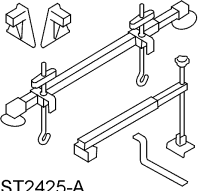
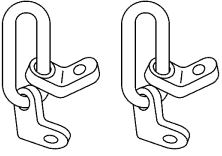
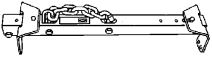
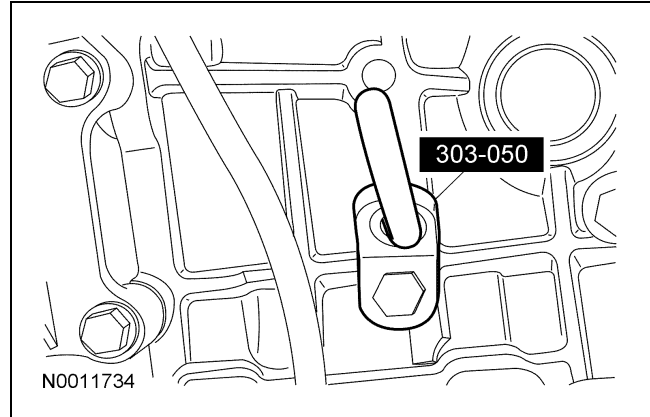



## INSTALLATION

### Engine

#### Special Tool(s)

 <p>ST2425-A</p>	<p>3-Bar Engine Support Kit 303-F072</p>
 <p>ST1595-A</p>	<p>Lifting Brackets, Engine 303-050 (T70P-6000)</p>
 <p>ST1377-A</p>	<p>Modular Engine Lift Bracket 303-F047 (014-00073) or equivalent</p>



-  **CAUTION:** Do not remove the engine crane until the special tool (3-bar support) is installed in the next step. The rear of the engine must be supported to prevent damage to the engine or cowl panel.

Using a suitable engine crane, position the engine in the vehicle.

#### Material

Item	Specification
<p>Motorcraft SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP (in Canada Motorcraft SAE 5W-20 Super Premium Motor Oil CXO-5W20-LSP12) or equivalent</p>	<p>WSS-M2C930-A</p>

#### All vehicles

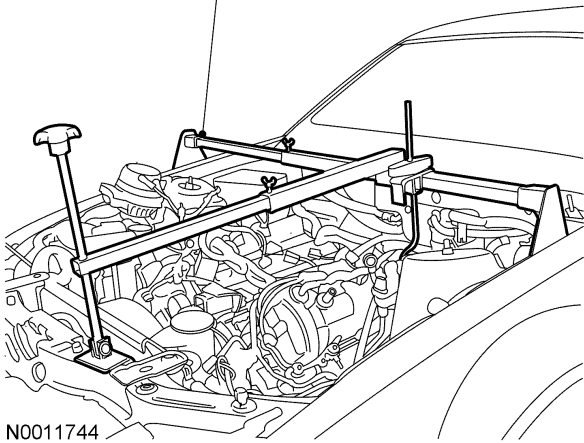
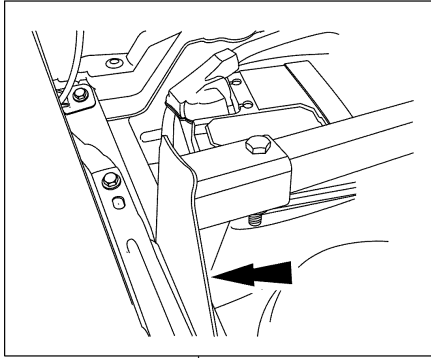
- Install the special tool to the threaded hole located at the LH side of the engine block.

