

SECTION D

THE COOLING SYSTEM

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GENERAL DESCRIPTION

Cooling is by impeller-assisted thermo-siphon circulation controlled by a thermostat. A six-bladed fan is mounted on the pump spindle and driven from the crankshaft pulley by an endless belt.

The impeller housing is detachable from the pump body and secured to the timing case by four studs ; the pump body is also secured to the impeller housing by four studs.

Water passages in the timing case communicate with the heater connection body on the top of the timing case ; a short rubber hose connects this to the thermostat housing.

Section D.1

DRAINING AND FILLING THE COOLING SYSTEM

Remove the radiator cap.

Open the taps : one at the rear left-hand side of the cylinder block, and one on the left-hand side of the radiator lower tank. To make sure that the heater is drained it will be necessary to disconnect the heater hoses.

Drain the water into a clean container for further use since it contains anti-freeze necessitated by the presence of the heater.

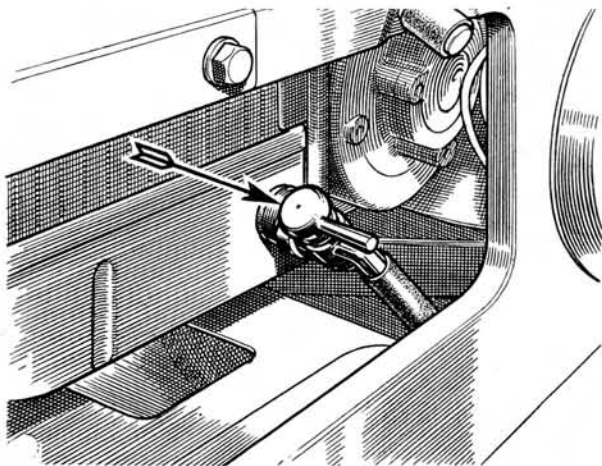


Fig. D.1.
The radiator drain tap.

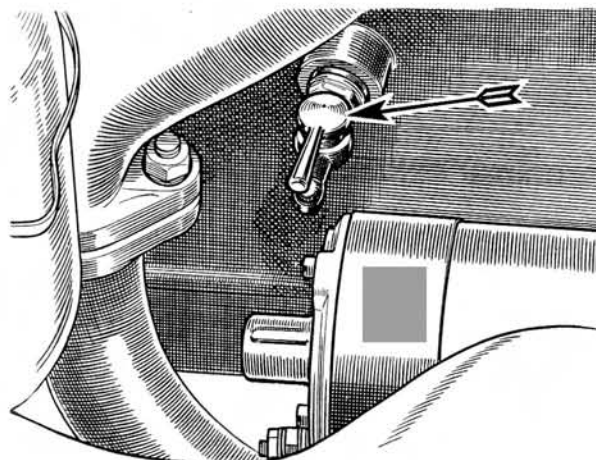


Fig. D.2.
The engine drain tap.

D THE COOLING SYSTEM

Refill to within $\frac{1}{2}$ in. of the bottom of the filler neck. Do not overfill, or there will be loss due to expansion.

Section D.2

REMOVING AND REPLACING THE RADIATOR

Drain the cooling system.

Unscrew the clips and disconnect the top and bottom radiator hoses.

Unscrew the two bolts with self-locking nuts, plain and spring washers securing each horn to its bracket on the side of the radiator. Lower the horns through the holes in the apron and hang them on pieces of wire.

Unscrew the three bolts at each side securing the radiator to the cradle, and move the radiator forward to give access to the set screws holding the horn brackets to the radiator; remove the bracket set screws and brackets.

Lift out the radiator.

Section D.3

REMOVING THE FAN BLADES

Drain the cooling system and remove the top radiator hose.

Withdraw the three bolts at each side securing the radiator to the cradle and pull the radiator forward to give clearance between the fan and radiator.

Unscrew the four set screws securing the fan blades to the hub and remove the blades.

Section D.4

REMOVING THE WATER PUMP

See Section A.6.

Section D.5

DISMANTLING AND REASSEMBLING THE WATER PUMP

Unscrew the four nuts and remove the impeller housing from the pump body.

Remove the fan blades.

Unscrew and remove the self-locking nut and washer holding the fan pulley, and withdraw the pulley; extract the key from the spindle.

Remove the felt washer.

Press the spindle from the bearings in the pump body and withdraw the sealing gland, flat washer and two split collets.

The two races and the distance-piece will remain in the shaft housing, with the felt washer, spacer tube and cup washer.

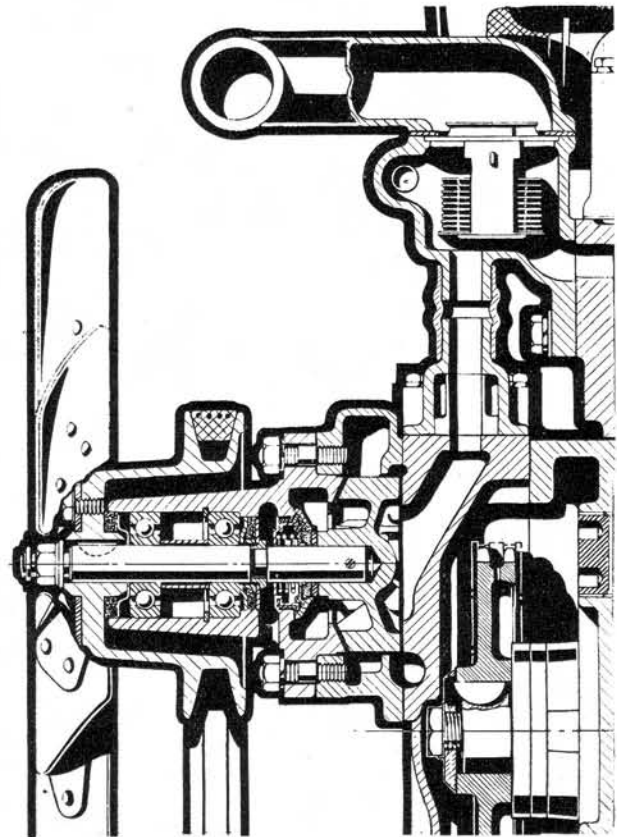


Fig. D.3.

A sectional view of the water pump, outlet housing and thermostat.

The front ball race may be withdrawn from the front end of the body together with the distance-piece. To remove the rear ball race, extract the circlip and withdraw the race through the front of the pump body. The impeller is pinned to the spindle and the seal facing is brazed to the impeller.

Reassembly is a reversal of this sequence of operations.

Section D.6

ADJUSTING THE FAN BELT

Slacken the dynamo mounting bolts and exert gentle hand pressure on the dynamo to take up slack in the belt. Do not use force.