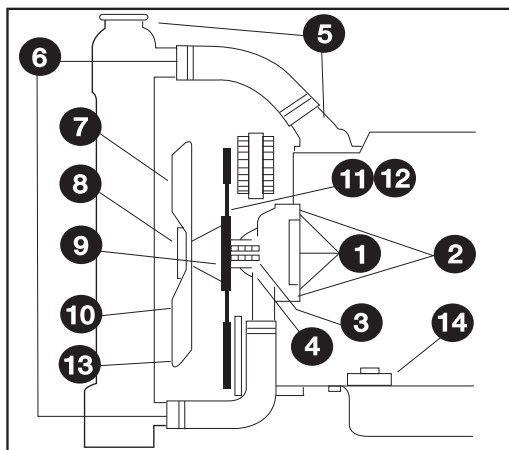


## HOW TO INSTALL YOUR NEW WATER PUMP

Follow the simple step-by-step instructions below. Handle your new water pump with care. Never strike shaft; this can damage shaft or bearings. Always check fan, pulleys, belts and fan clutch when installing new water pump. **CAUTION: FOR YOUR PROTECTION THE HOOD SHOULD BE CLOSED WHEN REVVING ENGINE.**

### Installation Instructions:

Follow this sequence:



- 1 Flush cooling system when replacing water pump. Clean pump impeller cavity and gasket surface. Tighten back plate mounting bolts before installation, where applicable.
- 2 Position new gaskets after coating them on both sides with thin film of sealer. FOR RUBBER GASKETS, ONLY USE SILICONE GREASE; SEALERS WILL CAUSE PREMATURE FAILURE OF THE RUBBER GASKET.
- 3 Carefully install new pump. DO NOT STRIKE SHAFT. Tighten bolts using a crossing pattern.
- 4 Turn pump shaft by hand to check for free rotation.
- 5 Check thermostat, radiator, and cap. Replace if they show signs of sticking or leaking.
- 6 Connect hoses, fill cooling system and check for leaks.
- 7 Check fan blade for cracks, bent blades, loose rivets, etc. NEVER STRAIGHTEN A BENT BLADE. When any defects are found replace the entire fan.

- 8 CHECK FAN CLUTCH (IF USED) FOR LOSS OF OIL, LOOSENESS OR WOBBLE. A BAD OR MISALIGNED CLUTCH WILL DAMAGE A WATER PUMP.
- 9 Check that the fan pulley (or clutch, if used) sits square on pump hub. Using lockwashers, torque bolts evenly to assure wobble-free operation.
- 10 Rotate fan by hand and check for fan wobble -  $\frac{3}{32}$ " max. at outer edge (with no fan clutch);  $\frac{1}{4}$ " with fan clutch.
- 11 Check belts for cracks, frayed edges, and missing sections. If in doubt, replace belt(s).
- 12 Adjust fan belt(s) to proper tension, using commercial tension gauge, if available. Or lay straight edge between alternator and pump pulley and adjust belt deflection to  $\frac{1}{2}$ " to  $\frac{3}{4}$ ". (See vehicle manufacturer's specs for recommended tension.)
- 13 Check fan clearances at blade tip, between fan and shroud and fan and radiator.
- 14 CHECK MOTOR MOUNTS FOR WEAR OR SPLITTING. CHECK BOLT TIGHTNESS.
- 15 Start engine and run until normal operating temperature is reached. Check for leaks and for smooth operation. NEVER STAND IN LINE OR NEAR FAN WHEN REVVING ENGINE. FOR YOUR OWN PROTECTION THE HOOD SHOULD BE CLOSED WHEN REVVING THE ENGINE.

#### NOTE:

Many things can cause water pump failure Including: Defective, crooked or unbalanced fan, defective or unbalanced fan clutches; excessive (too-tight) fan belt tension, dirty cooling systems; insufficient clearance between fan and shroud or radiator; loose or broken motor mounts. CHECK ALL RELATED COMPONENTS AT INSTALLATION TO HELP AVOID FUTURE WATER PUMP FAILURES.