**INSTALLATION (Continued)**

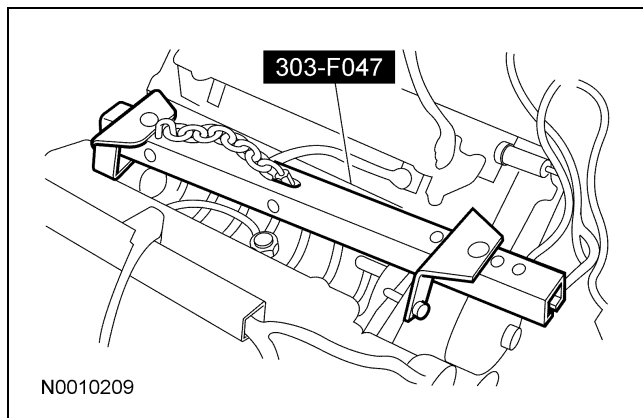
3. **⚠ CAUTION:** Do not position the legs of the special tool (3-bar support) on the fenders. Instead, the legs should be positioned on the body structure near the suspension strut tower.

Install the 3-bar support and a suitable length of chain to the engine lifting bracket installed in the previous step.

- Remove the engine crane.



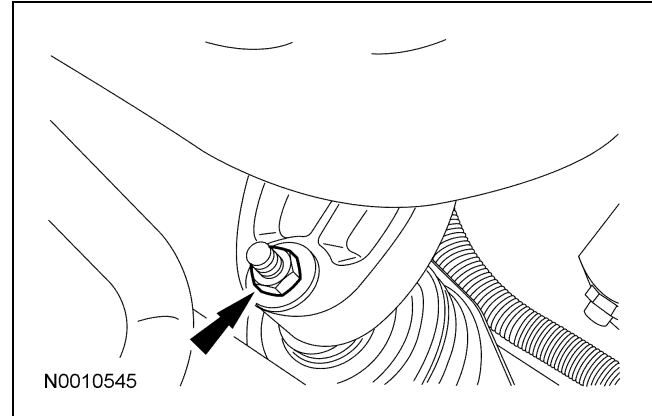
4. Remove the special tool.



5. **NOTE:** RH shown, LH similar.

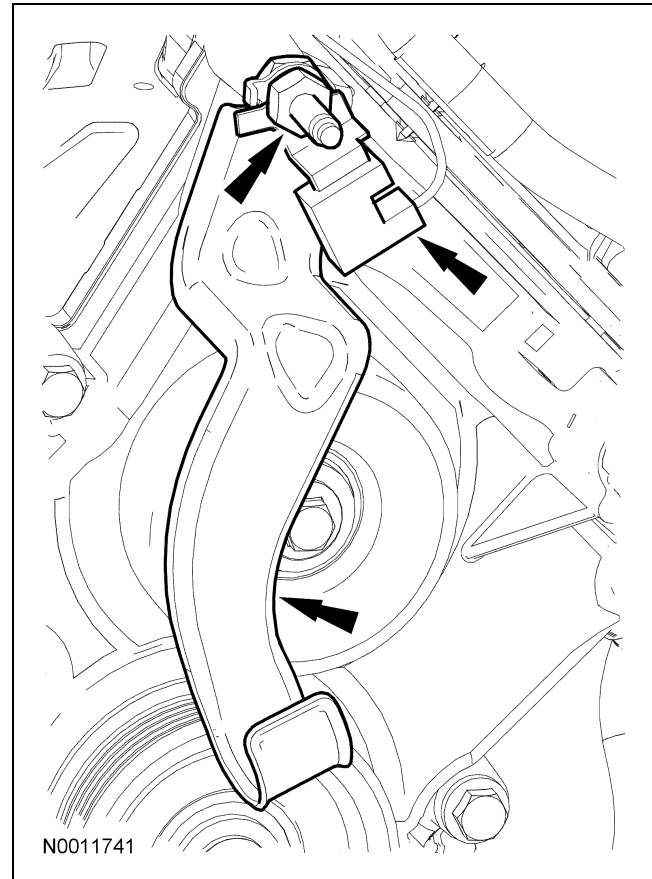
Install the RH and LH engine support insulator nuts.

- Tighten to 63 Nm (46 lb-ft).



