

## B Group Models RE-ASSEMBLING THE ENGINE

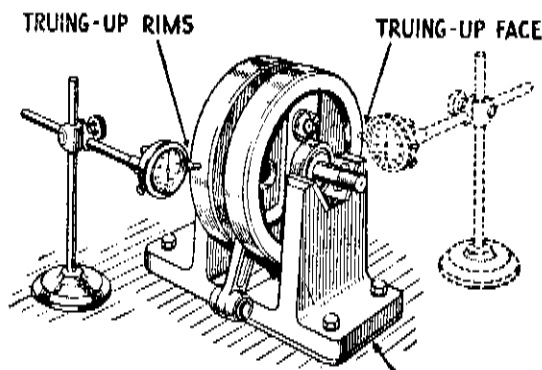
The need for extreme cleanliness cannot be over-emphasized.

Parts should be thoroughly cleaned and all trace of any anti-rust preparations with which new parts may be coated must be removed.

All bearing surfaces should be liberally smeared with engine oil when assembling.

### Flywheels

If the big-end assembly is to be renewed it is as well to check the weight of the new components against those which have been removed. A slight variation in the weights is inevitable, but provided that the discrepancy does not exceed  $1\frac{1}{2}$  ozs. no further action need be taken. This tolerance should not be exceeded, since in the first instance the flywheels have been balanced to suit the original parts, and the balance may be adversely affected if the weight of the new components varies considerably from that of the original ones.



Suitable packing under timing side "vee" block  
to compensate for smaller diameter bearing

Fig. B.9

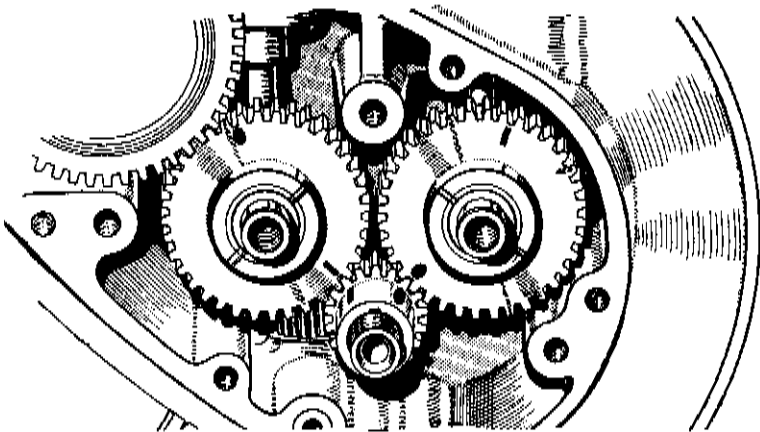
The driving side flywheel should now be fitted to the crankpin (this is the side with the keyway) and the nut tightened up by hand. Fit the timing side flywheel and again tighten the crankpin nut by hand.

In order to tighten the crankpin nuts properly, the whole flywheel assembly must be held rigidly. For this purpose, it should be mounted in a large vice (fitted with lead clamps) with the driving side flywheel uppermost. If a large enough vice is not readily available an alternative method is to fix rigidly to the bench in a vertical position, two  $1\frac{1}{8}$  in. diameter posts, the distance between their centres being  $3\frac{7}{8}$  in. Midway between the posts a hole of 1 in. diameter should be bored in the bench to receive the mainshaft. The flywheel assembly is mounted on these posts so that they pass through the holes bored

The magdyno can now be fitted to the crankcase and its straps loosely coupled up. Make sure that the dowels in the base engage properly in their holes in the platform, and that any packing shims are refitted. Refit the idler pinion between the inlet cam pinion and the magdyno pinion, but do not replace the pinion retaining plate at this stage.

### **Models fitted with Alternator**

Replace the Contact Breaker using a new paper gasket, if the old one is damaged, no shims are required.



**Fig. B.11. Valve Timing**

An oil sealing washer is fitted behind the magdyno pinion, and this should be temporarily removed. Replace the magdyno pinion on its taper; it need not be driven on very firmly, but just tight enough to prevent slip. Check the backlash between this pinion and the idler. If excessive, the gear will be noisy; if insufficient, a whining noise will result.

In order to adjust the backlash, shims are fitted under the magdyno if necessary, when the engine is first built. If a different magdyno is being fitted, it is essential this backlash be checked carefully, shims of a different thickness being used as required.

Remove the magdyno pinion once more, replace the oil sealing washer and again fit the magdyno pinion loosely in position. It is preferable to leave the setting of the ignition until the barrel and piston are in position, and for this reason the magdyno pinion should not be tightened up. The valve timing can now be set. Replace the pinion retaining plate, noting that the coarse threaded bolts screw into the crankcase bosses, and then fit the lockwasher and nut on the engine mainshaft. Play between the pinions and the retaining plate should be .002 in./0.003 in.

**ASSEMBLY FROM THIS POINT WILL BE THE SAME AS AFTER DECARBONISING. (SERVICE SHEET No. 303).**