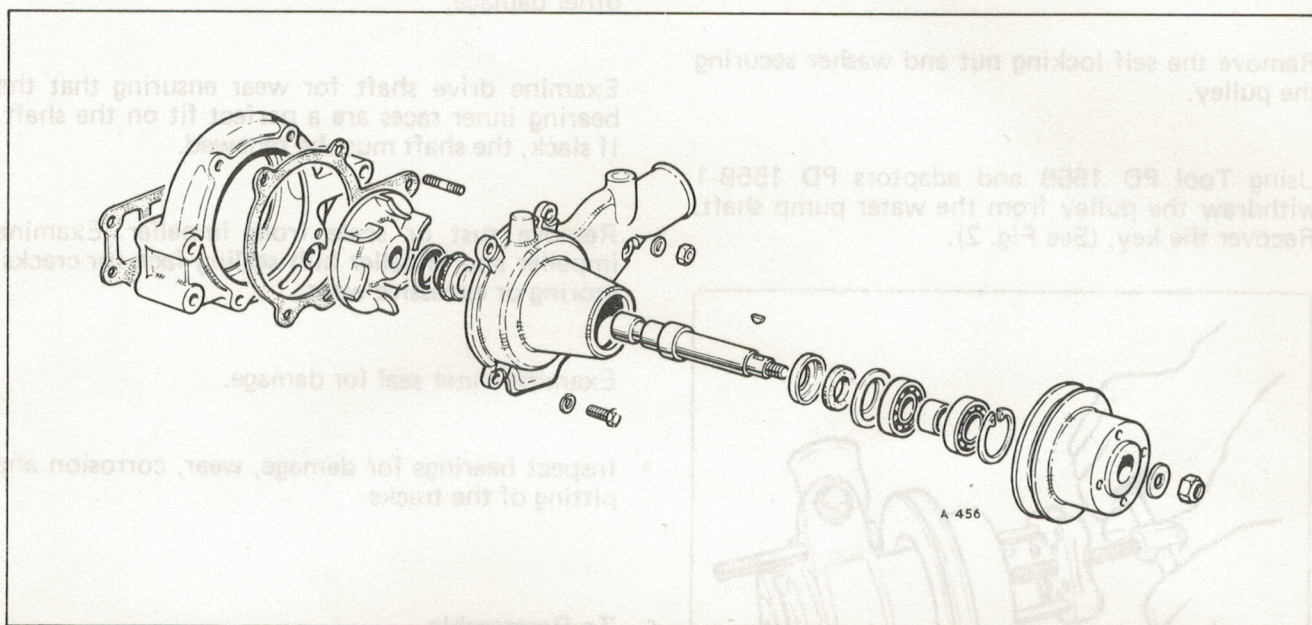


4.236 ENGINE**Fig. 1 Exploded view of water pump assembly****WATER PUMP****To Remove**

Place heater control in HOT position.

Detach rear engine cover.

Disconnect battery

Open and secure bonnet.

Remove heater air ducting from its location on bulkhead and inner wing.

Partially drain coolant (Refer to Sub-section C 200 PARTIAL DRAINING).

Remove cooling fan upper guard.

Slacken alternator pivot and adjustment nuts and bolts and displace 'Vee' drive belt.

Remove cooling fan taking care not to damage radiator matrix.

Disconnect heater and radiator hoses at water pump.

Remove water pump noting the location of the long bolt and the spacer.

To Refit

Refitting is a reversal of the removal instructions.

Clean water pump and cylinder block faces and use a new gasket coated on both faces with 'Hylomar'.

Adjust the 'Vee' drive belt to obtain a deflection of 10 mm (3/8 in) midway between the crankshaft and alternator pulleys.

Refill with coolant.

To Dismantle

Remove the water pump as described previously.

Remove the self locking nut and washer securing the pulley.

Using Tool PD 155B and adaptors PD 155B-1 withdraw the pulley from the water pump shaft. Recover the key. (See Fig. 2).

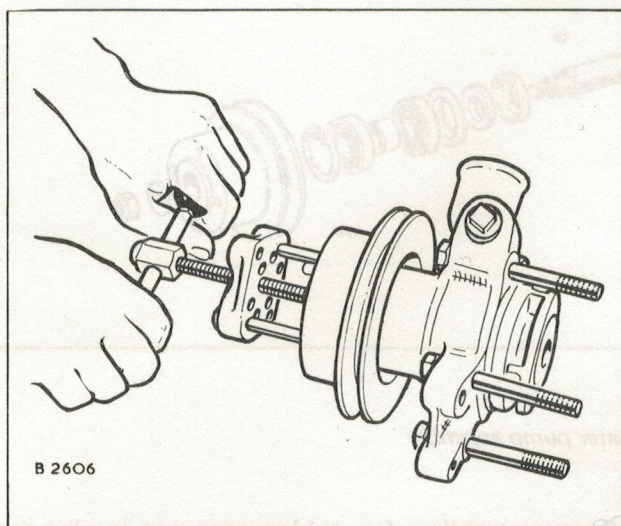


Fig. 2 Removing water pump pulley

Remove nuts and separate bearing housing from impeller housing.

