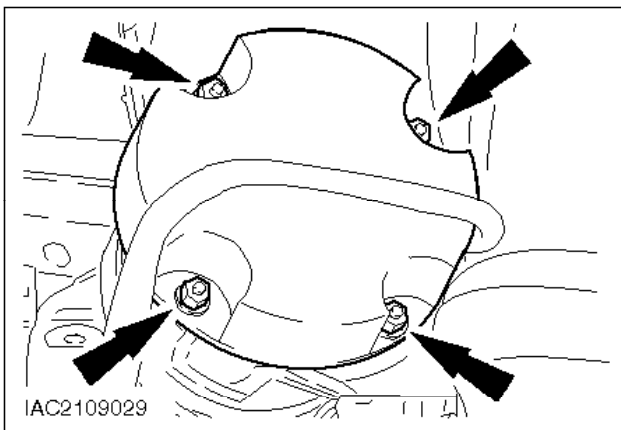
⦿ 39. Remove the radiator crossmember.

- Lower the air conditioning compressor slightly and remove the radiator crossmember, passing it out between the air conditioning pipes.
- Tie up the air conditioning compressor under the engine to allow the radiator to be removed.

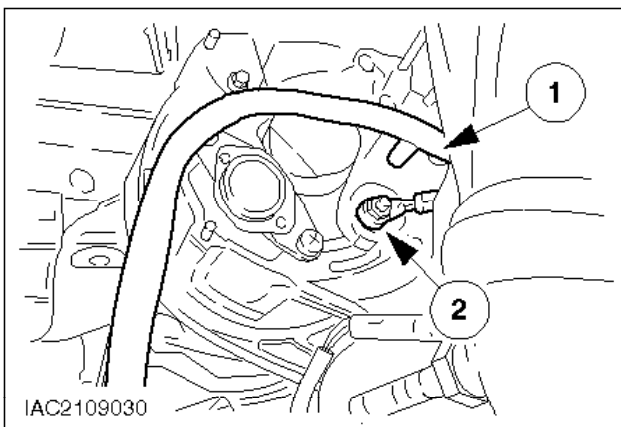


40. Remove the radiator.

- 1 Remove the cooling fan shroud.
  - 2 Detach the radiator from the lock panel and remove it.
- Tie up the air conditioning compressor to the towing eye to allow the engine to be removed.

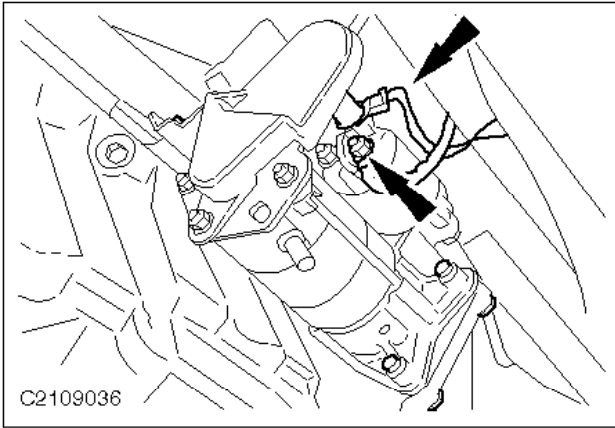


41. Detach the alternator heat shield.

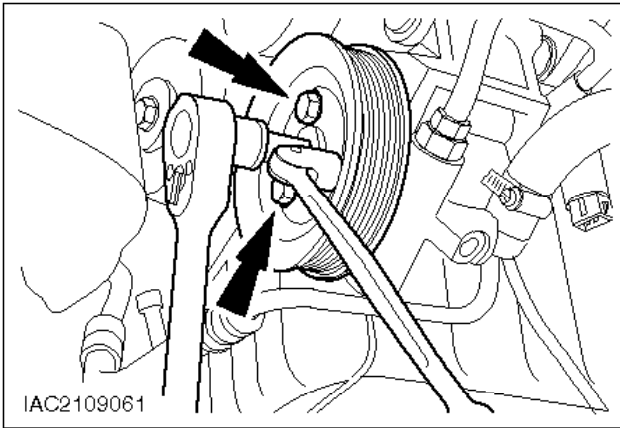


42. Disconnect the alternator.

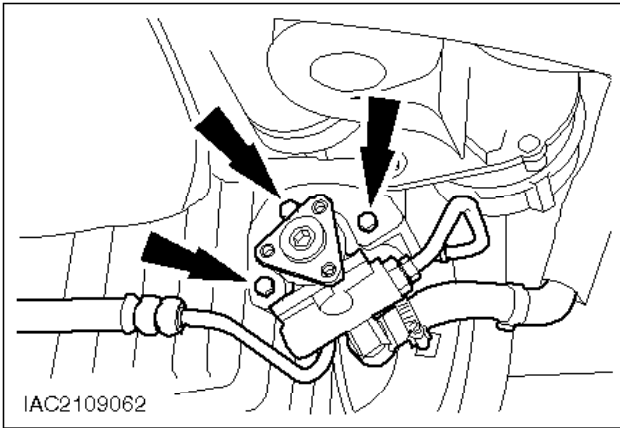
- 1 Lead for ignition warning light
- 2 Positive lead



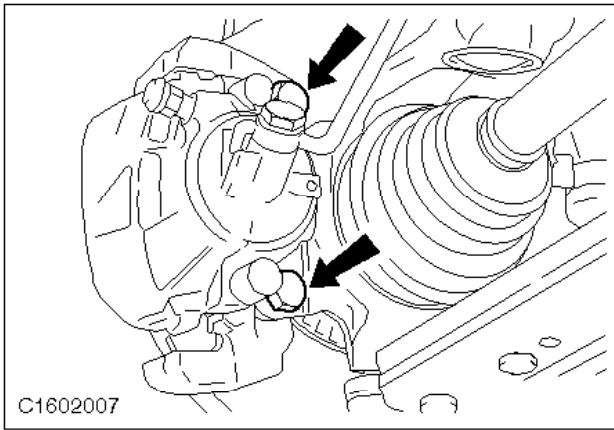
⌚ 43. Disconnect the starter motor.



⌚ 44. Detach the belt pulley from the power steering pump.

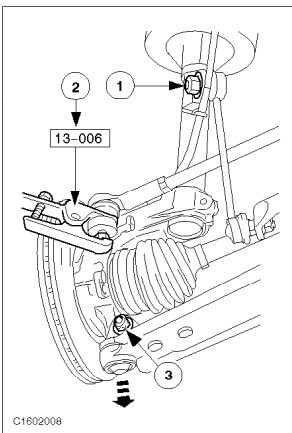


⌚ 45. Detach the power steering pump and tie it up.



**Only vehicles with 4-wheel drive**

- ⌚ 46. Detach the right-hand brake caliper.



**CAUTION:**

**Do not open out the ball joint mounting in the spindle carrier more than 1,5 mm. There is a risk of cracks occurring.**

- ⌚ 47. Detach the left and right-hand wheel suspension.

Detach the brake disc.

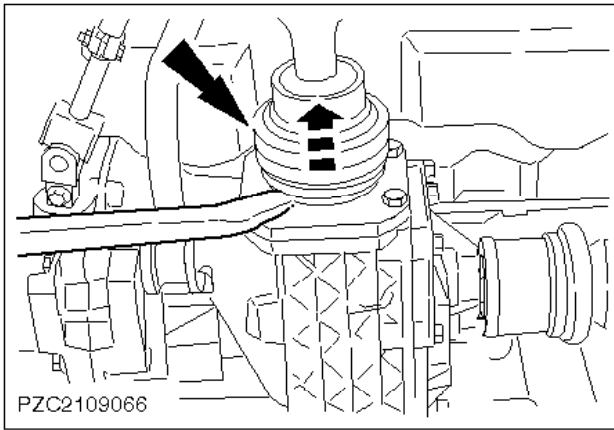
- 1 Detach the stabiliser bar connecting link from the suspension strut.
- 2 Detach the track rod end.

Note:

Swivel the ball joints outwards to avoid damaging the driveshaft gaiters.

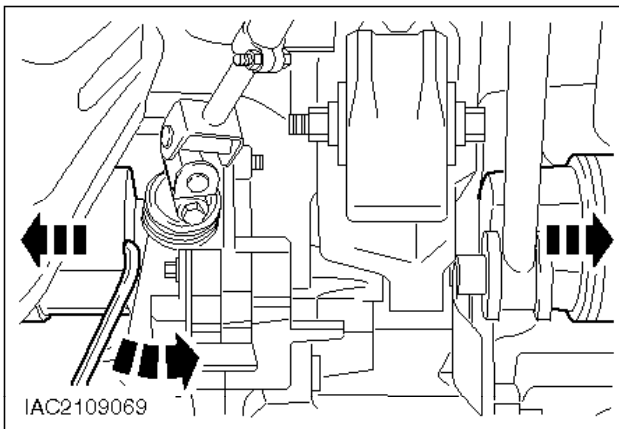
- 3 Detach the lower suspension arm ball joint from the spindle carrier.



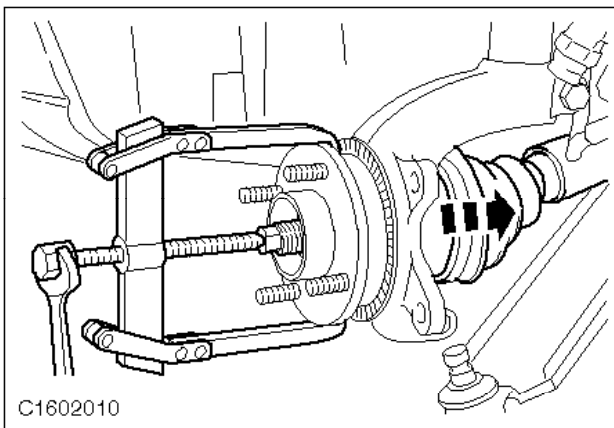


**Only vehicles with 4-wheel drive.**

- 48. Release the driveshaft from the transfer box.



- 49. Release the driveshafts from the transmission.



