

Engine Cooling Systems

JEEP

WATER PUMP

ALL 4-CYLINDER MODELS

Removal

Drain coolant. Remove drive belts and fan. Disconnect radiator hoses from water pump. Remove water pump attaching bolts, and remove pump.

Installation

Clean gasket surfaces. Install new hoses, as required and replace gaskets. Reverse removal procedure, tighten bolts and adjust drive belt tension. Refill system and check for leaks.

ALL 6-CYLINDER MODELS

Removal

1) Drain cooling system and disconnect all hoses at water pump. Remove drive belts and separate fan shroud, if equipped, from radiator.

2) Remove fan and hub assembly and remove fan shroud. Remove water pump and gasket. On some models, fan removal may be easier if shroud is rotated 1/2 turn.

Installation

Clean gasket surfaces, install new hoses, as required, and replace gaskets. Reverse removal procedure, tighten bolts and adjust drive belt tension. Refill cooling system.

NOTE: The 6-cylinder engines with a single drive belt have a reverse rotating water pump and viscous (Tempatrol) fan drive assembly. Components are identified by the words "REVERSE" stamped on the cover of viscous drive and inner side of fan, and "REV" cast into water pump body. Do not install components that are intended for non-single drive belts.

ALL V8 MODELS

Removal

1) Drain cooling system and disconnect negative battery cable. Disconnect upper radiator hose at radiator. Loosen all drive belts. Separate fan shroud, if equipped, from radiator and position rearward on engine.

2) Remove fan and hub from water pump. Remove fan and shroud assembly, if equipped, from engine compartment. If equipped with air conditioning, install a double nut on compressor bracket-to-water pump stud and remove stud. This eliminates having to remove the mounting bracket.

3) Remove alternator and mounting bracket assembly. Position assembly to one side with wires attached. If equipped with power steering, remove nuts attaching pump to rear half of mounting bracket. Remove bolts attaching front half of bracket to rear half.

4) Remove remaining upper bolt from inner air pump support brace, loosen lower bolt and drop brace away from power steering front bracket. Remove front half of power steering bracket from water pump mounting stud. Disconnect heater hose, by-pass hose and lower hose at water pump. Remove water pump attaching bolts and water pump assembly.

Installation

Clean all gasket surfaces. Install new hoses, as required, and replace gaskets. Reverse removal

procedure, tighten nuts and bolts, adjust drive belt tension and refill cooling system.

NOTE: Check to be sure wire coil is installed in lower radiator hose. Failure to install this coil will result in the hose collapsing at high engine RPM.

SPECIFICATIONS

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs (N.m)
Water Pump-to-Block	
2.5L	18-33 (24-45)
4.2L	9-18 (12-24)
6.0L	18-33 (24-45)
Front Cover to Engine	
Block Through Water Pump (V8 only)	18-33 (24-45)
Fan Blade-to-Hub	12-25 (16-34)
Thermostat Housing	
2.5L Engines	17-25 (23-34)
All Others	10-18 (14-24)

COOLING SYSTEM CAPACITIES

Application	Quarts (Liters)
All Models	
2.5L Engines	8 (8)
4.2L Engines	11 (10)
6.0L Engines	14 (13)

PRESSURE CAP

Application	psi (kg/cm ²)
4-Cylinder Engines	15 (1)
6-Cylinder & V8 Engines	15 (1)

THERMOSTAT

Application	Initial Open °F (°C)	Full Open °F (°C)
All Models	195 (91)	218 (103)