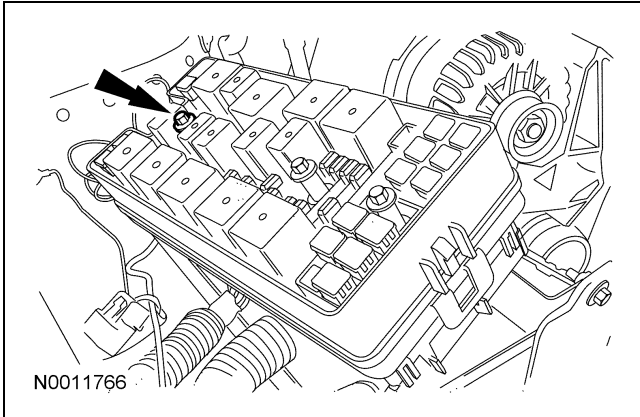
6. Install the J-bracket, radio interference capacitor and nut onto the engine front cover stud bolt.

- Tighten to 25 Nm (18 lb-ft).

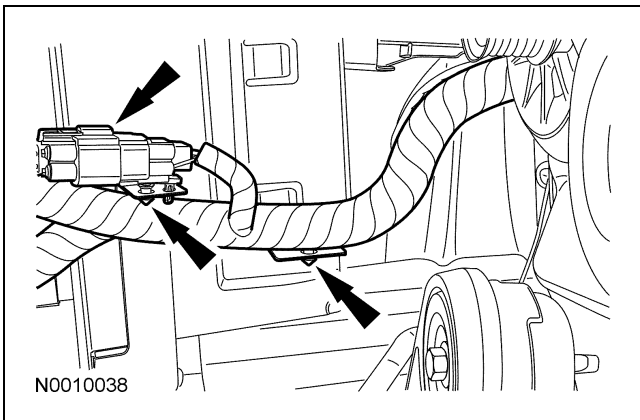


**INSTALLATION (Continued)**

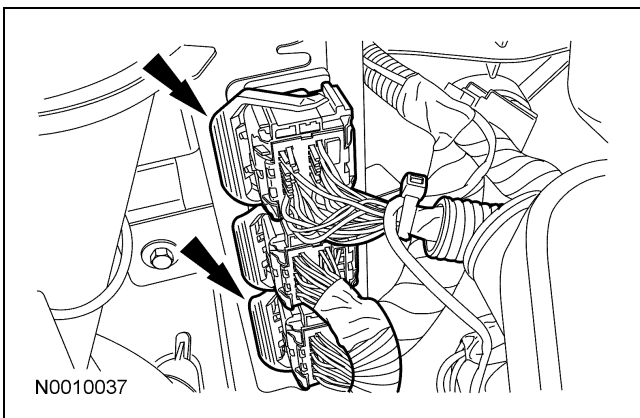
7. Connect the 68-pin connector to the power distribution box and tighten the bolt.
  - Tighten to 6 Nm (53 lb-in).
  - Attach the power distribution box upper housing to the lower housing.



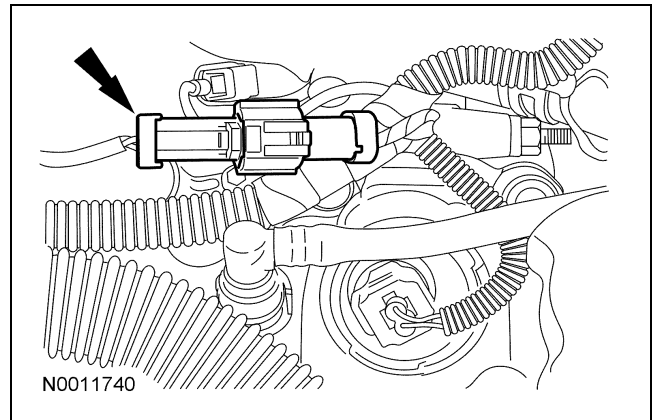
8. Install the power distribution box cover.
9. Connect the 16-pin electrical connector and attach the 2 wiring retainers.