**Only vehicles with 4-wheel drive.**

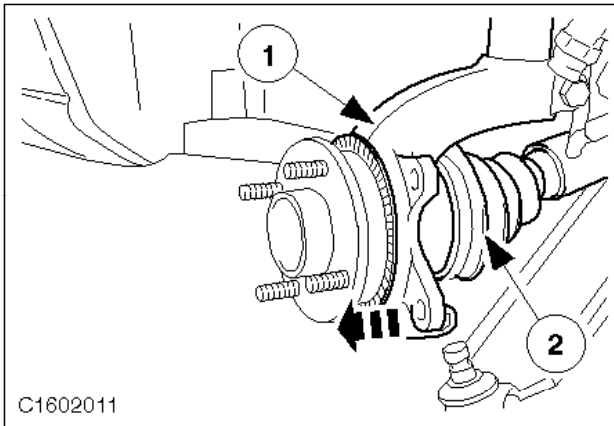
**⚠ CAUTION:**

**Do not pull the wheel hub out of the spindle carrier. This would destroy the wheel bearing.**

- 50. Detach the right-hand driveshaft from the spindle carrier.

Press the driveshaft out from its interference fit in the wheel hub.

- 1 Pull the wheel suspension outwards and withdraw the driveshaft from the spindle carrier.

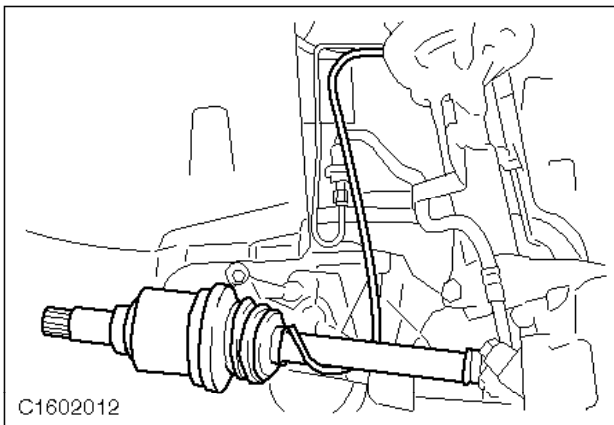


**Only vehicles with 4-wheel drive.**

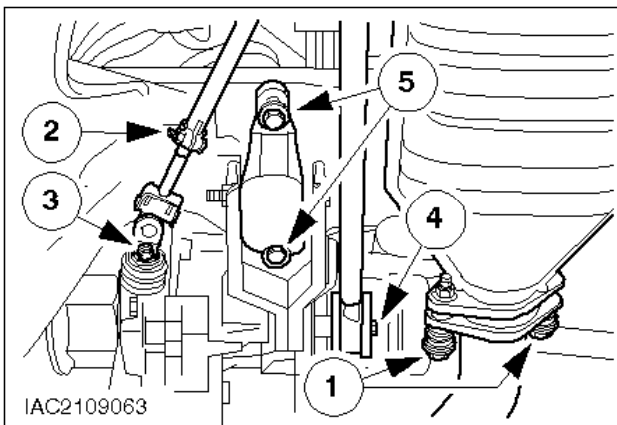
Note:

Watch out for escaping oil. Close off the differential with an auxiliary plug.

51. Detach the right-hand driveshaft from the spindle carrier (continued).
  - 1 Pull the wheel suspension outwards and detach the driveshaft from the spindle carrier.
  - 2 Withdraw the driveshaft from the transmission and remove it as a complete unit.

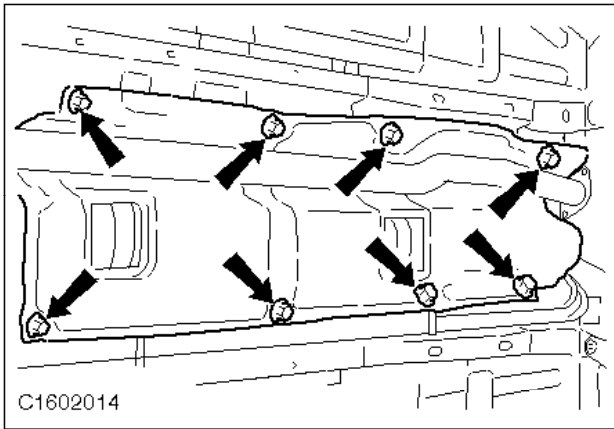


52. Detach the driveshafts from the transmission and tie them up (left-hand side shown).



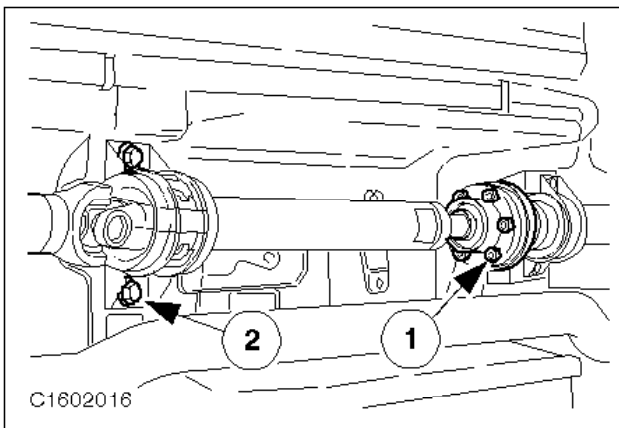
53. Detach the exhaust and detach the gearshift mechanism from the transmission.

- 1 Detach the exhaust manifold from the catalytic converter.
- 2 Slacken the shift rod clamp bolt.
- 3 Detach the shift rod from the transmission and slide the shift rod into itself.
- 4 Detach the gearshift stabiliser bar.
- 5 Detach the engine roll restrictor.



**Only vehicles with 4-wheel drive.**

- ⌚ 54. Detach the floor assembly heat shield.

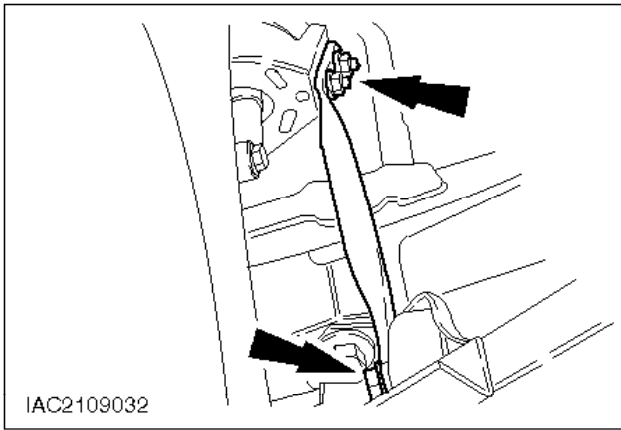


**Only vehicles with 4-wheel drive.**

Note:

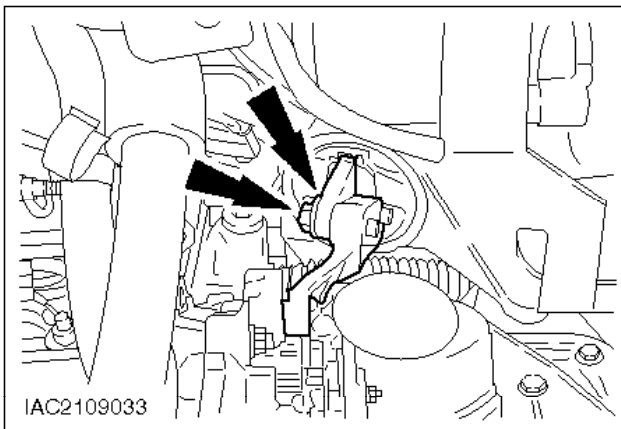
Watch out for escaping oil. Seal the transfer box with auxiliary plugs.

- ⌚ 55. Remove the driveshaft.
- 1 Detach the driveshaft from the rear axle extension (six bolts).
  - 2 Remove the centre bearing and remove the driveshaft.

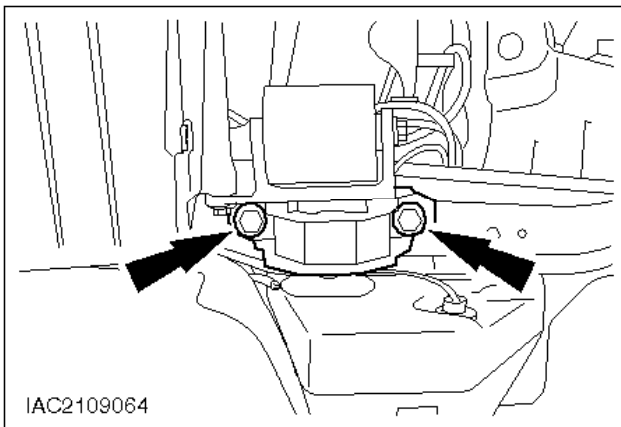


⌚ 56. Remove the engine support bracket.

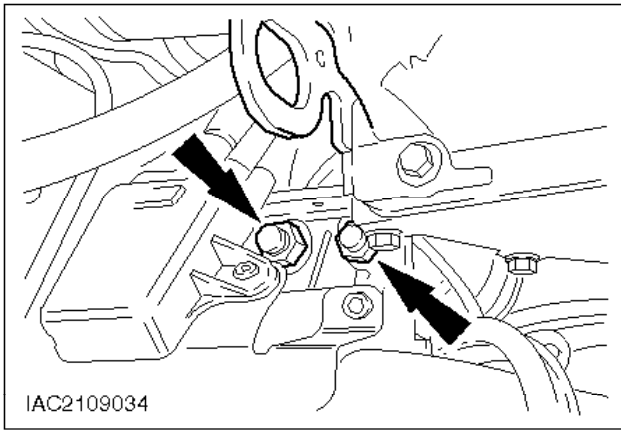
57. Set down the engine and transmission assembly on the assembly table, support it with wooden blocks and secure it to the assembly table with a clamping strap.



⌚ 58. Detach the rear right-hand engine mounting.



⌚ 59. Detach the rear left-hand engine mounting from the side member.



