

Fan Shroud: Service and Repair

Cooling Fan - 4.6L, 5.4L and 6.8L

Special Tool(s)	
<p>ST1499-A</p>	Holding Wrench, Fan Clutch Pulley (4.6L, 5.4L) 303-239 (T84T-6312-C)
<p>ST1500-A</p>	Wrench, Fan Clutch Hub Nut (4.6L, 5.4L) 303-240 (T84T-6312-D)
<p>ST2542-A</p>	Holding Wrench, Fan Clutch Pulley (6.8L) 303-478 (94T-6312-AH)
<p>ST2042-A</p>	Wrench, Fan Clutch Hub Nut (6.8L) 303-214 (T83T-6312-B)

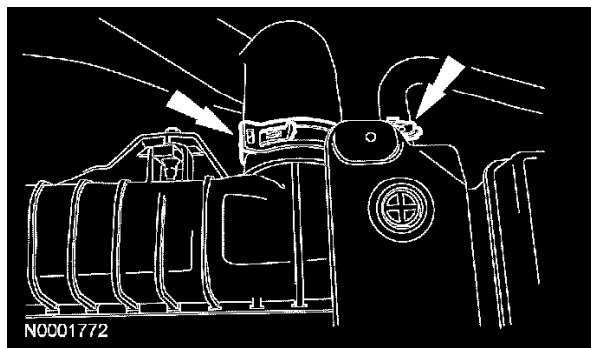
Special Tool(s)

Removal

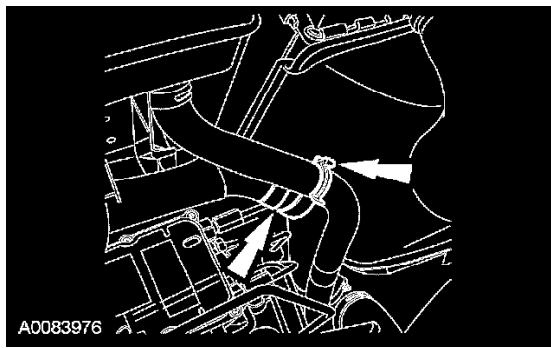
All vehicles

NOTE: The fan, fan clutch and shroud must be removed and installed together due to insufficient clearance to remove them separately.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to Maintenance/Service and Repair.
2. Drain the engine cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding.
3. Remove the air cleaner assembly. For additional information, refer to Fuel Delivery and Air Induction.

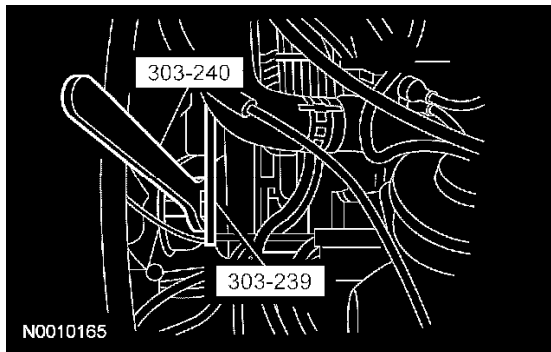


4. Disconnect and position the radiator upper hose and the overflow hose from the radiator aside.



5. **CAUTION:** The coolant hose must be mounted in the lower hole and power steering hose in the upper hole or damage to the hoses can occur.

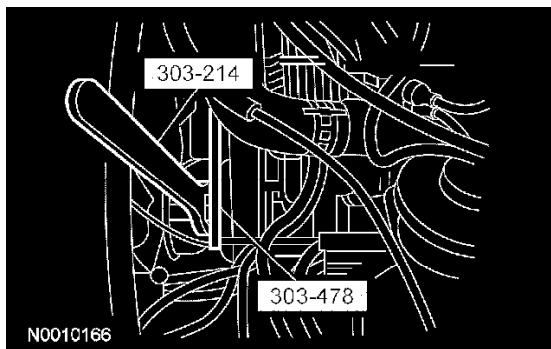
Disconnect the coolant degas bottle and power steering hose from the shroud.



Vehicles with 4.6L, 5.4L engine

6. **CAUTION:** The clutch assembly nut has a right-hand thread and must be rotated **counterclockwise** to remove it.