Press the shaft and impeller assembly from bearing housing.

Separate the impeller from the shaft.

Remove the water seal assembly from the shaft housing.

Remove the bearing circlip from housing.

Press the bearings and distance piece from the housing.

Remove the shield, felt seal and grease shield noting their positions for reassembly.

Inspection

Inspect housing for cracks, corrosion and any other damage.

Examine drive shaft for wear ensuring that the bearing inner races are a perfect fit on the shaft. If slack, the shaft must be renewed.

Remove rust or scale from impeller. Examine impeller and impeller hub sealing face for cracks, scoring or excessive wear.

Examine water seal for damage.

Inspect bearings for damage, wear, corrosion and pitting of the tracks.

To Reassemble

Press the rear bearing onto the shaft, followed by the distance piece and front bearing. When fitting bearings, ensure that the shielded face of each bearing faces outwards i.e. towards the extremities of the shaft.

Fit the shield in position against the back face of the rear bearing. The shield is dished and when correctly positioned the centre must not be in contact with the bearing.

Fit the felt seal and grease shield so that these bear against the shield previously fitted.

Half fill the space between the bearings with high melting point (H.M.P.) grease.

Press the complete shaft and bearing assembly into the pump housing. Fit the retaining circlip immediately forward of the front bearing in the recess provided.

Press the spring loaded water seal assembly into the machined counter-bore of bearing housing. Position the remaining water seal on the shaft with its carbon face towards the spring loaded seal. At this stage turn the shaft by hand to check for undue resistance.

Fit the pulley key and press on the pulley making sure there is no rearward movement of the shaft.

Press impeller on to shaft until a clearance of 0,30 mm to 0,81 mm (0.012 in to 0.032 in) is obtained between the impeller vanes and pump body (See Fig. 3).

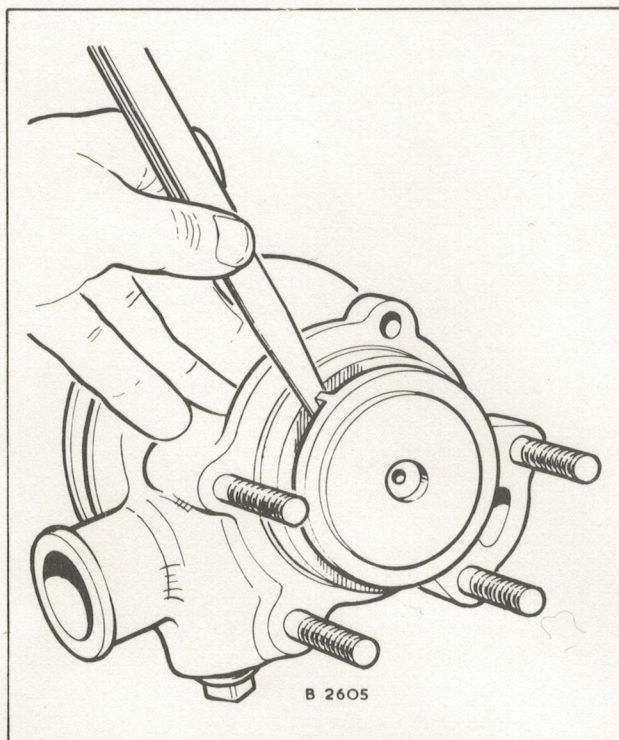


Fig. 3 Checking clearance between impeller and pump body

Refit plain washer and self locking nut and tighten to torque figure of 81 Nm (60 lbf/ft).

Refit the water pump assembly as described previously.

Refill with coolant.

THERMOSTAT

To Remove

Place heater control in the HOT position.

Disconnect the battery.

Open and secure bonnet.

Remove heater air ducting from its location or bulkhead and inner wing.

Release and displace oil filler neck assembly.

Release and remove header tank vent hose and radiator hose at thermostat housing outlet elbow.

Remove two bolts and lift off outlet elbow.

Remove thermostat.

Note: Some coolant spillage will occur but this will not be sufficient to require draining of the cooling system.

IMPORTANT The vehicle must NOT be operated with the thermostat removed. This can lead to extreme overheating and extensive engine damage.

To Refit

Refitting is a reversal of the removal procedure.

Ensure that joint faces are clean and use new gasket.

Refill with coolant.