- ⌚ 60. Detach the front right-hand engine mounting from the body.



**CAUTION:**

**When raising the vehicle, guide the engine and transmission assembly to ensure no damage is caused.**

61. Raise the vehicle and pull the engine and transmission assembly out from under the vehicle.

**Install**

62. General note.

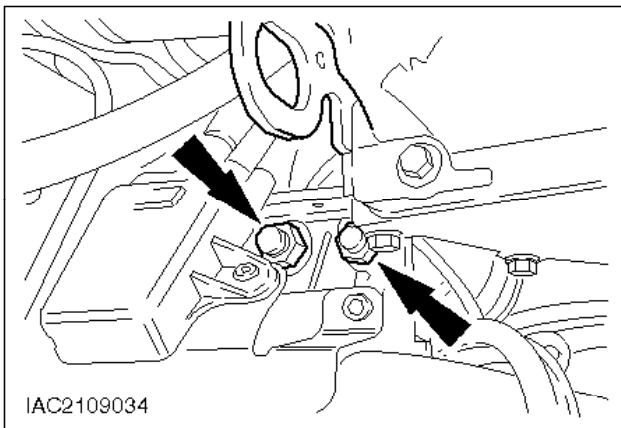
Renew the self-locking nuts, driveshaft circlips and split pins.



**CAUTION:**

**When lowering the vehicle, guide the engine and transmission assembly to ensure no damage is caused.**

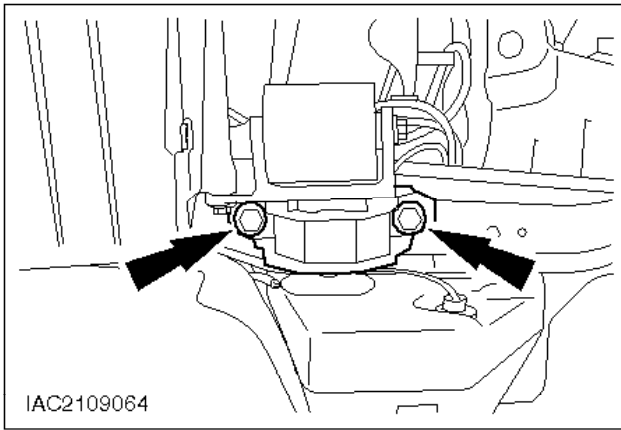
63. Locate the engine and transmission assembly in position under the vehicle.  
64. Lower the vehicle and guide the engine and transmission assembly into the engine compartment.



**Note:**

Do not tighten the nuts.

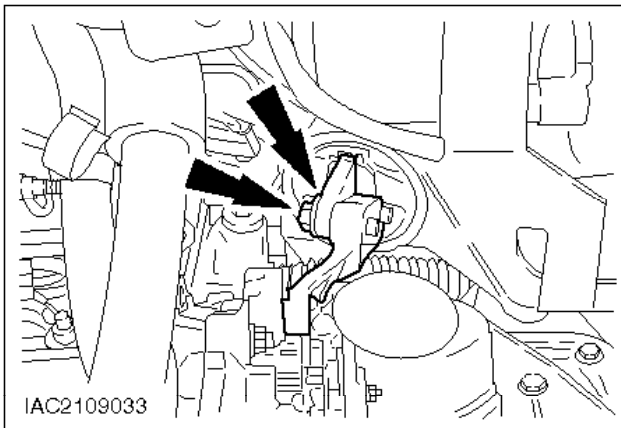
- ⌚ 65. Fit the nuts of the front right-hand engine mounting.



Note:

Do not tighten the bolts.

- ⦿ 66. Fit the bolts of the rear left-hand engine mounting.



Note:

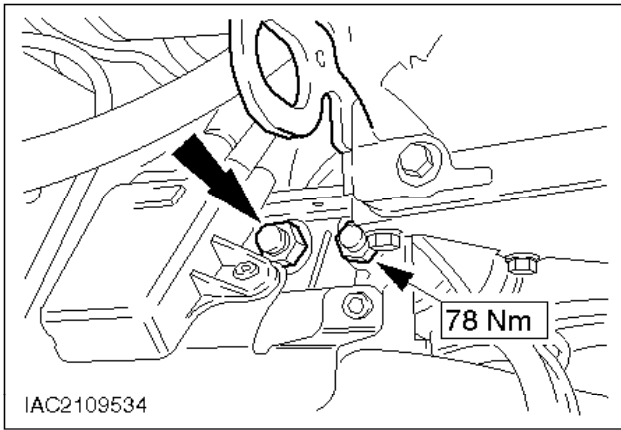
Do not tighten the bolts.

- ⦿ 67. Screw in the bolts of the rear right-hand engine mounting.
- 68. Align the engine and transmission assembly so that it is free of strain.
  - Remove the clamping strap, raise the vehicle slightly and pull the assembly table out from under the vehicle.

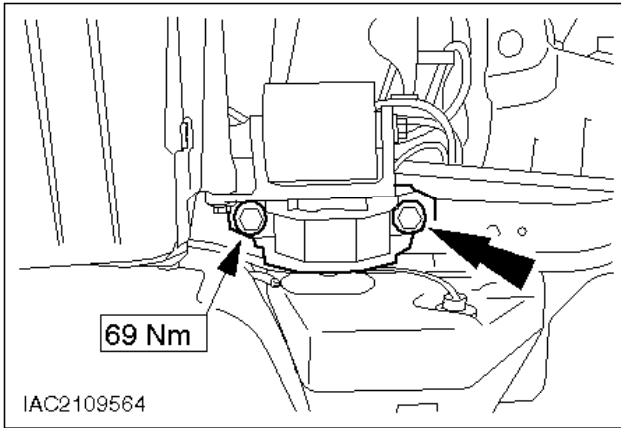
Note:

Do not fit the gearshift stabiliser bar yet.

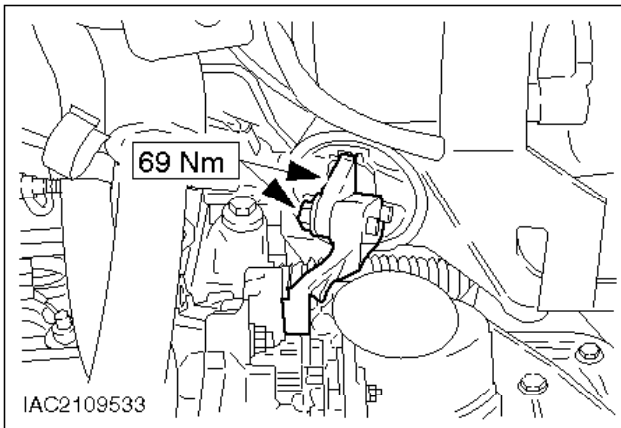
- Raise the vehicle and align the engine and transmission assembly so that the gearshift stabiliser bar can be fitted free of strain.
- Lower the vehicle.



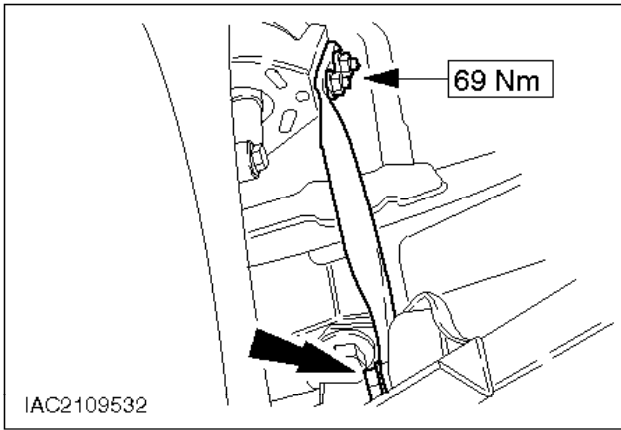
- 69. Tighten the nuts of the front right-hand engine mounting.



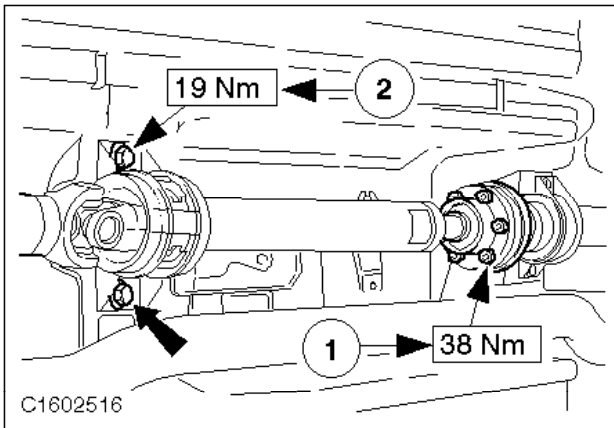
- 70. Tighten the bolts of the rear left-hand engine mounting.



- 71. Tighten the bolts on the rear right-hand engine mounting.



- 72. Fit the engine support bracket.



**Only vehicles with 4-wheel drive. 09-51">**

Note:

Make sure the circlip clicks into place properly.

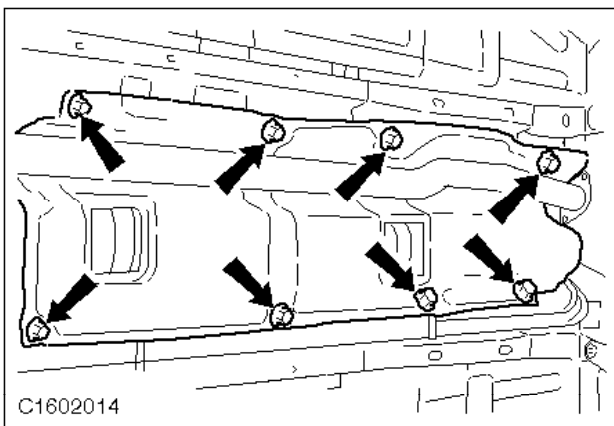
- 73. Install the driveshaft.

Fit the driveshaft in the transfer box using a new circlip.

Note:

Screw in the centre bearing bolts (do not tighten the bolts).

