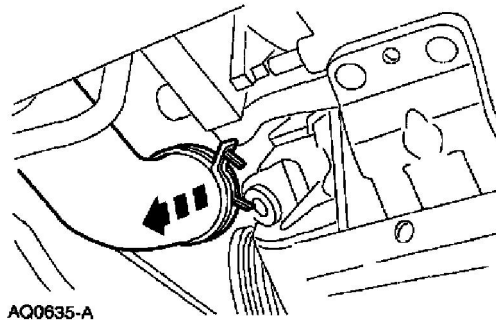


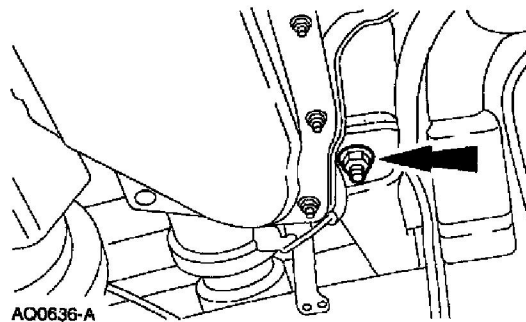
Water Pump: Service and Repair

Removal

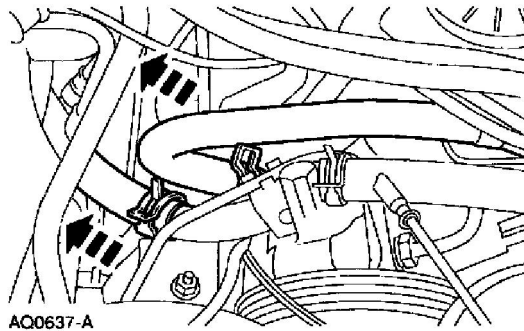
1. Disconnect the battery ground cable.
2. Drain the cooling system.
3. Remove the accessory drive belt.
4. Raise and support the vehicle.



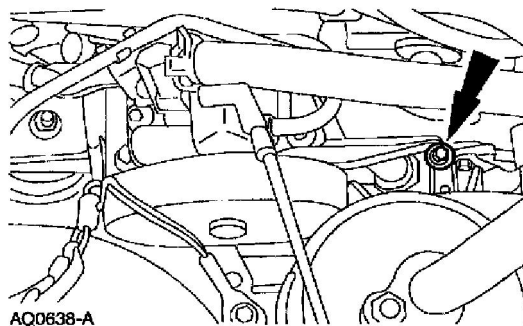
5. Disconnect lower radiator hose from the water pump lower tube.



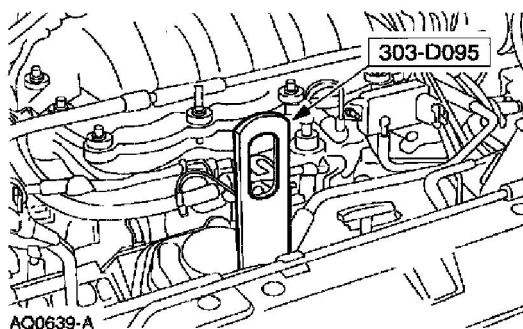
6. Remove the engine mount nuts.
^ Lower the vehicle.
7. Remove the cowl extension panel.



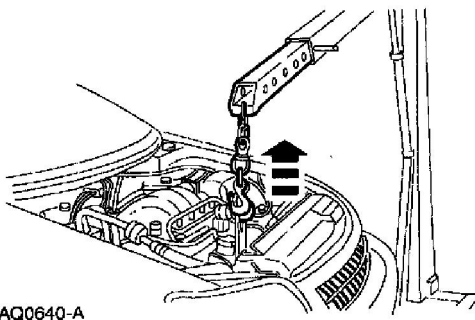
8. Disconnect the water bypass hose and the heater hose from the water pump outlet tube.



