

Engine Fan

Ford Ranger/Explorer/Mountaineer 1991-1999

REMOVAL&INSTALLATION

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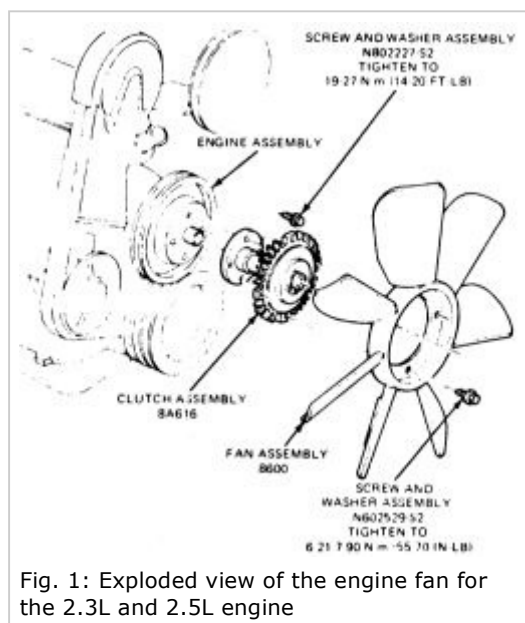
Refer to exploded view illustration before starting this service procedure.

WARNING

The following procedures for removing the fan clutch gives the factory recommended loosening and tightening directions for the fan hub nut. However, it has been our experience that certain aftermarket parts manufacturers have changed this to enable use of universal fit parts. We recommend trying the factory direction first, then, if the nut doesn't seem to be moving, reverse the direction. Placing too much load on the water pump snout will break it.

2.3L and 2.5L Engines

See Figure 1



The 2.3L and 2.5L engine does not use a fan hub nut. It is retained by four bolts which also secure the pump pulley to the water pump.

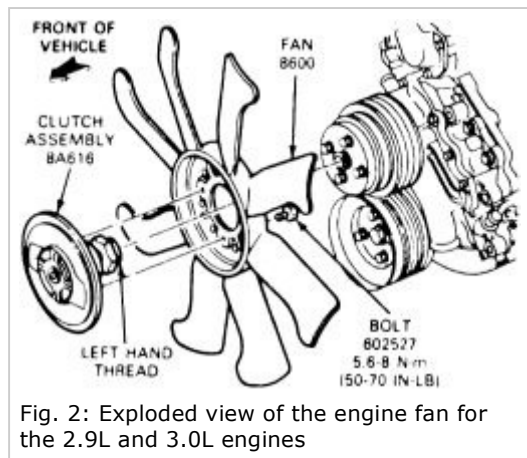
1. If not equipped with A/C, disconnect the overflow tube from the fan guard, then unbolt and remove the guard.
2. If equipped with A/C, disconnect the overflow tube from the shroud, remove the mounting screws and lift the shroud off the brackets. Place the shroud behind the fan.
3. Remove the 4 clutch/fan assembly to pulley screws and remove the

clutch/fan assembly. Vehicles equipped with A/C should remove the clutch/fan and shroud together.

4. If necessary, remove the fan-to-clutch bolts to separate the fan from the clutch.
5. Installation is the reverse of removal. Torque the fan-to-clutch screws to 55-70 inch lbs. (6-8 Nm); the fan/clutch assembly-to-pulley bolts to 12-18 ft. lbs. (16-24 Nm).

2.9L and 3.0L Engines

See Figure 2



1. If necessary, remove the air cleaner outlet tube.
2. Using Strap Wrench D79L-6731-A and Fan Clutch Nut Wrench T83T-6312-B, or their equivalents, loosen the large nut attaching the clutch to the water pump hub.

According to the manufacturer, the nut uses LH threads and is loosened clockwise.

3. Remove the two upper fan shroud retaining bolts. If the overflow hose is routed through the fan shroud, remove it from the shroud.
4. Lift up on the fan shroud to disengage the lower mounting clips.
5. Remove the fan/clutch assembly and the fan shroud together.
6. If necessary, remove the fan-to-clutch bolts to separate the fan from the clutch.