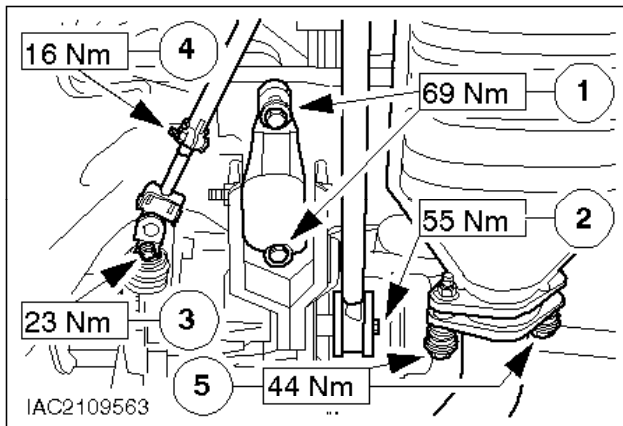
- 1 Attach the driveshaft to the rear axle extension.
- 2 Align the centre bearing and tighten it.





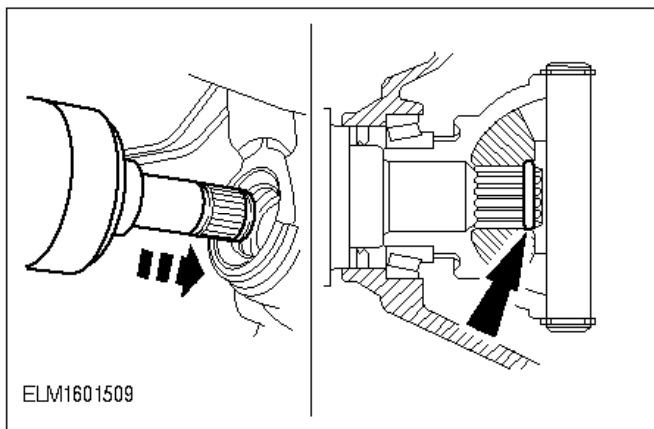
**Only vehicles with 4-wheel drive.**

- 🔧 74. Fit the floor assembly heat shield.



- 🔧 75. Connect the exhaust and attach the gearshift mechanism to the transmission.

- 1 Fit the engine roll restrictor.  
Put the transmission in neutral.
- 2 Attach the gearshift stabiliser bar.
- 3 Attach the shift rod to the transmission.
- 4 Screw in the shift rod clamp bolt.
- 5 Attach the exhaust manifold to the catalytic converter.

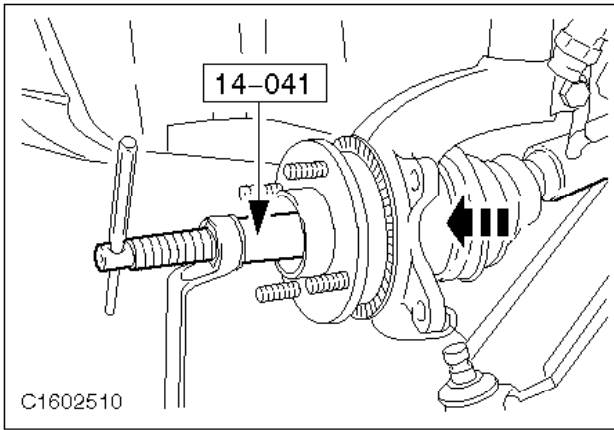


**Note:**

Make sure the circlips have clicked into place properly.

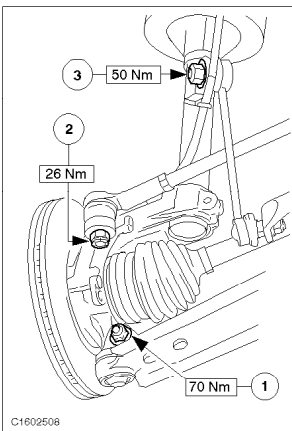
- 🔧 76. Install the right and left-hand driveshafts.

Insert the driveshafts in the transmission, using new circlips.

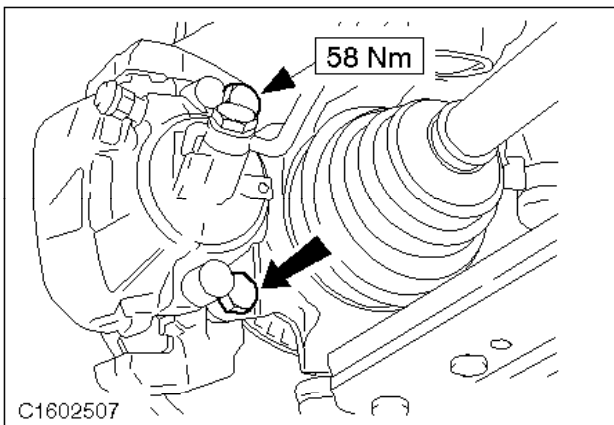


**Only vehicles with 4-wheel drive.**

- 77. Fit the right-hand driveshaft in the spindle carrier.
  - Draw the driveshaft into the wheel hub using the special tool.
  - Fit the axle nut (do not tighten).

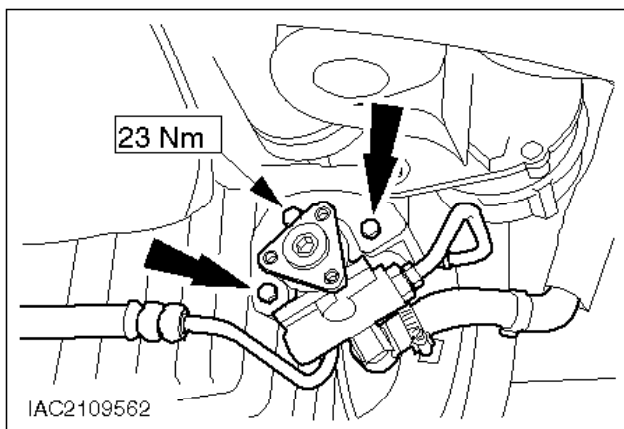


- 78. Attach the right and left-hand wheel suspension.
  - 1 Attach the lower suspension arm ball joint to the spindle carrier.
  - 2 Attach the track rod end and secure it with a new split pin.
  - 3 Attach the stabiliser bar connecting link to the suspension strut.
 Fit the right-hand brake disc.



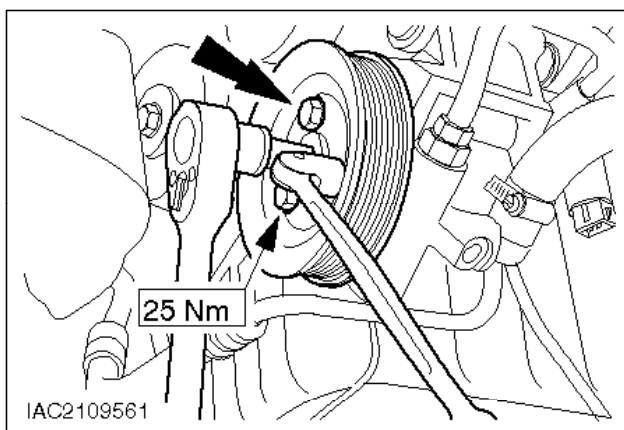
**Only vehicles with 4-wheel drive.**

- 🔩 79. Fit the right-hand brake caliper.

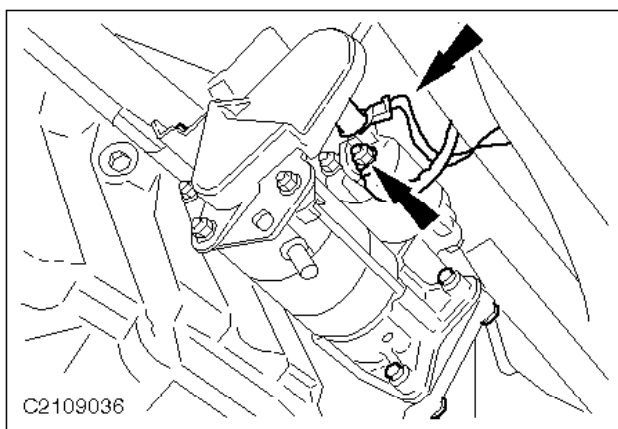


**Vehicles without air conditioning only**

- 🔩 80. Fit the power steering pump.

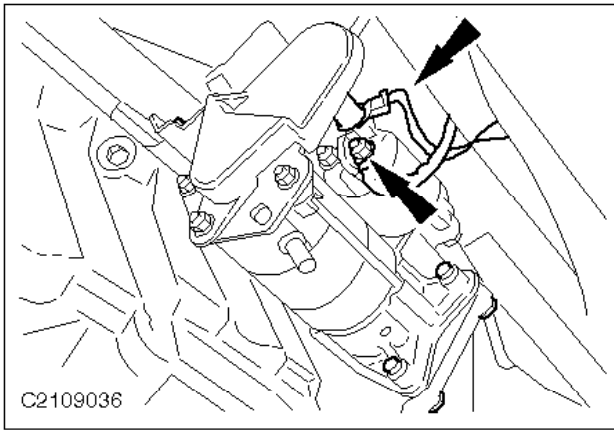


- 🔩 81. Fit the belt pulley to the power steering pump.

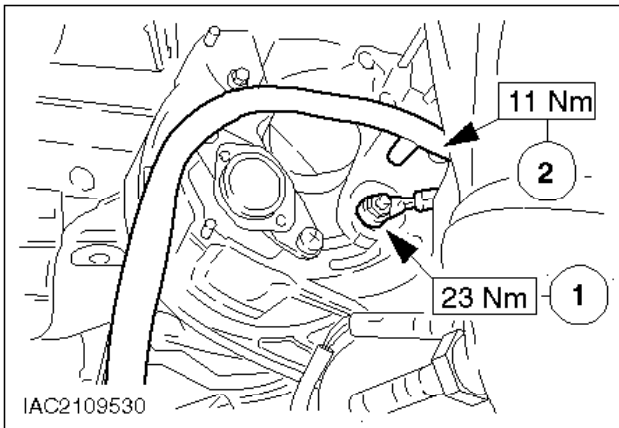


**All vehicles**

- 🔩 82. Connect the starter motor.