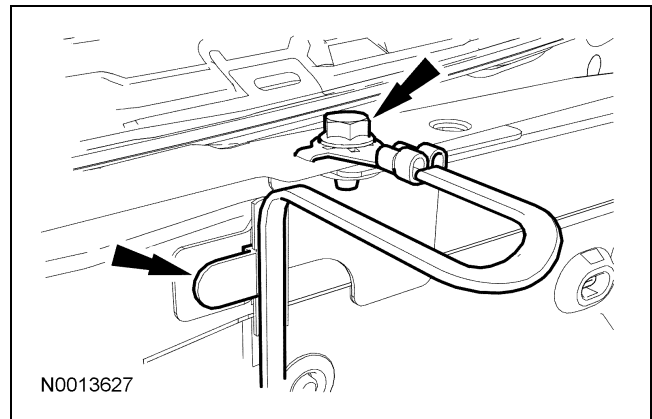
10. Connect the upper and lower powertrain control module (PCM) electrical connectors.



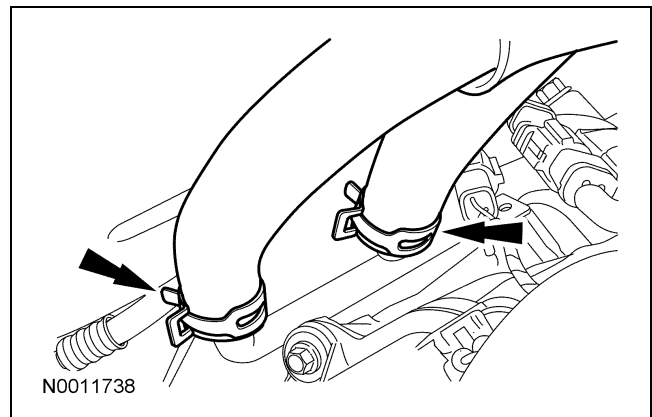
11. Connect the generator jumper harness electrical connector.



12. Install the ground strap and bolt to the cowl.
  - Tighten to 6 Nm (53 lb-in).
  - Attach the pin-type retainer.

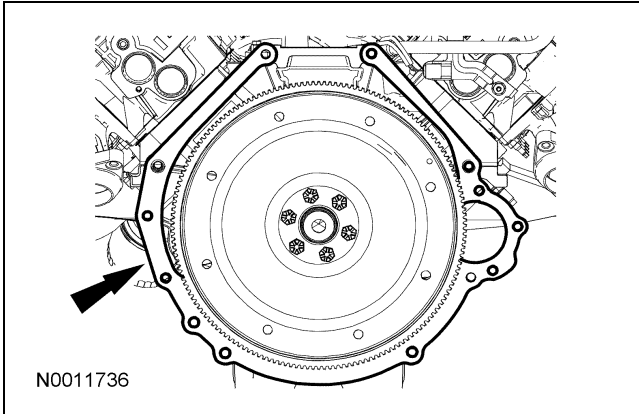


13. Connect the heater hoses.



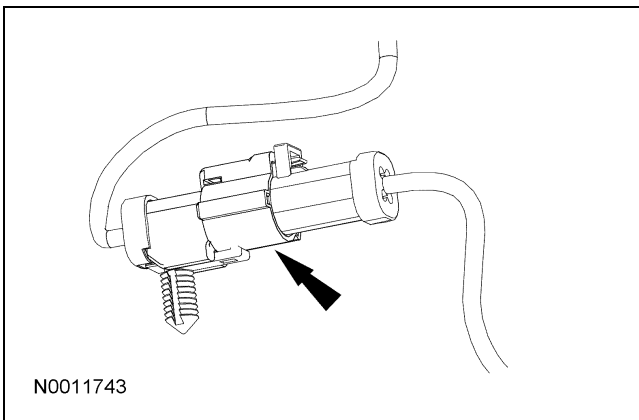
**INSTALLATION (Continued)**

14. Install the engine-to-transmission spacer plate.

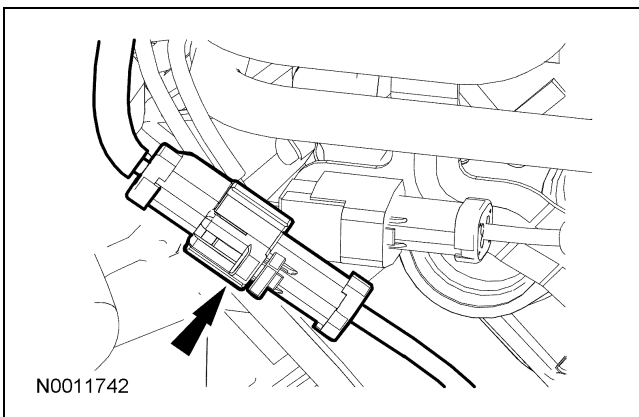


15. **NOTE:** RH shown, LH similar.

