REAL HEALEY NATTER

MAY 1997

Recently there have been a couple of enquiries about 4 cylinder water pump seals. One that I have used successfully (18,000 miles over 5 years) is a Sealol ¾" Type 6 seal, a fairly standard swimming pool pump seal.
The impeller which is held on by a nut is the easiest to do, although the press on type can be done, **using great care and with good luck** (as it is thin cast iron and could be over 50 years old).

SHAFT
Enlarge the 5/8" rear section to ¾" by using a sleeve of 19mm X 1.6mm 316 stainless steel tube secured by Loctite Super Bearing Mount. Chamfer the front of the tube to allow the thrower to work if required. A stainless steel ½" ID washer is required at the rear to seat the seal's rubber ring.

BEARINGS
While you are at it, replace the bearings with pre-greased sealed bearings (LJ 5/8 2RS) and you won't have to remember to grease them or clean up grease thrown around the engine bay if you are over enthusiastic with the grease gun. Discard the old oil seal and cut a ¼" slot in the holder, this is to drain any water that might get there in. Refit the oil seal holder, using silicon rubber, with the slot to the bottom. Also remove the grease nipple and plug up the hole with a short bolt.

SEAL.
Remove the protruding step on the carbon face, do this by rubbing the step on 400 wet and dry on a flat surface and then trial fit the seal. If it is to long replace the square section rubber ring with a ¾" ID X 3/32" 'O' Ring (BS 116) to do the sealing at the back, also the ½" washer will have to have it's outside reduced to 0.95" to fit into the seal's rear recess. The ceramic seat supplied is not used as the carbon face runs on the pump body's cast iron seat.

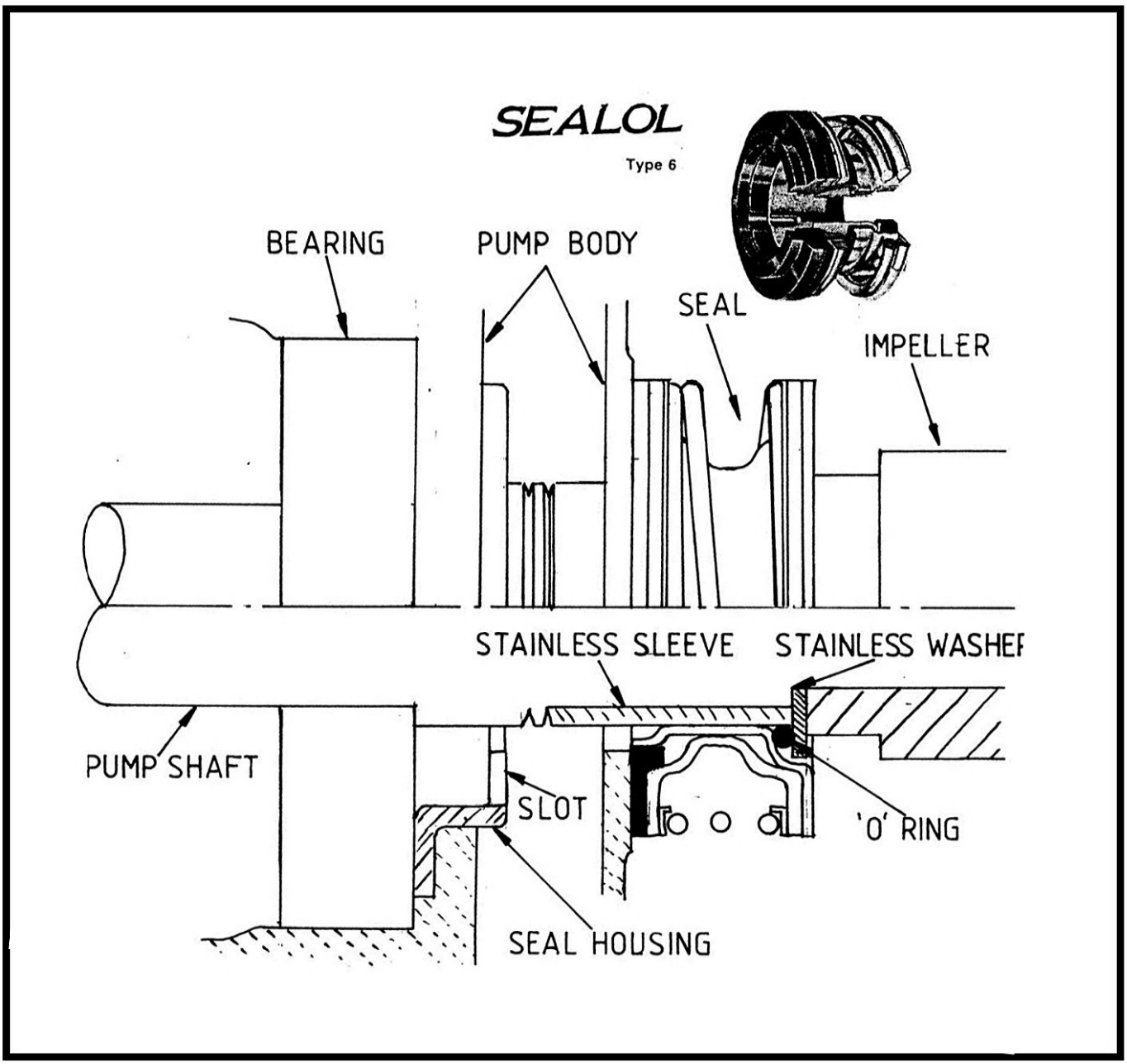
IMPELLER
Shorten the front of the impeller where it touches the ½"washer by the amount required to obtain the clearance of 0.010" to 0.020" between the pump body and the vanes of the impeller.

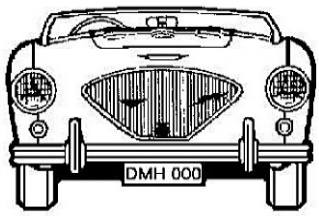
The seal came from a Swimming Pool Parts Supplies, as it was noticed when replacing the one in a swimming pool pump, it looked suitable for the use in the 100 Water Pump.

Sealol ¾" Type 6 seals are available from most bearing suppliers (ask for a ¾" pool pump seal).

UPDATE for narrow fan belt pulley

The 6 cylinder narrow fan belt water pump pulley was the biggest job. As suggested by John Dowsett, a 3/8-inch long spacer was made and fitted to the pump shaft. Then 1/4 inch turned off the fan end inner boss of the new pulley and the pulley fitted (with Loctite on the nut as before). Alignment to the crankshaft pulley was checked with a straight edge and found to be correct, but could have been adjusted by shimming or shortening the spacer.





UPDATE - At the last engine rebuild in March 1999 the seal was checked (after 28,600 miles over 7 years) and found to be ok, but replaced with a new one and new bearings fitted. After another 30,450 miles it is was still running ok in March 2008, but the pump was again reconditioned as the engine was out.

A spare is always carried in the boot (trunk), which has at times has helped out fellow 100 owners.

NOTE – Other company's seals are - KY Type 6, John Crane Type 6, PAC-SEAL Type 16, and US SEAL Type A,