Using the special tools, loosen the fan clutch.



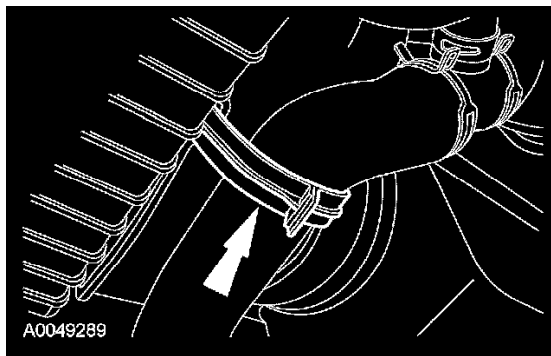
Vehicles with 6.8L engine

7. **CAUTION:** The clutch assembly nut has a right-hand thread and must be rotated **counterclockwise** to remove it.

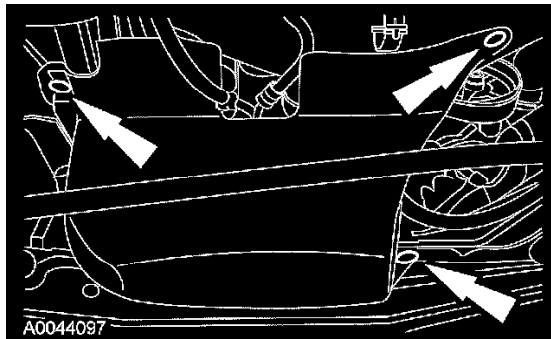
Using the special tools, loosen the fan clutch.

All vehicles

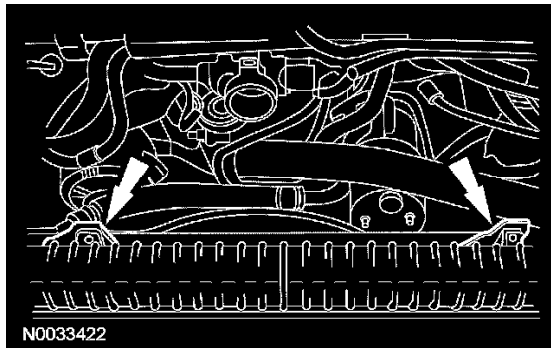
8. Carefully rotate the fan and fan clutch assembly **counterclockwise** until the assembly is free from the coolant pump. Place the fan and fan clutch into the shroud opening.



9. Disconnect the lower radiator hose retaining clamp from the shroud.



10. If equipped, disconnect the underbody splash shield from the shroud.



11. **CAUTION:** Use extreme care when removing or installing the fan, fan clutch and shroud. Failure to do so will cause damage to the radiator.

Remove the mounting bolts and the fan, fan clutch and shroud.

12. If servicing the fan blade assembly or clutch, remove the 4 bolts and separate the cooling fan from the clutch.

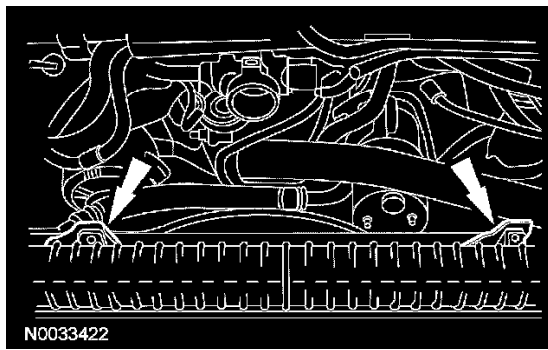
Installation

All vehicles

1. If servicing the fan blade assembly or clutch, position the cooling fan onto the clutch and install the 4 bolts.
^ Tighten to **20 Nm (15 ft. lbs.)**.

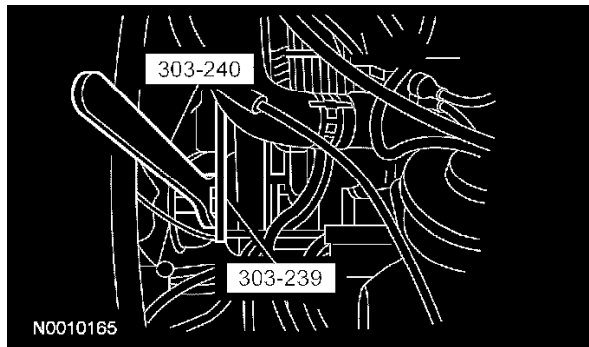
2. **CAUTION:** Use extreme care when installing the fan, fan clutch and shroud. Failure to do so will cause damage to the radiator.