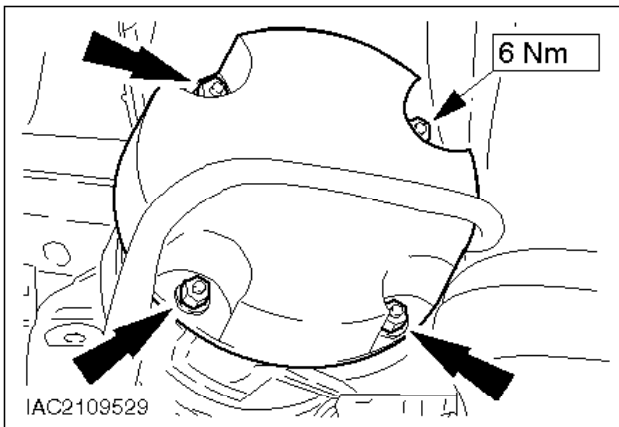


83. Connect the starter motor.

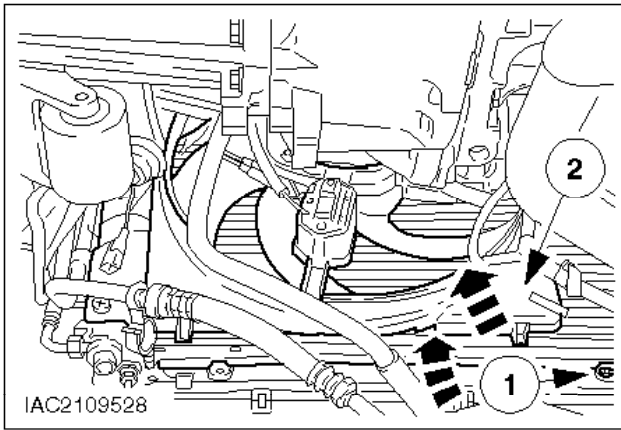


84. Connect the alternator.

- 1 Positive lead
- 2 Lead for ignition warning light

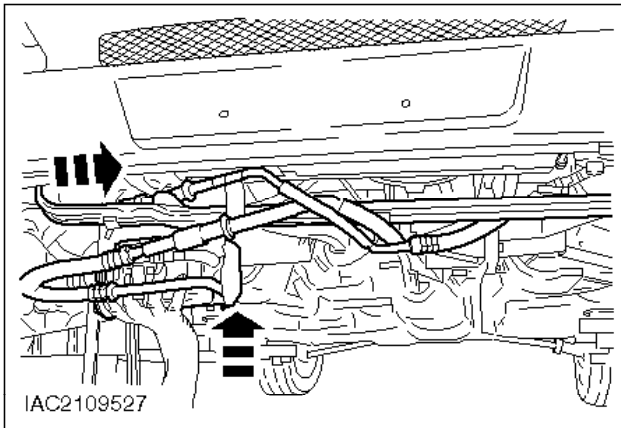


85. Fit the alternator heat shield.



86. Fit the radiator.

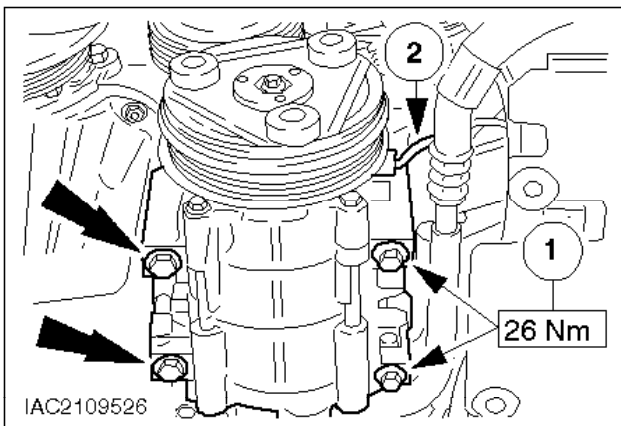
- Suspend the air conditioning compressor under the engine to allow the radiator to be installed.
- 1 Guide the radiator in and tie it up to the lock panel to allow the radiator crossmember to be installed.
- Suspend the air conditioning condenser from the radiator retaining tangs.
- 2 Install the cooling fan shroud.



**Only vehicles with air conditioning. 09-56">**

87. Install the radiator crossmember.

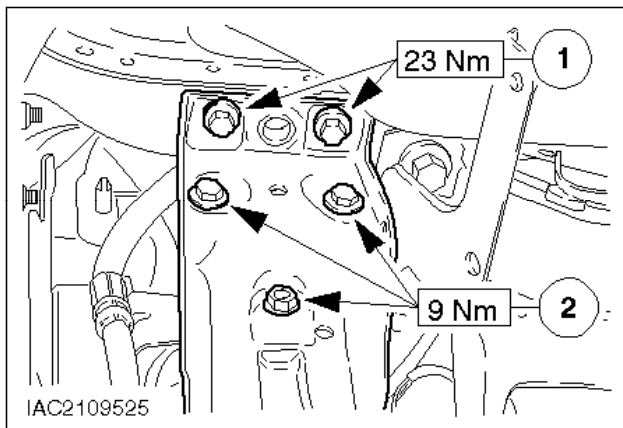
- Untie the air conditioning compressor from the towing eye and lower it slightly.
- Guide the radiator crossmember into the air conditioning lines.



**Only vehicles with air conditioning.**

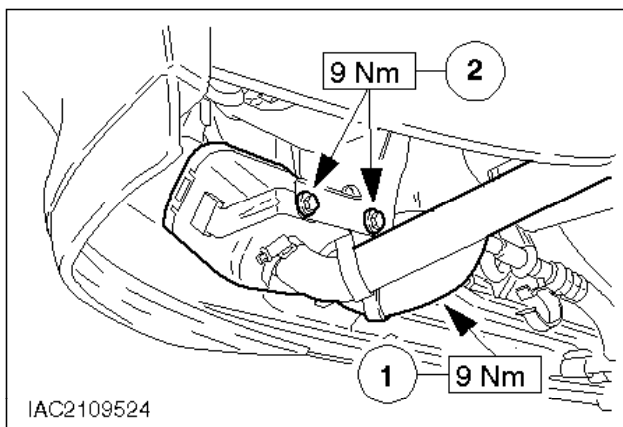
88. Fit the air conditioning compressor.

- 1 Screw in the bolts.
- 2 Connect the plug of the air conditioning clutch.



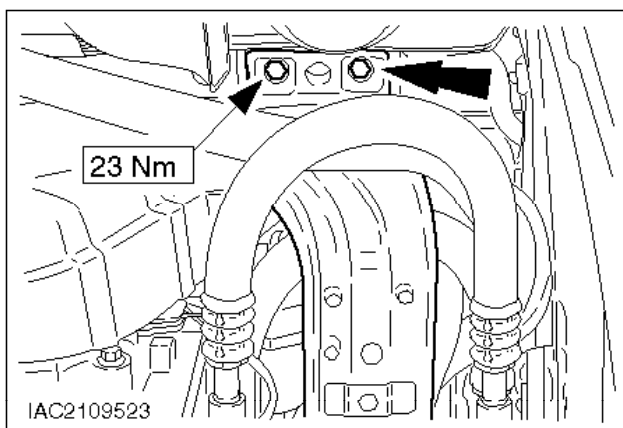
89. Attach the left-hand radiator crossmember.

- 1 Attach the radiator crossmember to the side member.
- 2 Attach the bracket for the pulse air system and the air conditioning dehydrator.

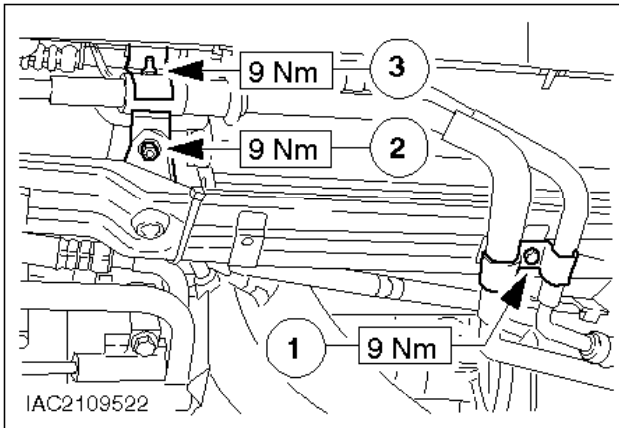


90. Attach the left-hand radiator crossmember (cont.).

- 1 Screw on the nut on the air conditioning condenser.
- 2 Attach the air cleaner of the pulse air system.



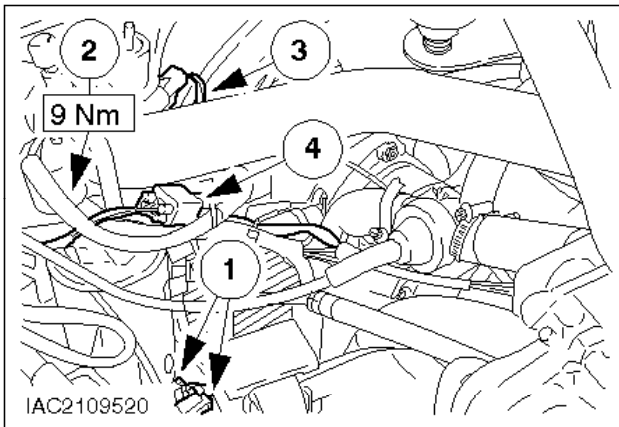
91. Install the right-hand radiator crossmember.