Connect the RH and LH catalyst monitor sensor (CMS).



16. Connect the RH heated oxygen sensor (HO2S) electrical connector.

**Vehicles with manual transmission**

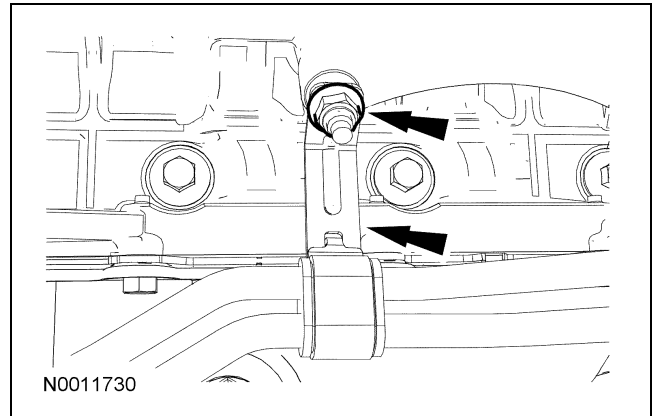
17. Install the clutch. For additional information, refer to Section 308-01.

**Vehicles with automatic transmission**

18. Install the transmission. For additional information, refer to Section 307-01.

19. Install the transmission cooler tube bracket and nut.

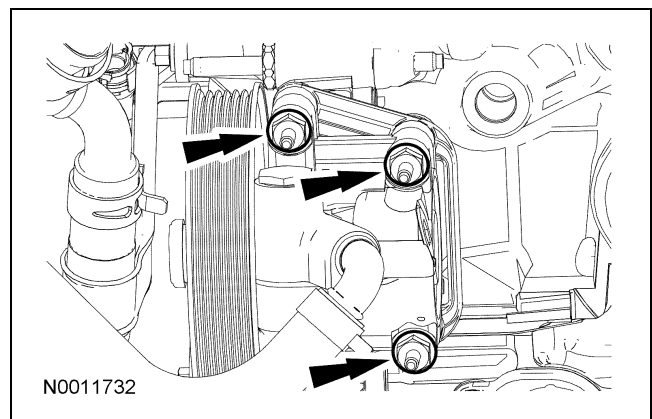
- Tighten to 25 Nm (18 lb-ft).

**All vehicles**

20. Remove the 3-bar support, chain and lifting eye from the engine.

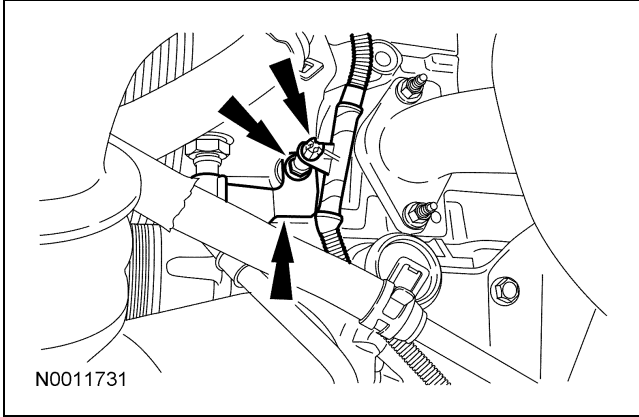
21. Position the power steering pump and install the 3 stud bolts.

- Tighten to 25 Nm (18 lb-ft).

