

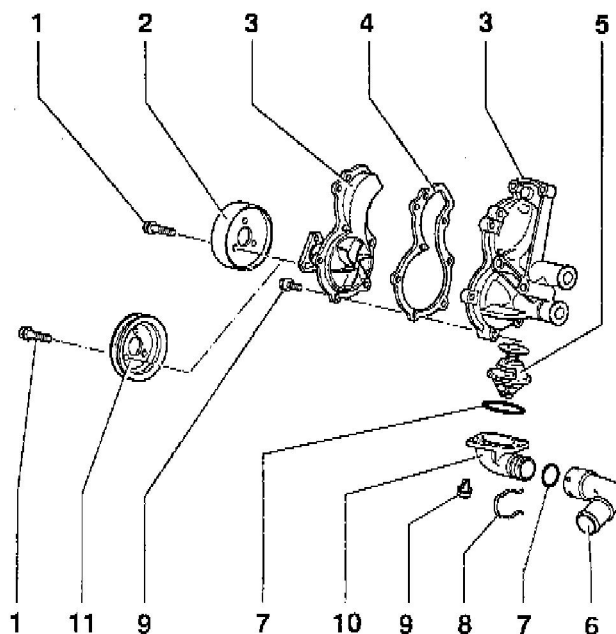
Water Pump: Service and Repair

Coolant Pump Disassembling and Assembling

Coolant Pump Disassembly and Assembly

Note:

During disassembly and assembly procedures, refer to the component location illustration and component notes below.



V19 - 0584

- 1 Bolt. Torque Specification: **25 Nm (18 ft. lbs.)**.
- 2 Pulley - Ribbed Drive Belt version.
- 3 Engine Coolant Pump (Water Pump) - Check shaft for ease of movement.
- 4 Gasket - Always replace.
- 5 Coolant Thermostat - Checking: Heat-up thermostat in boiling water.
Starts to open at approx: **87°C (188°F)**.
Fully open at approx: **102°C (215°F)**.
Opening lift: **7 mm (0.28 inch) minimum**.
- 6 Elbow Connection
- 7 O-ring - Always replace.
- 8 Retaining Clip
- 9 Bolt. Torque Specification: **10 Nm (7 ft. lbs.)**.
- 10 Thermostat Flange
- 11 Pulley - V belt version.

Water Pump: Service and Repair

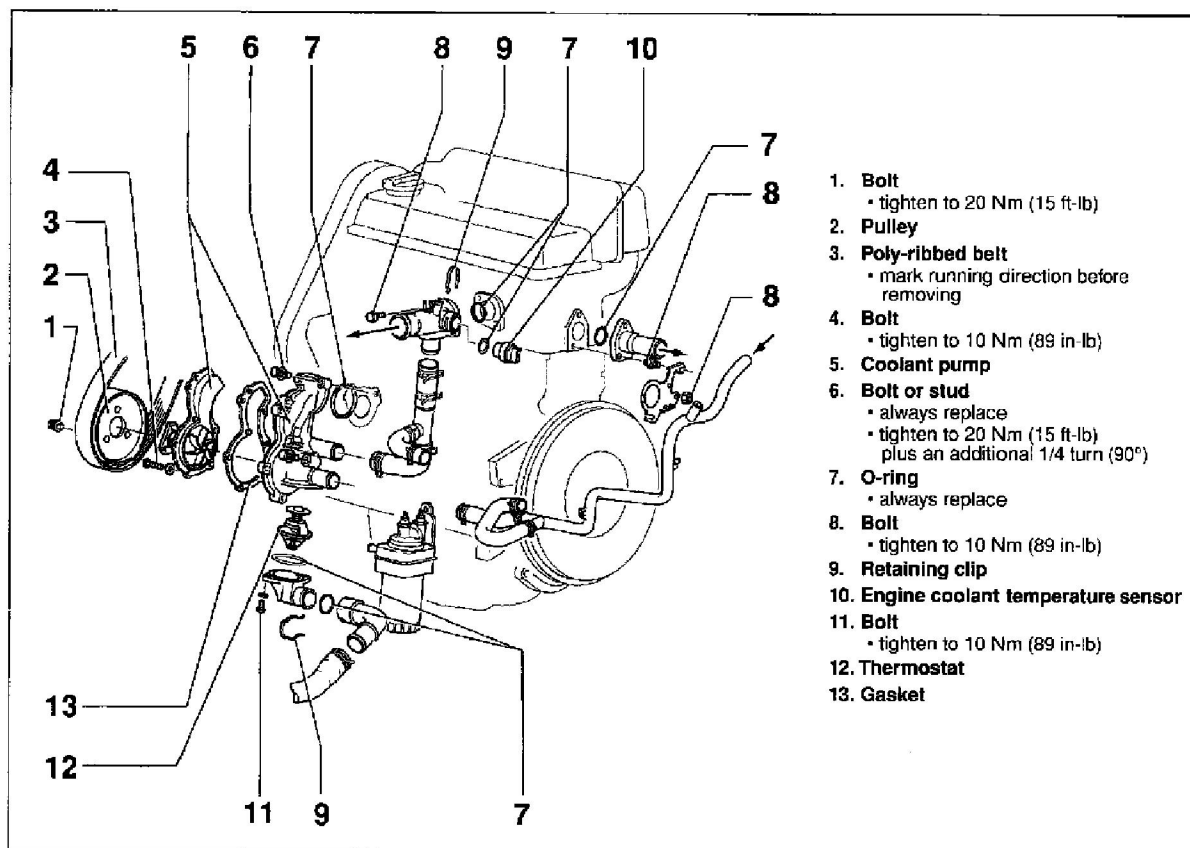
Coolant Pump and Housing, Removing and Installing

Coolant Pump Removing and Installing

Note:

Stretch-type studs or bolts are used to mount the pump assembly to the block. These fasteners should not be reused. Be sure to have new fasteners on hand before beginning the job.