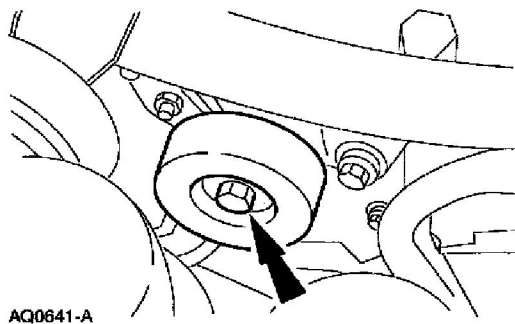
9. Remove the water pump outlet tube bolt and position the tube assembly out of the way.



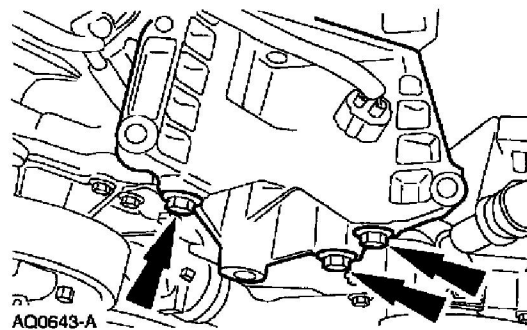
10. Install the lifting eye to the exhaust manifold.



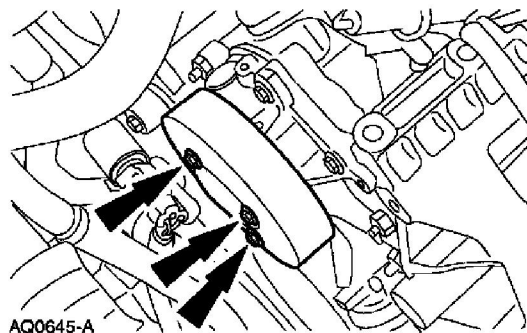
11. Attach engine lifting equipment and raise the engine **127 mm (5 inches)**.



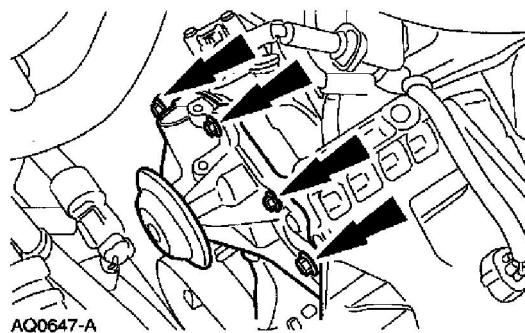
12. Remove the bolt and the accessory belt idler pulley.



