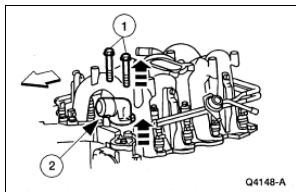
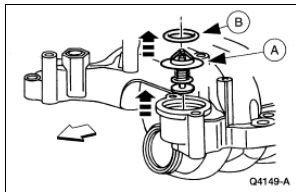


Thermostat 4.6L and 5.4L**Removal**

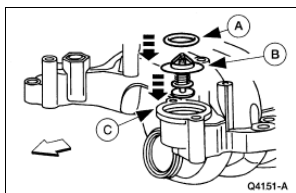
1. Partially drain the cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding in this section.
2. Disconnect the upper radiator hose.
3. Remove the water outlet connection.
 1. Remove the bolts.
 2. Remove the water outlet connection.



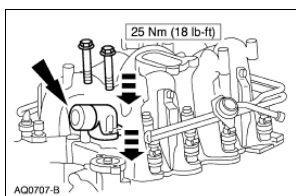
4. Remove the (A) water thermostat (8575) and the (B) O-ring seal.
 - Discard the (B) O-ring seal.

**Installation**

1. Use a new (A) O-ring seal to position the (B) water thermostat in the (C) upper intake manifold (9424).



2. Install the water outlet connection and the bolts.



3. Connect the upper radiator hose.

4. Fill the cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding in this section.
-

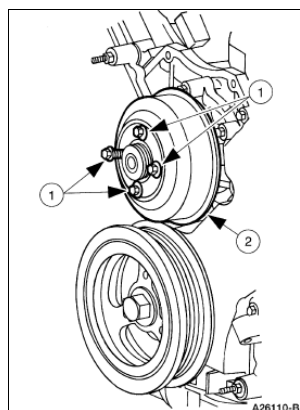
Water Pump

Material

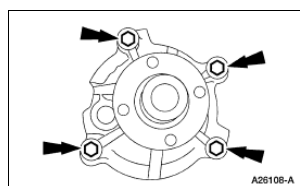
Item	Specification
Motorcraft Premium Engine Coolant VC-4-A (in Oregon VC-5, in Canada CXC-10)	ESE-M97B44-A
Motorcraft Premium Gold Engine Coolant VC-7-A	WSS-M97B51-A1

Removal

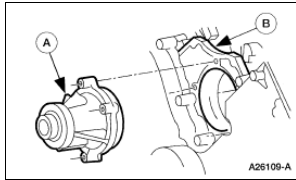
1. Remove the engine cooling fan (8K620) and fan shroud (8146). For additional information, refer to Cooling Fan Blade, Clutch and Shroud in this section.
2. Remove the drive belt (8620). For additional information, refer to Section 303-05 .
3. Remove the water pump pulley (8509).
 1. Remove the bolts.
 2. Remove the water pump pulley.



4. On the 4.2L engine only, remove the upper radiator hose (8260) from the water pump (8501).
5. Remove the water pump bolts.



6. Remove the (A) water pump from the (B) cylinder block (6010).
 - Clean and inspect the mating surfaces.

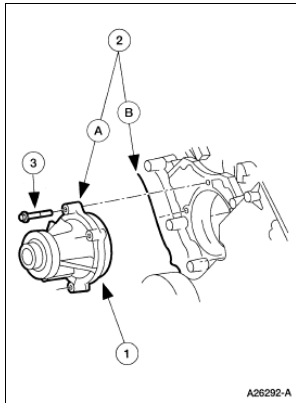


Installation

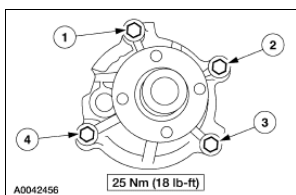
1. **⚠ CAUTION:** Some vehicle cooling systems are filled with Motorcraft Premium Engine Coolant VC-4-A (in Oregon VC-5, in Canada CXC-10) or equivalent meeting Ford specification ESE-M97B44-A (green color). Others are filled with Motorcraft Premium Gold Engine Coolant VC-7-A or equivalent meeting Ford specification WSS-M97B51-A1 (yellow color). Always fill the cooling system with the same coolant that is present in the system. Do not mix coolant types.

Install the water pump.

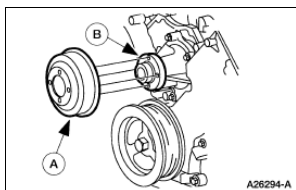
1. Lubricate with engine coolant and install the O-ring seal.
2. Position the (A) water pump on the (B) engine.
3. Loosely install the bolts.



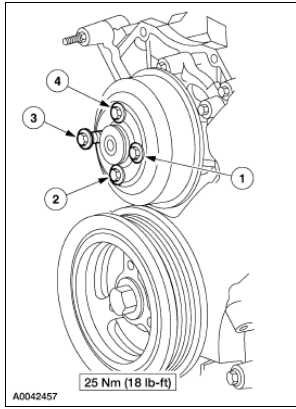
2. Tighten the bolts in the sequence shown.



