

Group 0417 WATER PUMP

GENERAL INFORMATION

The centrifugal-type water pump is attached directly to the cylinder block and is driven by the fan belt. A bellows-type seal assembly is pressed into the pump housing between the pre-lubricated ball bearing and the impeller. If the seal becomes worn or damaged, water will escape through the drain hole in the bottom of the pump housing.

REMOVAL

Drain engine coolant and remove radiator (Group 0510).

Remove fan belts and fan.

Remove water pump.

REPAIR

Remove the rear cover plate and gasket from the pump housing (Fig. 1).

NOTE: The impeller has puller holes for removal if only the seal (6) is to be replaced.

Support the pump housing from the pulley side. The lower flange on the fan pulley should be a minimum of 3.00 in. (76 mm) above the press rails. The pulley must be free to travel down a minimum of 3.00 in. (76 mm) during bearing removal.

Select a drift which is slightly smaller than the bearing shaft at the impeller end. Press the bearing and pulley out of the housing as one piece from impeller end.

IMPORTANT: Do not attempt to press shaft from pulley end. A flange in the bearing bore prevents bearing passage through housing.

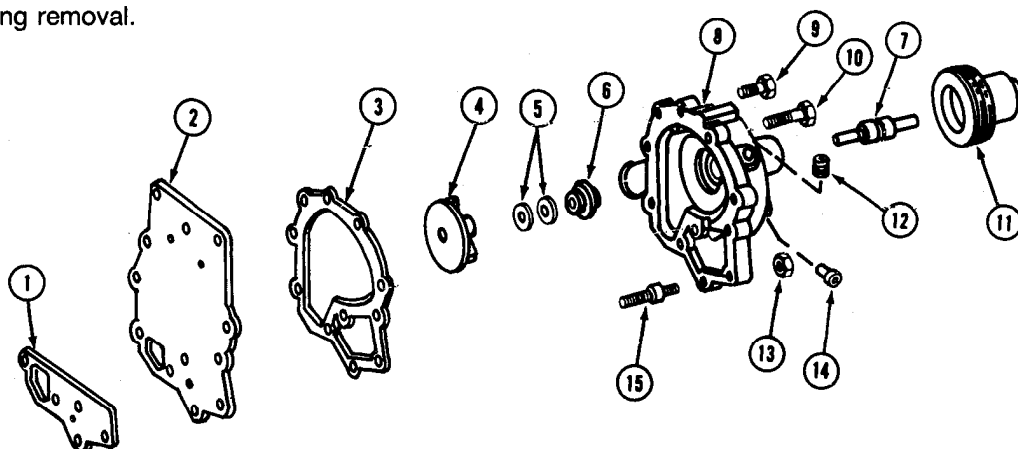
IMPORTANT: The bearing should always be replaced if removed from the pump.

Remove the impeller, which is loose, and the seal from the housing.

Remove ceramic insert and cupped rubber insert found in counterbore in impeller.

Inspect impeller, ceramic insert, and cupped rubber insert. Replace if necessary.

Inspect housing for damage behind the impeller. Replace if metal has been scraped away by impeller.



- 1—Gasket
- 2—Cover
- 3—Gasket
- 4—Impeller
- 5—Cup and Insert

- 6—Seal
- 7—Bearing
- 8—Housing
- 9—Cap Screw (5 used)
- 10—Cap Screw (4 used)

- 11—Fan Pulley
- 12—Pipe Plug
- 13—Hex Nut
- 14—Tube
- 15—Stud

Fig. 1—Water Pump