13. Remove the bolts and the generator support bracket.

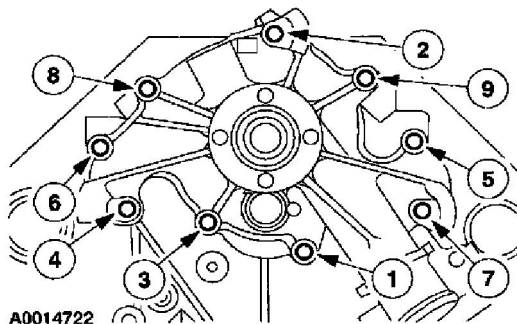


14. Remove the four bolts and the water pump pulley.

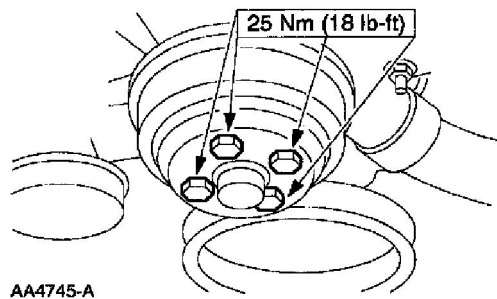


15. Remove the four nuts, four bolts, water pump, lower tube and gasket.

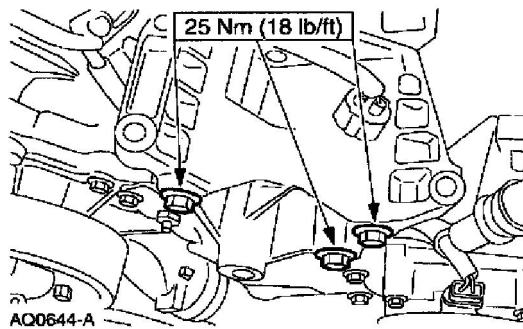
Installation



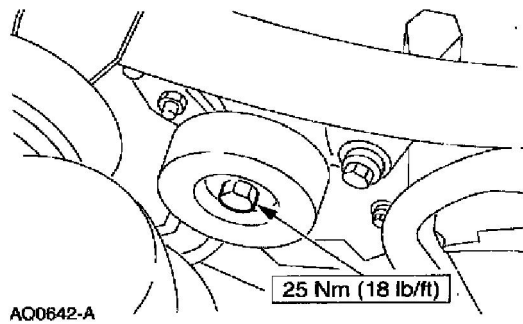
1. Install the water pump with a new gasket.
- ^ Tighten the bolts in two stages.
 - ^ Stage 1: Tighten to **22 Nm (16 ft. lbs.)**.
 - ^ Stage 2: Tighten **90 degrees**.



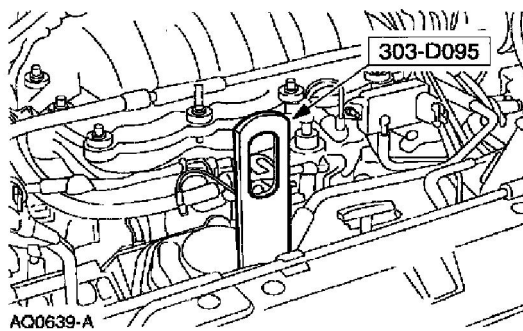
2. Install the water pump pulley.



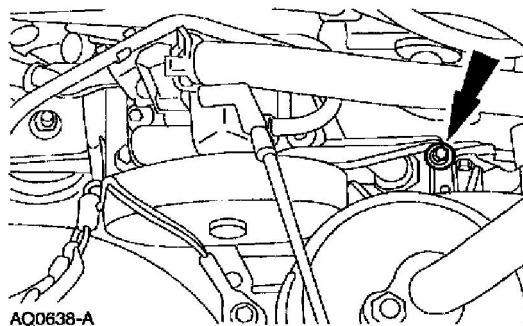
3. Install the generator support bracket.



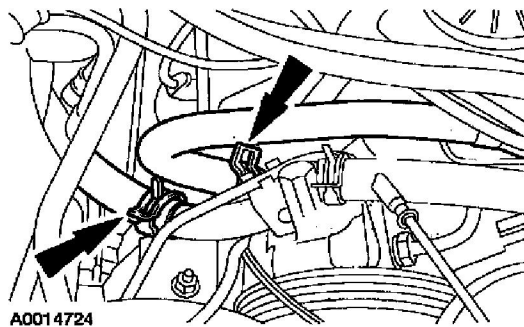
4. Install the idler pulley.



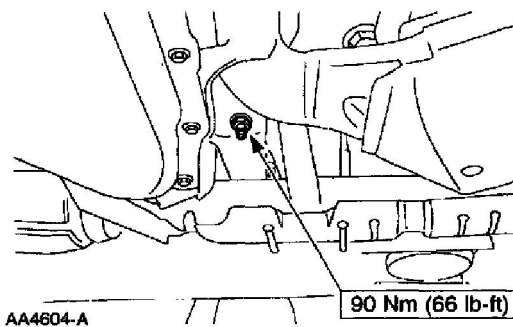
5. Remove the special tools.



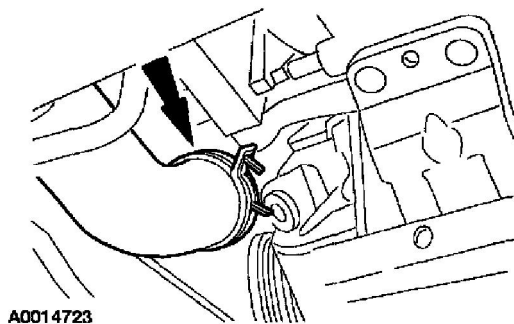
6. Position the water pump outlet tube and install the bolt.



7. Connect the water bypass and heater hose.
8. Raise and support the vehicle.



9. Install the engine mount nuts.



10. Connect the lower radiator hose.
11. Lower the vehicle.
12. Install the accessory drive belt.
13. Fill the engine cooling system.