To install:

7. Installation is the reverse of removal. Torque the fan-to-clutch bolts to 55-70 inch lbs. (6-8 Nm); the hub nut to 30-100 ft. lbs. (41-135 Nm) for 1991-95 models and 34-46 ft. lbs. (46-63 Nm) for 1996-99 models. Don't forget, the nut uses LH threads and is tightened counterclockwise.

4.0L Engine (VIN X)

See Figure 3 through 7



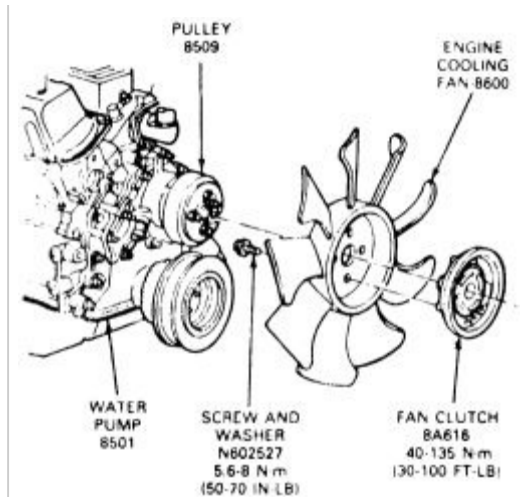


Fig. 3: Exploded view of the engine fan for the 4.0L engine



Fig. 4: Before attempting to unfasten the engine fan, check the fan shroud for indications of normal or reverse threads



Fig. 5: Remove the air intake tube. You will need these specialized tools to unfasten the fan clutch nut

1. If necessary, remove the air cleaner outlet tube.

According to the manufacturer, the nut uses RH threads and is loosened counterclockwise.

2. Using Fan Clutch Pulley Holder T84T-6312-C and Fan Clutch Nut Wrench T84T-6312-D, or their equivalents, loosen the large nut attaching the clutch to the water pump hub.



Fig. 6: Using the special tools, loosen the fan clutch nut in the direction indicated on the shroud.

Some models have enough room between the shroud and the engine to remove the fan without unbolting the shroud.

3. Remove the two upper fan shroud retaining bolts. If the overflow hose is routed through the fan shroud, remove it from the shroud.
4. Lift up on the fan shroud to disengage the lower mounting clips.



Fig. 7: Remove the fan and clutch assembly from the vehicle

5. Remove the fan/clutch assembly and the fan shroud together.
6. If necessary, remove the fan-to-clutch bolts to separate the fan from the clutch.

To install:

7. Installation is the reverse of removal. Torque the fan-to-clutch bolts to 55-70 inch lbs. (6-8 Nm); the hub nut to 30-100 ft. lbs. (41-135 Nm) for 1991-95 models and 34-46 ft. lbs. (46-63 Nm) for 1996-99 models. Don't forget, the nut uses RH threads and is tightened clockwise.

4.0L SOHC (VIN E) and 5.0L Engines

1. If necessary, remove the air cleaner outlet tube.
2. Using Fan Clutch Pulley Holder T84T-6312-C and Fan Clutch Nut Wrench T84T-6312-D for the 4.0L engine, or Holder T96T-6312-A and Wrench T96T-6312-B for the 5.0L engine, loosen the large nut attaching the clutch to the water pump hub.

WARNING

The manufacturer does not specify a loosening or tightening direction. Using extreme care, try loosening the nut in one direction first. If it does not move, change directions. Applying too much force to the end of the water pump will break it.

3. Remove the two upper fan shroud retaining bolts. If the overflow hose is routed through the fan shroud, remove it from the shroud.
4. Lift up on the fan shroud to disengage the lower mounting clips.
5. Remove the fan/clutch assembly and the fan shroud together.
6. If necessary, remove the fan-to-clutch bolts to separate the fan from the clutch.

To install:

7. Installation is the reverse of removal. Torque the fan-to-clutch bolts to 14-19 ft. lbs. (19-26 Nm); the hub nut to 34-46 ft. lbs. (46-63 Nm). Tighten the nut in the reverse direction of removal.