Carefully position the cooling fan, fan clutch and shroud into the vehicle as an assembly.



3. Install the 2 fan shroud bolts.
^ Tighten to **6 Nm (53 inch lbs.)**.

Vehicles with 4.6L, 5.4L engine

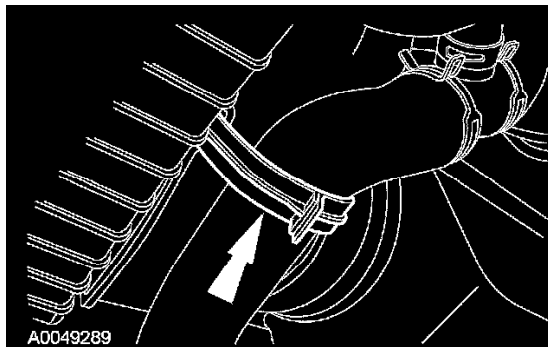


4. Using the special tools, install the fan clutch.
^ Tighten to **55 Nm (41 ft. lbs.)**.



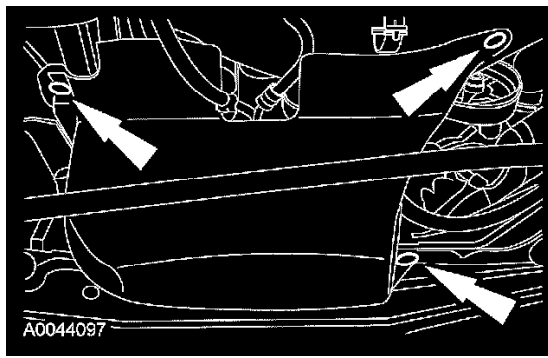
Vehicles with 6.8L engine

5. Using the special tools, install the fan clutch.
^ Tighten to **133 Nm (98 ft. lbs.)**.

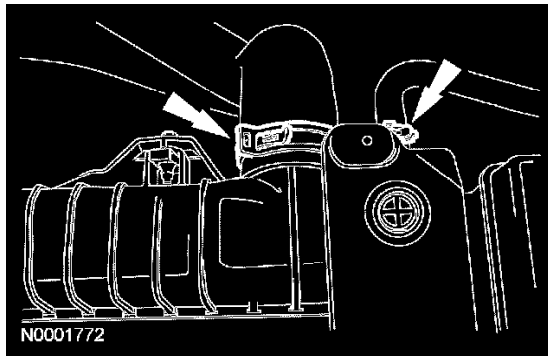


All vehicles

6. Connect the lower radiator hose retaining clamp to the shroud.

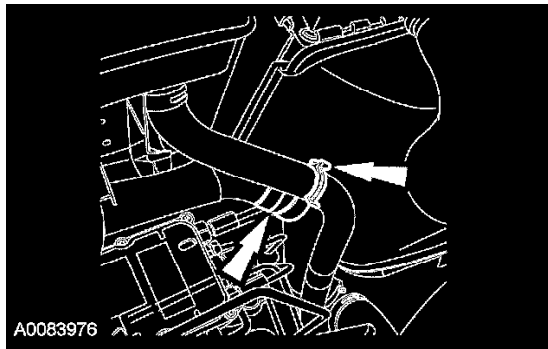


7. If equipped, connect the underbody splash shield to the shroud.



8. **NOTE:** If necessary, install new appropriately sized worm drive-type clamps.

Connect the radiator upper hose and the overflow hose to the radiator.



9. **CAUTION:** The coolant hose must be mounted in the lower hole and power steering hose in the upper hole or damage to the hoses can occur.

Connect the coolant degas bottle and power steering hose to the shroud.

10. Install the air cleaner assembly. For additional information, refer to Fuel Delivery and Air Induction.
11. Fill and bleed the engine cooling system. For additional information, refer to Cooling System Draining, Filling and Bleeding.