**Only vehicles with air conditioning.**

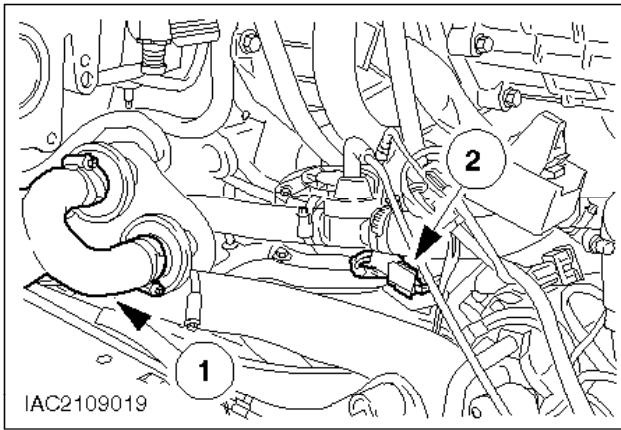
92. Attach the air conditioning pipes.

- 1 To the radiator crossmember.
- 2 Attach the bracket for the line to the radiator crossmember.
- 3 To the bracket.
- Lower the vehicle.
- Untie the radiator and condenser from the lock panel.



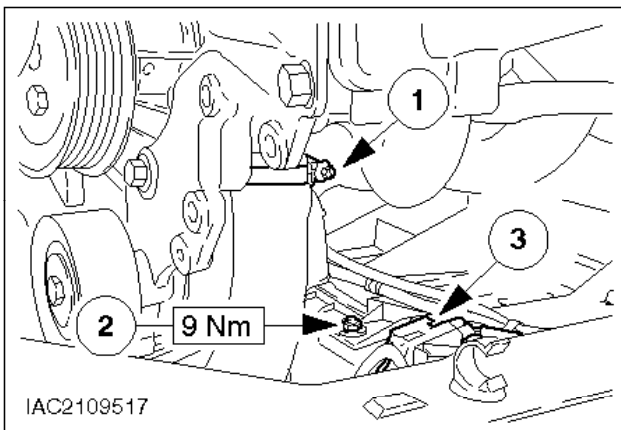
93. Attach the cooling fan shroud.

- 1 Connect the plug and attach it to the radiator.
- 2 Screw on the nut on the cooling fan shroud.
- 3 Connect the plug at the top of the radiator.
- 4 Connect the plug of the cooling fan motor.



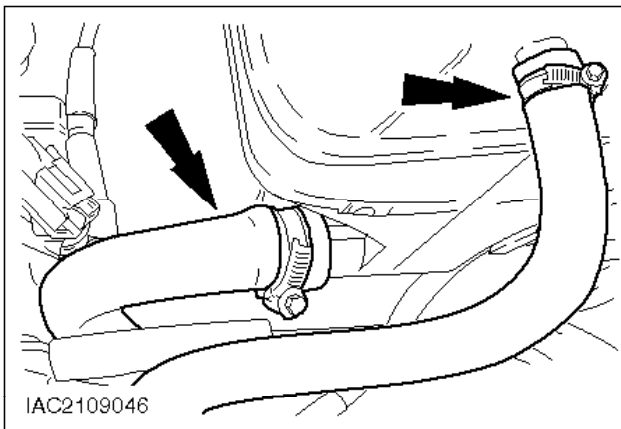
94. Attach the cooling fan shroud (continued).

- 1 Connect the air hose of the pulse air system.  
Attach the air hose of the pulse air system to the cooling fan shroud.
- 2 Connect the plug of the cooling fan resistor.



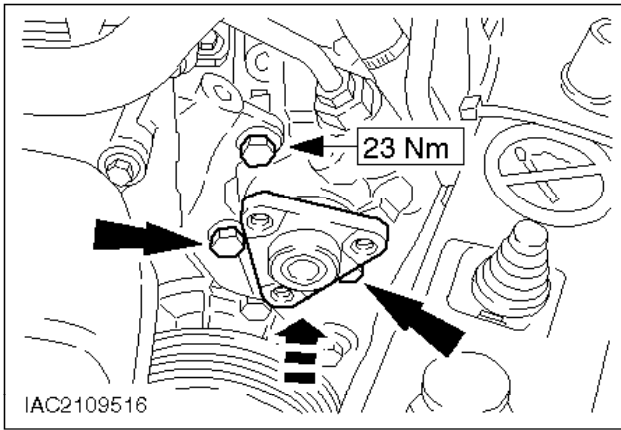
95. Attach the cooling fan shroud (continued).

- 1 Connect the coolant hose.
- 2 Screw on the nut of the cooling fan shroud.
- 3 Connect the plug to the HO2S and attach it to the radiator.



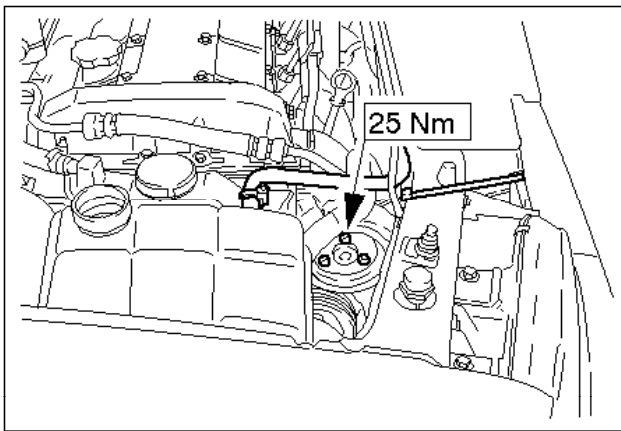
96. Attach the coolant hoses to the coolant expansion tank.





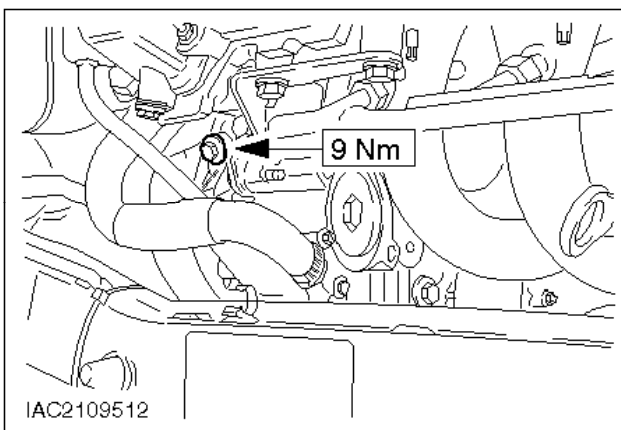
**Only vehicles with air conditioning.**

- 97. Install the power steering pump.



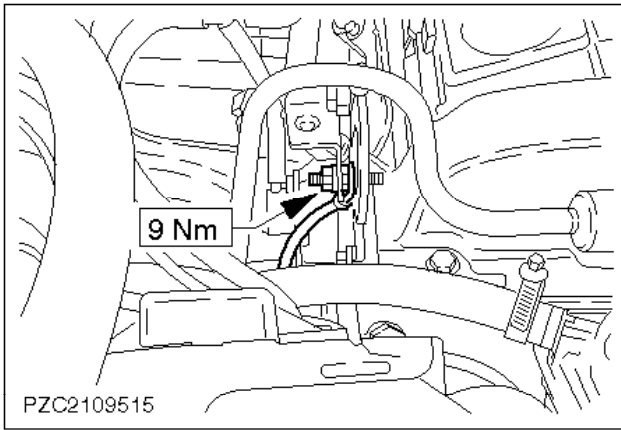
**Only vehicles with air conditioning.**

- 98. Fit the belt pulley with the cover and the multi-groove belt to the power steering pump.



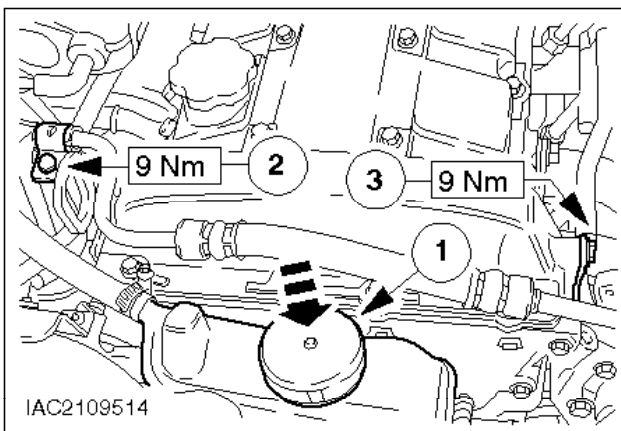
**Only vehicles with air conditioning.**

- 99. Attach the belt pulley cover to the power steering pump.



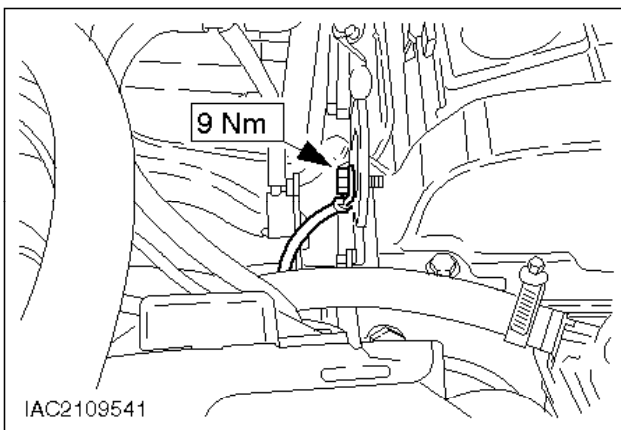
**Only vehicles with air conditioning.**

- 100. Attach the bracket for the power steering pipe.

