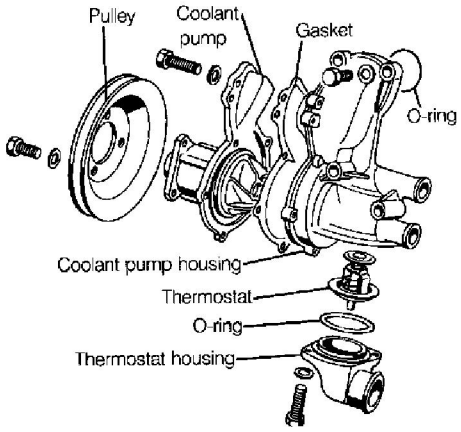
Water Pump: Service and Repair

COOLANT PUMP REPLACEMENT:



Coolant Pump & Thermostat

The right-hand part of the water pump, which contains the shaft, the seals, the bearing, and the impeller, can be replaced separately. However, you can avoid removing the camshaft drive belt and sprockets by removing the water pump as a unit before you disassemble it.

For removal of the camshaft drive belt, refer to Engine/Timing Components/Timing Belt. See: Timing Components/Timing Belt/Service and Repair

Removal:

1. Drain the cooling system.
2. Remove the nut and T-bolt that fastens the camshaft drive belt cover to the coolant pump. Disconnect the remaining hoses from the pump housing.
3. Remove pump and housing assembly. Four bolts hold the coolant assembly to the engine.
4. Disassemble the pump and housing assembly. Remove the pulley(s) from the coolant pump shaft. Remove the seven bolts and washers and separate the pump from the housing.
5. Assembly is the reverse of disassembly. Use a new gasket between the coolant pump and housing. Tighten the seven bolts evenly until all are torqued to **10 Nm (87 in lb)**. Install the pulley(s). Torque the bolts to **20 Nm (15 ft lb)**.

   NOTE: The power-steering V-belt pulley attached to the coolant pump is marked with the word KLIMA. The mark faces outward (away from the pump) on vehicles with air conditioning, and inward on vehicles without air conditioning.

Installation:

1. Clean the surface of the engine block where it will be contacted by the pump housing and the 0-ring. Install a new 0-ring in the recess that surrounds the water outlet.

   NOTE: The 0-ring between the coolant pump housing and the engine block does not require sealer.

2. Loosely install the coolant pump on the engine. The two short bolts are used at the top of the pump housing. Torque the four bolts evenly to **20 Nm (15 ft lb)**. Refasten the camshaft drive belt cover to the coolant pump.
3. Install the hoses and refill the cooling system. Install and adjust the V-belt.