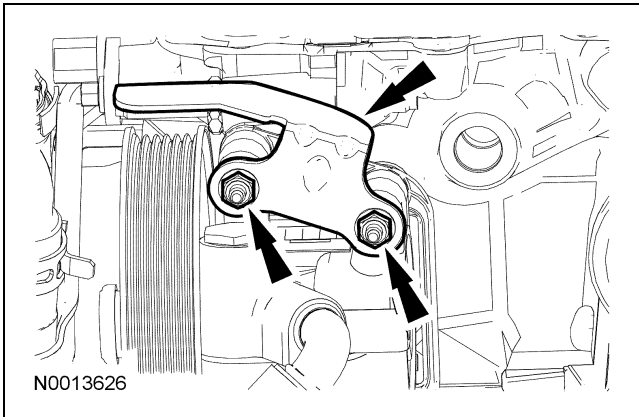


**INSTALLATION (Continued)**

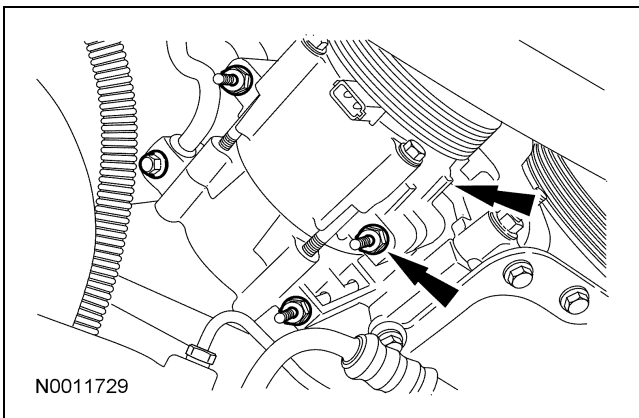
22. Install the power steering tube retaining clip and nut to the power steering stud bolt.
- Tighten to 10 Nm (89 lb-in).
  - Install the wiring retainer.



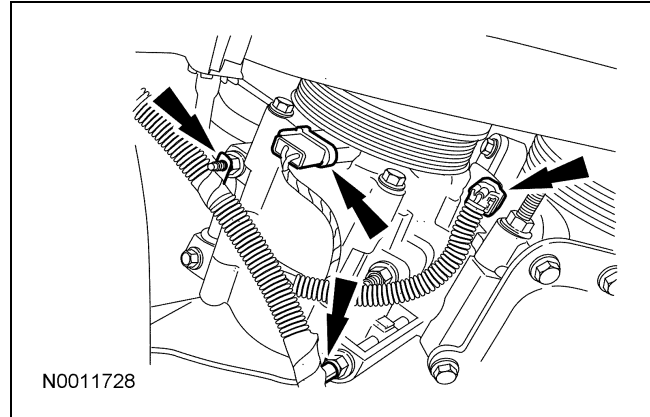
23. Install the power steering pulley shield and 2 nuts.
- Tighten to 10 Nm (89 lb-in).



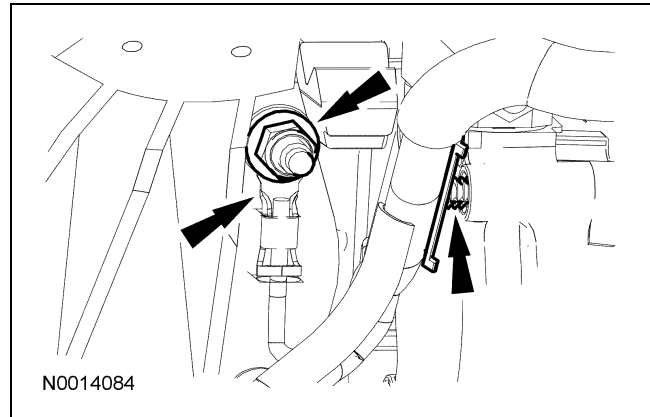
24. Position the A/C compressor, bolt and install the 3 nuts.
- Tighten to 25 Nm (18 lb-ft).



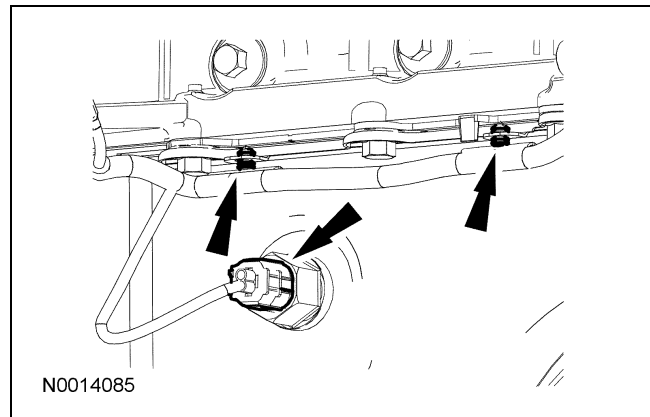
25. Connect the A/C clutch and crankshaft position (CKP) sensor electrical connectors.
- Attach the wiring harness retainers.