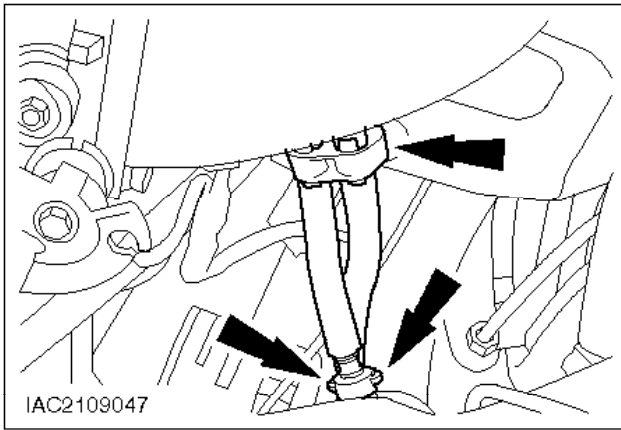


**Only vehicles with air conditioning.**

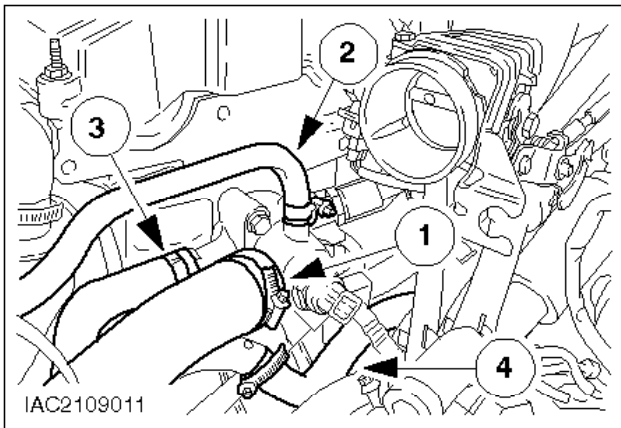
- 101. Attach the power steering pipe.
  - 1 Slide the power steering reservoir onto the coolant expansion tank.
  - 2 Attach the power steering pipe to the bracket of the engine lifting eye.
  - 3 Attach the power steering pipe to the cylinder head cover.



- 102. Attach the ground cable to the engine lifting eye.

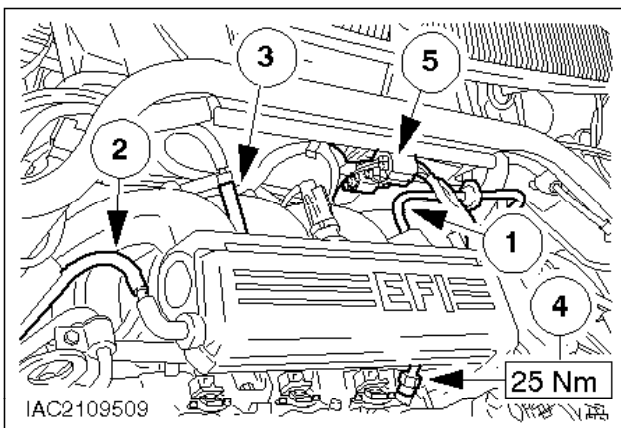


- ☛ 103. Connect the fuel return pipe and fit the fuel pipes in the bracket.



- ☛ 104. Connect the coolant hoses at the thermostat housing.

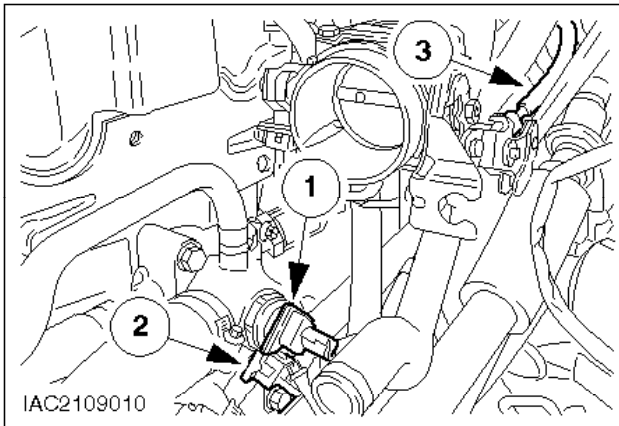
- 1 To the radiator.
- 2 To the vent.
- 3 To the heater.
- 4 To the coolant pipe.



- ☛ 105. Connect the plug of the engine wiring loom, attach the fuel pipe and the vacuum hoses.

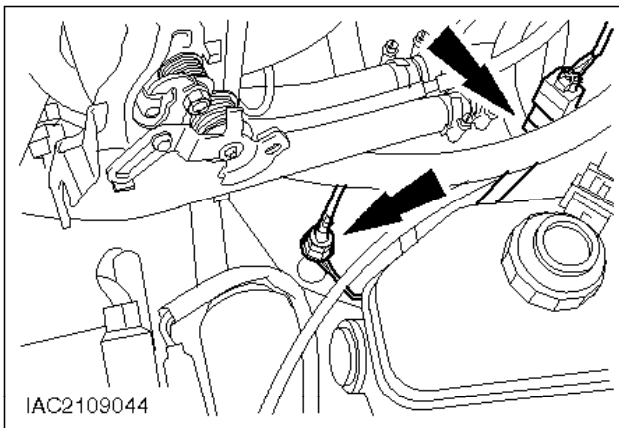
- 1 Connect the vacuum pipe of the brake servo.
- 2 Connect the vacuum hose to the MAP sensor.
- 3 Connect the vacuum hose of the pulse air system.
- 4 Connect the fuel feed pipe.

5 Connect the plugs of the engine wiring loom and attach them to the body.



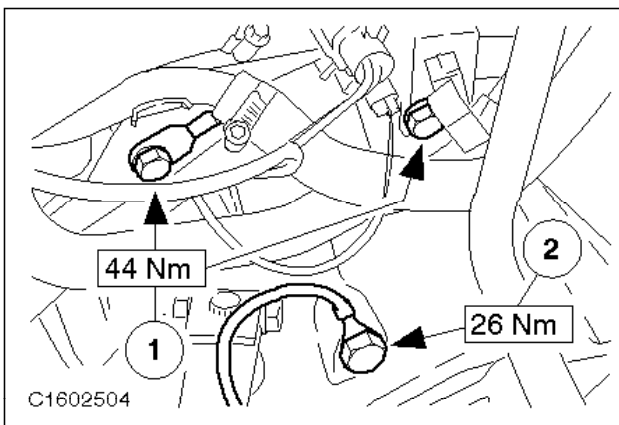
106. Connect the plugs and the vacuum hose.

- 1 Connect the CTS plug.
- 2 Connect the ECT sensor plug.
- 3 Connect the vacuum hose to the throttle body.



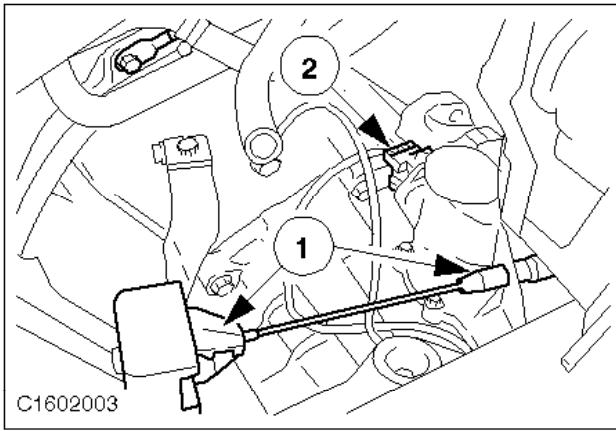
107. Fit the speedometer drive cable.

Connect the VSS plug.



108. Attach the ground cable and the bracket.

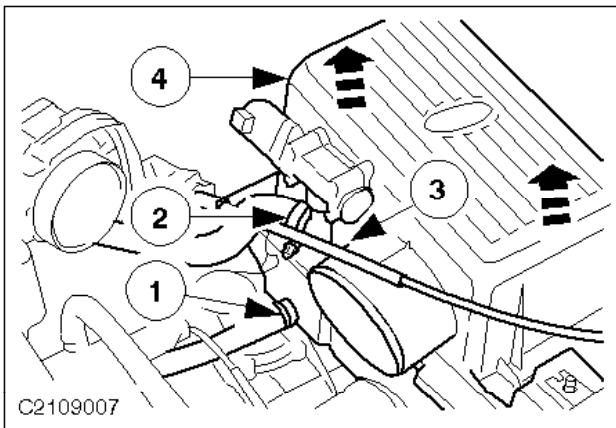
- 1 Attach the ground cable and bracket to the transmission.
- 2 Connect the transmission ground cable.



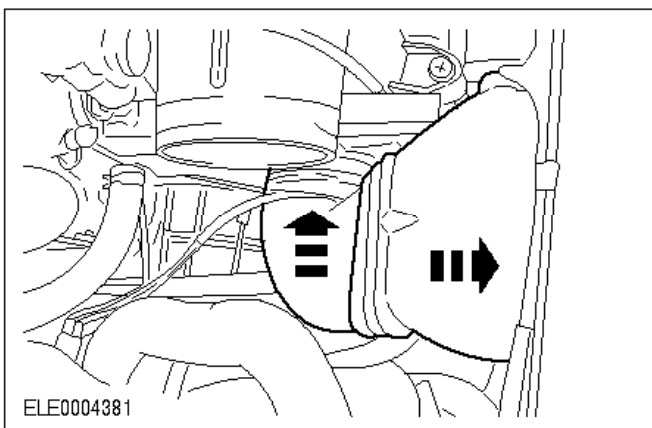
**Note:**

If the cable cannot be pulled out, pull back the clutch pedal.

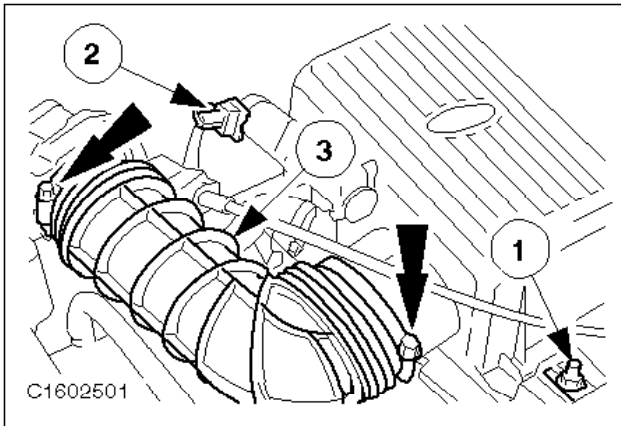
- 109. Hook the clutch cable in place and connect the plug.
  - 1 Hook the clutch cable onto the clutch release lever and guide it into the transmission mounting.
  - 2 Connect the plug to the reversing light switch.