Removing



- Disconnect the negative (-) battery cable.

Note:

Be sure to have the anti-theft radio code on hand before disconnecting the battery.

- Drain the cooling system See: Cooling System/Service and Repair
- remove the remaining hose(s) from the pump.
- Mark the running direction on the poly-ribbed drive belt.
- Remove the V-belt and the poly ribbed belt. Refer to Drive Belt, Service and Repair. See: Drive Belts, Mounts, Brackets and Accessories/Drive Belt/Service and Repair
- Remove the alternator together with its bracket from the engine. Refer to Alternator, Service and Repair. See: Starting and Charging/Charging System/Alternator/Service and Repair
- Remove the air conditioning compressor from its bracket without disconnecting any refrigerant lines. Place the compressor safely out of the way. Refer to Compressor HVAC, Service and Repair. See: Heating and Air Conditioning/Compressor HVAC/Service and Repair
- Remove the coolant pump assembly from the engine block.
- Discard the coolant pump mounting studs or bolts.

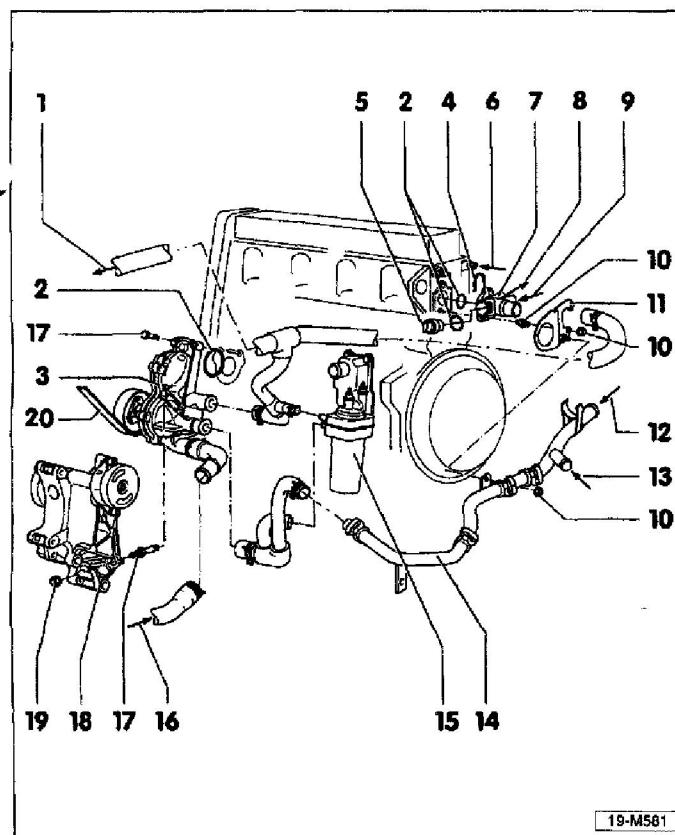
Installing

- Installation is the reverse of removal.
- Clean the pump mating surface before installing.
- Always use new O-rings and gaskets during installation.
- Fill and bleed the cooling system.

Water Pump: Service and Repair

Cooling System Components, Engine Side

COOLING SYSTEM COMPONENTS, ENGINE SIDE



Cooling System Components, Engine Side

1. To upper radiator
Refer to Cooling System, Locations, Components, Cooling System Components, Body Side See: Cooling System/Locations/Component Locations
2. O-ring (Always replace)
3. Coolant pump with housing. To remove, Generator bracket must be removed.
Disassembling and assembling refer to Coolant Pump Disassembly
4. Clip
5. Engine Coolant Temperature (ECT) Sensor (G62), with ECT Sensor (G2)
6. From expansion tank
Refer to Cooling System, Locations, Components, Cooling System Components, Body Side See: Cooling System/Locations/Component Locations
7. Connector flange
8. To heater core
9. From expansion tank (vehicles with automatic transmission)
Refer to Cooling System, Locations, Components, Cooling System Components, Body Side See: Cooling System/Locations/Component Locations
10. **10 Nm (7 ft lb)**
11. Bracket
12. From heater core
13. From expansion tank (manual trans.) or ATF cooler (automatic trans.)
14. Coolant pipe
15. Oil cooler
16. To lower radiator
Refer to Cooling System, Locations, Components, Cooling System Components, Body Side See: Cooling System/Locations/Component

Locations

17. **20 Nm (15 ft lb) plus 1/4 turn (90°)** Always replace

18. Generator (GEN) bracket

19. **30 Nm (22 ft lb)**

20. Ribbed belt

Removing and installing refer to Engine, Drive Belts, Mounts, Brackets and Accessories, Drive Belt, Serpentine Belt, Service and Repair See:
Drive Belts, Mounts, Brackets and Accessories/Drive Belt/Service and Repair