3. Position the (A) water pump pulley on the (B) water pump and loosely install the bolts.



4. Tighten the bolts in the sequence shown.



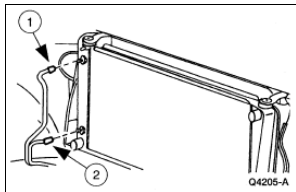
5. On the 4.2L engine only, install the upper radiator hose on the water pump.
 6. Install the drive belt. For additional information, refer to [Section 303-05](#) .
 7. Install the engine cooling fan and fan shroud. For additional information, refer to [Cooling Fan Blade, Clutch and Shroud](#) in this section.
-

Radiator**Removal**

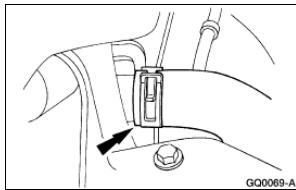
1. Remove the fan. For additional information, refer to Cooling Fan Blade, Clutch and Shroud in this section.
2. **NOTE:** To avoid disturbing the transmission oil cooler fittings, use a backup wrench.

On automatic transmission equipped vehicles, disconnect the transmission fluid cooler fitting.

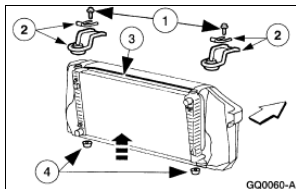
1. Disconnect the upper transmission fluid cooler fitting.
2. Disconnect the lower transmission fluid cooler fitting.



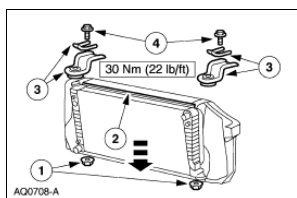
3. Disconnect the lower radiator hose from the radiator (8005).



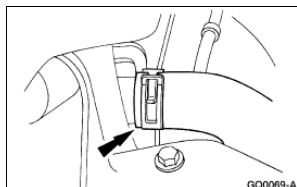
4. Remove the radiator.
 1. Remove the upper radiator support bracket bolts.
 2. Remove the upper radiator support brackets and the jack handle and wheel nut wrench retainers.
 3. Lift the radiator off the radiator mounting insulators (8124).
 4. Remove the radiator mounting insulators.

**Installation**

1. Install the radiator.
 1. Install the radiator mounting insulators.
 2. Position the radiator on the radiator mounting insulators.
 3. Position the upper radiator support brackets and the jack handle retainers.
 4. Install the bolts.



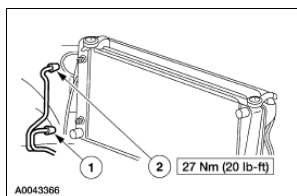
2. Connect the lower radiator hose to the radiator.



3. **NOTE:** To avoid disturbing the transmission oil cooler fittings, use a backup wrench.

On automatic transmission equipped vehicles, connect the transmission fluid cooler lines.

1. Connect the lower transmission fluid cooler line.
2. Connect the upper transmission fluid cooler line.





4. Install the fan blade assembly. For additional information, refer to Cooling Fan Blade, Clutch and Shroud in this section.

5. Refill the engine cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding in this section.

Cooling Fan Blade, Clutch and Shroud

Special Tool(s)

 ST1499-A	Holding Wrench, Fan Pulley 303-239 (T84T-6312-C)
 ST1500-A	Wrench, Fan Clutch Hub Nut 303-240 (T84T-6312-D)

Removal and Installation**All vehicles**

⚠ WARNING: Do not run the engine while the protective components are removed. Failure to follow these instructions may result in personal injury.

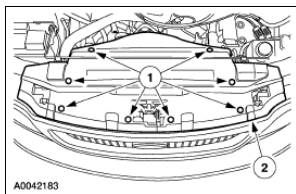
1. Drain the cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding in this section.
2. Remove the air cleaner outlet pipe. For additional information, refer to Section 303-12 .

Supercharged vehicles

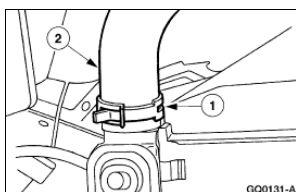
3. Remove the supercharger degas bottle. For additional information, refer to Section 303-03B .

All vehicles

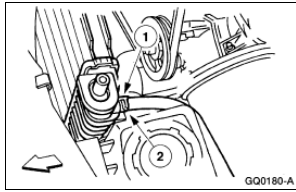
4. Remove the front air deflector (19E525).
 1. Remove the pin-type retainers.
 2. Remove the front air deflector.



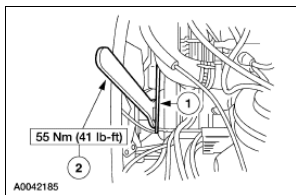
5. Remove the upper hose from the radiator.
 1. Release the clamp.
 2. Disconnect the hose.



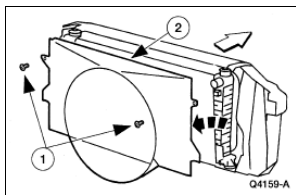
6. Remove the degas bottle hose from the radiator (8005).
 1. Release the hose clamp and slide it away from the end of the hose.
 2. Slide the overflow hose off the radiator fitting.



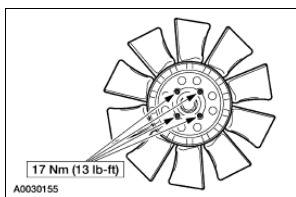
7. Remove the fan blade assembly and fan clutch (8A616).
 1. Use the fan pulley holding wrench to hold the water pump pulley steady.
 2. Use the fan clutch nut wrench to remove the fan blade (8600) and the fan clutch.



8. Remove the fan shroud (8146).
 1. Remove the screws.
 2. Lift and remove the fan shroud.
 - If equipped, disconnect the harness retaining pin-type retainer from the LH side of fan shroud.



9. Remove the fan blade and fan shroud out of the vehicle together.
10. Remove the bolts and separate the fan blade assembly from the fan clutch.



11. To install, reverse the removal procedure.