- 110. Install the air cleaner.
  - 1 Insert the air cleaner.
  - 2 Connect the throttle cable.
  - 3 Connect the air hose to the IAC valve.
  - 4 Connect the PCV hose.



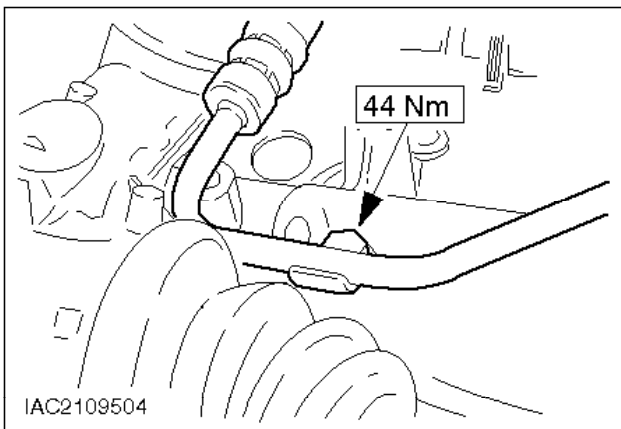
- ⌚ 111. Attach the intake pipe to the lock panel.



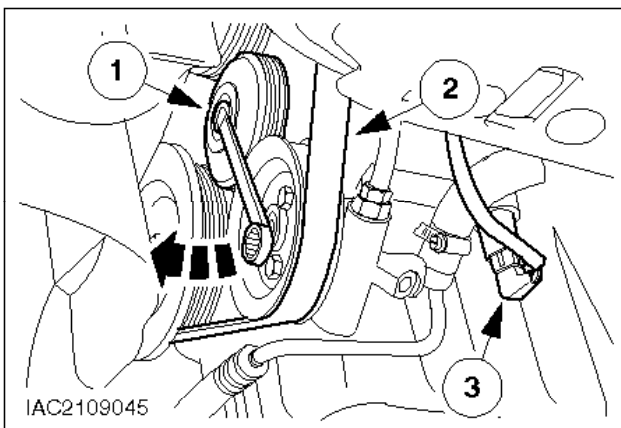
- ⌚ 112. Install the air cleaner (continued).

- 1 Screw on the nut.
- 2 Connect the plug to the IAC valve.
- 3 Fit the intake hose.

113. Lower the vehicle.



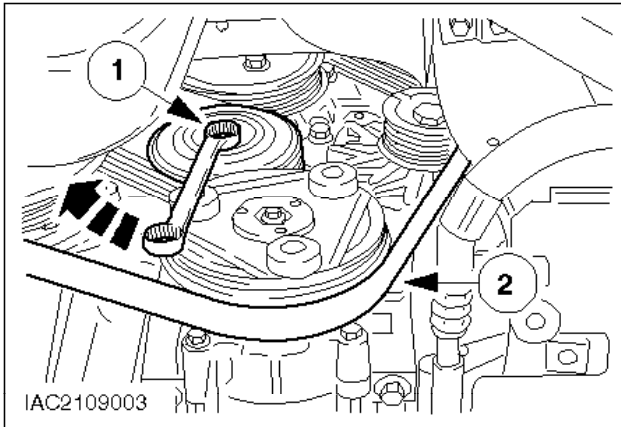
- ⌚ 114. Attach the power steering pipe to the cylinder block.



### Vehicles without air conditioning only

- ⌚ 115. Install the multi-groove belt.

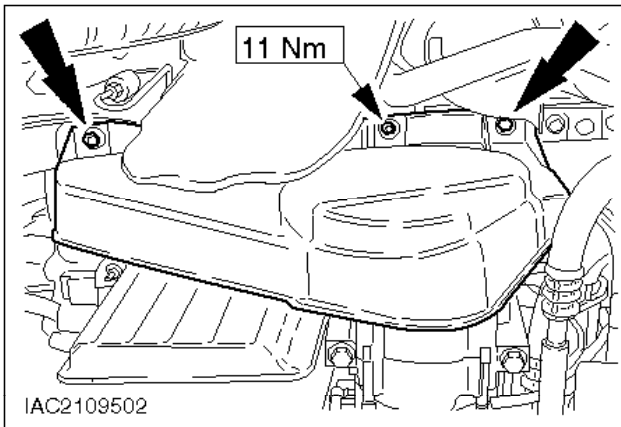
- 1 Tension the idler pulley (clockwise).
- 2 Lay the multi-groove belt over the belt pulleys
- 3 Connect the plug of the PSP switch.



**Only vehicles with air conditioning.**

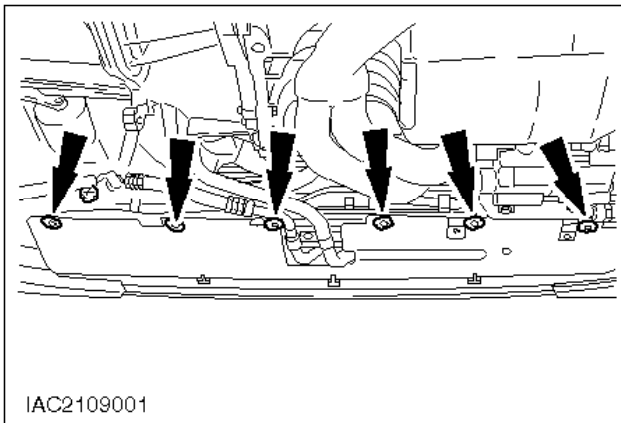
- Ⓒ 116. Install the multi-groove belt.

- 1 Tension the idler pulley (clockwise).
- 2 Lay the multi-groove belt over the belt pulleys.



**Only vehicles with air conditioning.**

- Ⓒ 117. Attach the multi-groove belt cover.

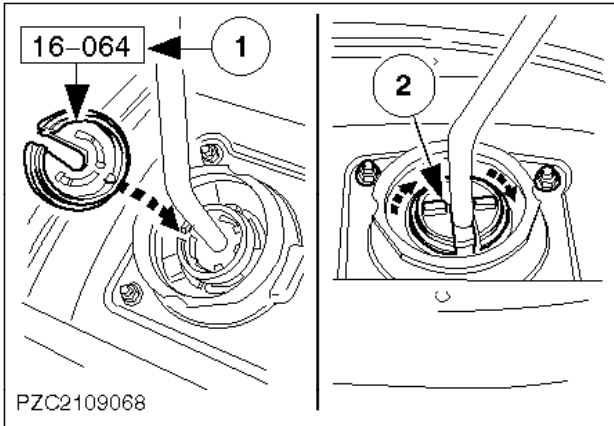


**Only vehicles with air conditioning.**

**Note:**

The rivets in the radiator cover can be replaced with suitable self-tapping screws.

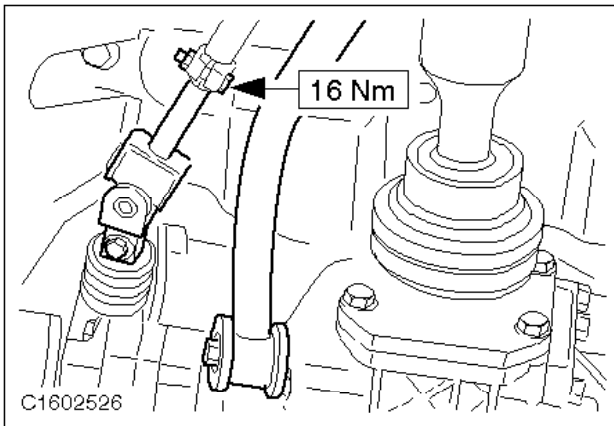
- ④ 118. Attach the radiator cover.



**Adjust**

- ④ 119. Adjust the gearshift mechanism.

- Pull off the gaiter and rubber bellows.
- 1 Fit the alignment tool.
- 2 Twist the upper part of the tool as far as the stop.
- Raise the vehicle.
- Tighten the shift rod clamp bolt in accordance with the next step.
- Lower the vehicle.
- Remove the timing tool.
- Pull on the gaiter and rubber bellows.

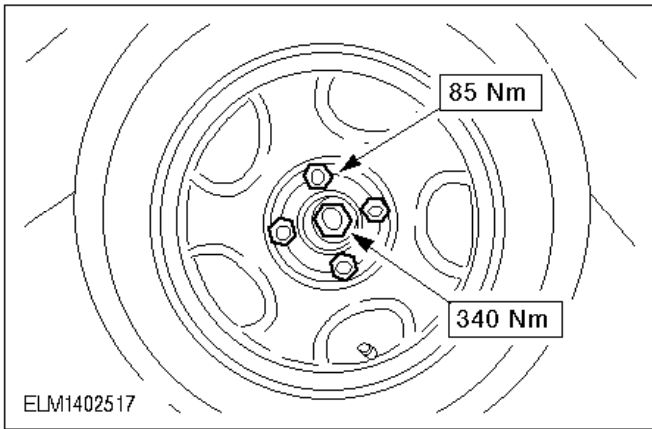


**Note:**

The shift rod must not move or turn while the bolt is being tightened.

- ④ 120. Tighten the shift rod clamp bolt.





**Only vehicles with 4-wheel drive.**

- Ⓒ 121. Tighten the bolts on the front wheels.

Note:

After tightening the hub nut, secure it by staking.

- 1 Tighten the right-hand driveshaft hub nut.
- 2 Tighten the bolts on the front wheels.

122. Standard finishing operations.

- Top up with coolant (ESD-M97B-49A).
  - Connect the battery negative lead.
  - Close the coolant expansion tank.
  - Check the fluid levels and rectify as necessary.
  - Check the routing of vacuum hoses and wiring and secure with cable ties.
  - Remove the protective coverings.
  - Enter the radio keycode.
  - Reprogram the radio stations.
  - Adjust the clock.
  - Carry out a road test to enable the PCM to collect data.
  - Check the coolant level again and correct as necessary.
-