26. Install the ground wire onto the stud bolt.
- Tighten to 25 Nm (18 lb-ft).
  - Attach the pin-type retainer from the A/C compressor.



27. Connect the oil temperature sensor electrical connector and 2 pin-type retainers.

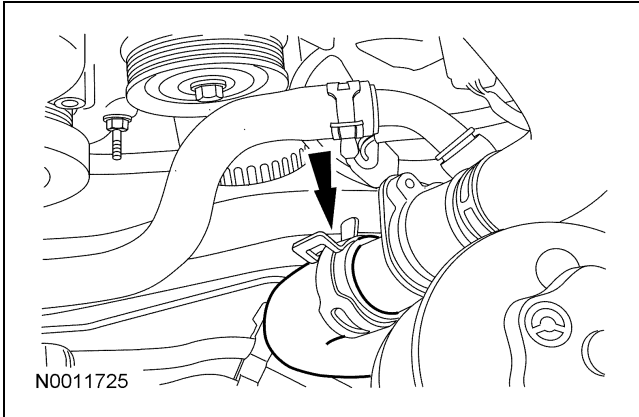


**INSTALLATION (Continued)**

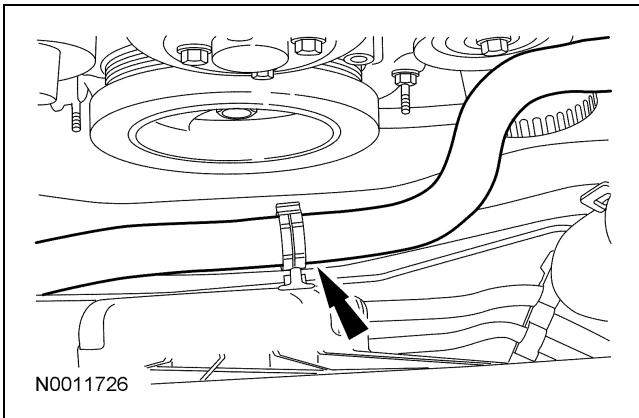
28. **NOTE:** Make sure the coolant hose is fully seated in the J-bracket.

Install the thermostat housing and coolant hoses as an assembly.

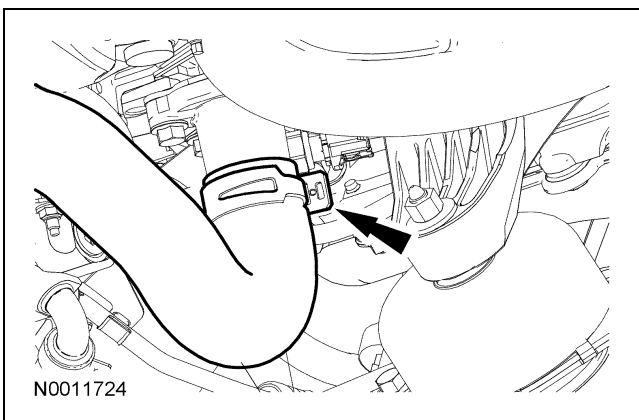
- Connect the lower radiator hose to the thermostat housing.



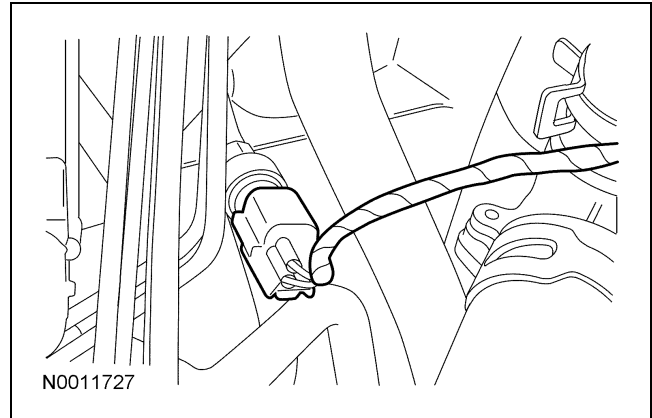
29. Attach the degas bottle hose to the cooling fan assembly.



