

MODEL  
779

## COOLING SYSTEM

SECTION  
6

## WATER PUMP

The water pump is the packless type, with a rotary seal on shaft between impeller and body. Pump shaft is mounted in two seal type ball bearings. The inner race of one bearing butts up against a shoulder on the shaft and the inner race of the other against a spacer between it and the coupling flange on the shaft. There is a spacer between the two bearings, and the space between the bearings is packed with a soft grease. There is a relief fitting in the body to prevent excess grease pressure on the bearings. The ball bearings are mounted with the open sides facing each other.

## INSPECTION - EVERY 1,000 MILES

1. Look over the pump for water or grease leakage. See that the coupling between the water pump and the oil pump is tight on the shaft, and that the bolts are tight in the coupling.
2. Examine hose, hose clamps and all connections for water leakage.

## INSPECTION - EVERY 75,000 MILES

Replace pump with a rebuilt or reconditioned unit.

## LUBRICATION - EVERY 1,000 MILES

Fill pump with a soft cup grease, *NOT WATER PUMP GREASE*, through the Alemite fitting in the body.

## DISASSEMBLING PUMP

1. Drain the cooling system.
2. Disconnect the pump inlet hose, oil cooler hose and air compressor water inlet pipe.
3. Disconnect the flexible coupling by taking off the coupling bolt nuts on one of the flanges, and slide bolts back to clear.
4. Remove the three bolts holding the pump to the engine, work hoses back and pull pump off. Note that two bolts have hollow dowels which fit counter-bores around bolt holes in the crankcase.
5. Remove the screws which hold the cover to the body.
6. Remove the coupling flange, which is held on to shaft with a square key, setscrew and capscrew.
7. Pull shaft and impeller out of pump, and remove rotary seal from shaft. Impeller can be removed by taking out the pin which holds it to the shaft.
8. Remove the snap rings and felt seal from front of body and pull out the bearings and the spacer.

## REASSEMBLING PUMP

Check the ball bearings for roughness and wear and replace, if necessary. Check pump body where seal seats and clean off all traces of carbon. If surface is rough it can be smoothed by taking a light cut and lapping it. If it is pitted or scored badly, replace it.

Reverse the operations under "DISASSEMBLING PUMP", using a new gasket between cover and body, and new felt seal at front end. Replace rotary seal, if necessary, as there is no adjustment.

See Illustration #468

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## WATER PUMP (CONT'D)

## MOUNTING PUMP

Check alignment carefully. As a further check of alignment, remove the bolts from the flexible coupling and see if the flanges remain aligned with each other when the bolts are out.

## IN CASE OF PUMP FAILURES

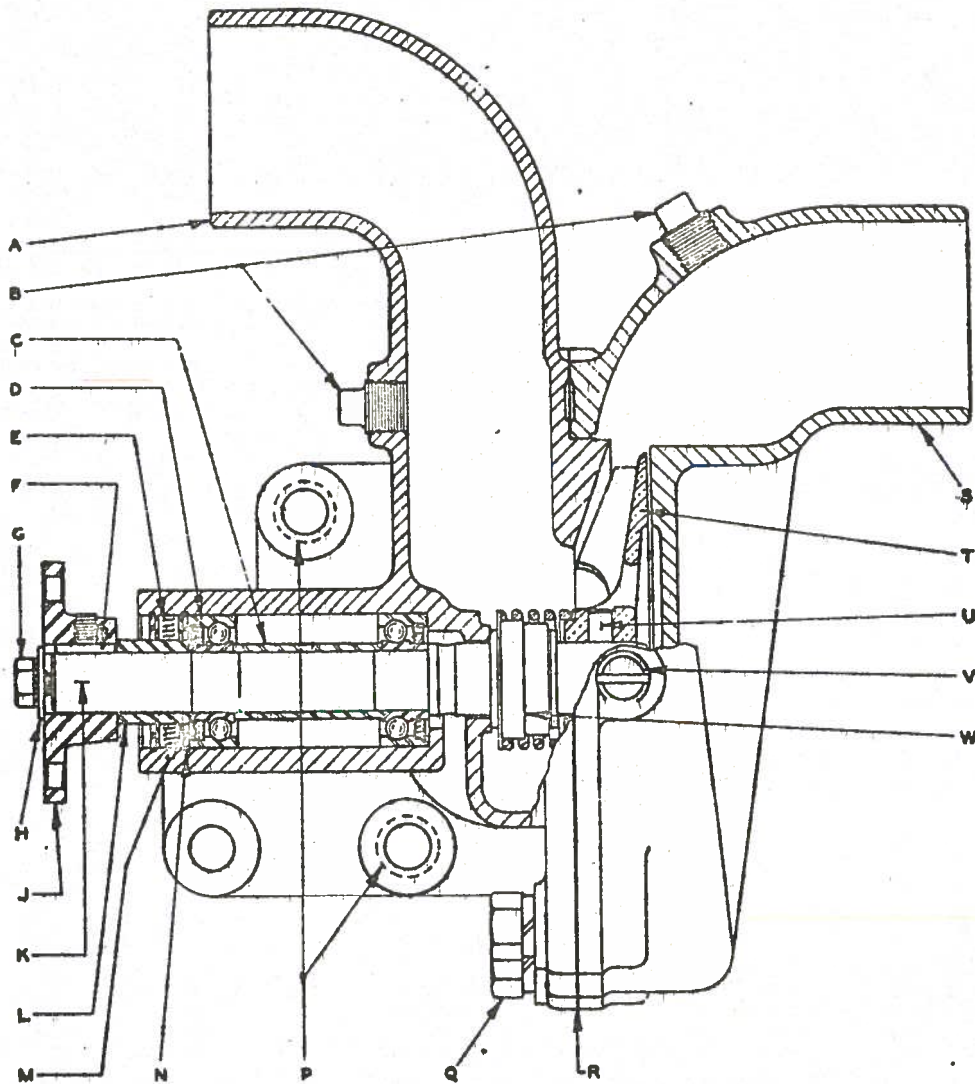
If pump fails to operate, or has been frozen, see if the keys in the coupling or the pin holding the impeller on the shaft have been sheared. Any other pump failure would be due to breakage in the oil pump which drives the water pump.

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## WATER PUMP



WATER PUMP

H.A.L.  
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A. Body  
 B. Pipe plug  
 C. Bearing Spacer  
 D. Ball bearing  
 E. Felt seal  
 F. Steel key  
 G. Capscrew  
 H. Steel washer  
 J. Coupling Flange  
 K. Shaft

L. Coupling Spacer  
 M. Steel washer  
 N. Snap ring  
 P. Body dowel  
 Q. Capscrew  
 R. Cover gasket  
 S. Cover  
 T. Impeller  
 U. Impeller pin  
 V. Pipe plug

W. Rotary seal

NOTE: Do not order parts by key letters on drawing. Order by part name and number from text page of Parts list. Do not scale or use as a working drawing. These illustrations are to show typical design only and the same illustration is sometimes used to show the general arrangement of more than one unit.

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