30. Connect the coolant hose to the oil filter adapter.

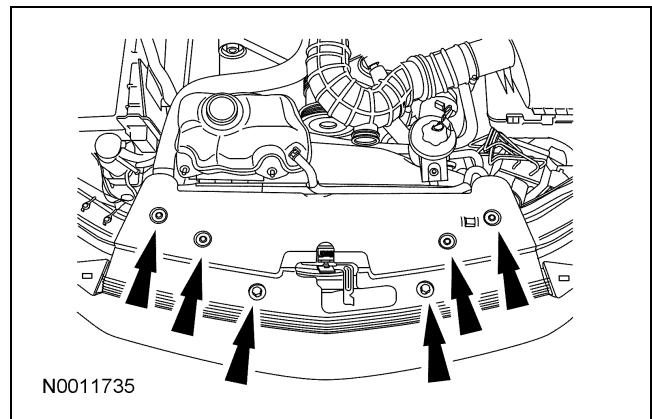


31. Connect the A/C pressure transducer electrical connector.



32. Install the accessory drive belt. For additional information, refer to Section 303-05.

33. Install the radiator sight shield and the 6 pin-type retainers.



34. Install the engine coolant crossover. For additional information, refer to Section 303-03.

35. Install the degas bottle. For additional information, refer to Section 303-03.

36. Install the air cleaner and outlet pipe. For additional information, refer to Section 303-12.

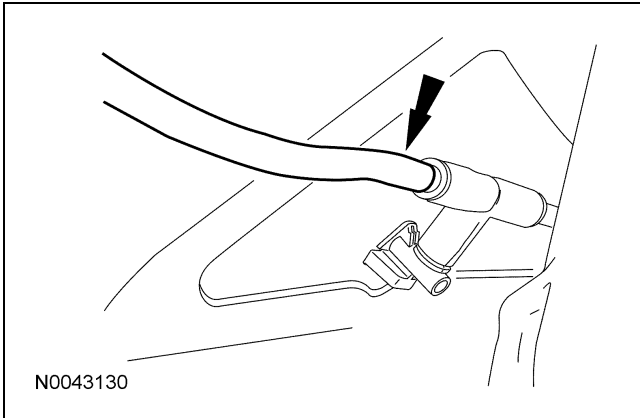
37. Install the cowl vent screen. For additional information, refer to Section 501-02.

38. **NOTE:** Use the hood hinge location index marks made during removal to aid in hood installation.

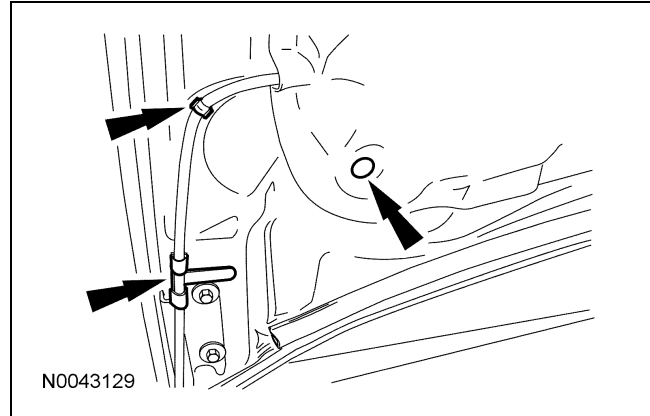
Install the hood and 4 bolts.

**INSTALLATION (Continued)**

39. Connect the windshield washer hose and position the hood insulation.



40. Install the hood insulation pin-type retainer and attach the 2 windshield washer hose retainers.



41. Fill the engine with clean engine oil.
42. Connect the battery ground cable. For additional information, refer to Section 414-01.