

21. Tappet Adjustment

The tappet clearance is adjusted by means of a screw in the outer end of the rocker. Access to the adjusting screws is obtained by removing the covers of the rocker boxes.

The correct clearances are:— Inlet .006 in., Exhaust .007 in.

These figures are for a COLD engine.

To adjust the clearance, loosen the locknut beneath the rocker arm, turn the screw and re-tighten the locknut.

The adjustment of each valve should be made with the corresponding valve in the other cylinder fully open. This ensures that the tappet is on the neutral position of the cam.

If the heads of the adjusting screws are worn they should be replaced.

22. Removal of the Camshafts

Remove the timing cover (Subsection 19).

Remove the timing chain (Subsection 39).

Remove the rocker box covers and screw the rocker adjusting screws right back.

Unscrew the three screws holding each of the timing side camshaft bearings. A hole is provided in the camshaft sprockets and this can be aligned with each screw in turn, for access with a hexagon wrench. The screws can be fully undone but will remain captive in the cast aluminium bearing.

Before removing the camshafts it is necessary to prevent the tappets falling through their guides when the shafts are no longer holding them up. If this happens, the push rods will come out of engagement with the rocker arms and make replacement difficult. This can be prevented by placing the motor cycle on its left side. With the machine in this position, rotate the camshaft until the timing marks on the sprockets are pointing at 2 o'clock for the inlet and 1 o'clock for the exhaust when they can be withdrawn upwards complete with sprockets and bearings. If the machine has to be moved before the shafts are replaced, it is essential that something is put into the camshaft tunnels to keep the tappets in place.

If it is necessary to remove the sprockets from the camshafts see Subsection 41.

23. Ignition Timing

The contact breakers are accessible after removing the small oval cover. Owing to the provision of automatic ignition advance, the contact breaker is always fully retarded when the engine is at rest or is being turned over slowly. The advance mechanism is situated behind the contact breaker and gives a range of approximately 12° on the half-speed shaft, corresponding to 24° on the engine shaft.

The optimum ignition timing is 32° advance, (.355 in. before T.D.C.), so that in the fully retarded position the contact points must open when the piston

is 8° or .023 in. before T.D.C.

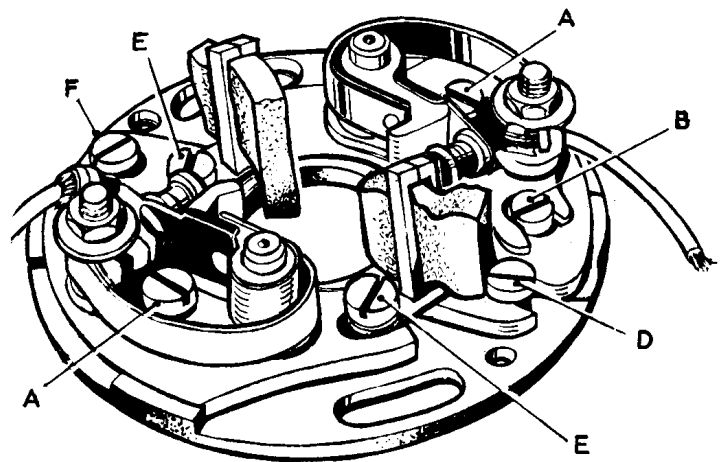
To obtain maximum performance and avoid possible damage to the engine, it is vitally important that the ignition timing is set accurately and also identical on both cylinders. It is easier to obtain the necessary accuracy by timing with the ignition cam in the advanced position and, to hold the cam in this position, a special recessed washer is included in the tool kit.

As a further aid to ignition timing, an indicator has been incorporated to show the correct position of the piston when the points are just beginning to open. Inside the primary chaincase, a line engraved on the alternator rotor lines up with a second line engraved on a fixed plate when the pistons are 32° before T.D.C. These lines are visible after removing the large screwed plug situated towards the front end of the chaincase.

To check the ignition timing, proceed as follows:

Switch off and check the maximum opening of the points, on both sets of contacts; this should be .014 in. to .016 in. The gap must always be checked with the line on face of the cam pointing towards the appropriate contact heel. To adjust the gap, slacken off the slotted screw, marked "A" in Fig. 4, and pivot the small contact plate by turning the eccentric headed screw marked "B" (clockwise to increase the gap). Re-tighten screw "A".

Unscrew and remove the centre screw and washer securing the contact breaker cam centre to the shaft, replace the washer by the special recessed one, Part No. W.49717, included in the tool kit, and refit the centre screw with the recess on the washer pointing towards the engine. Before tightening the centre screw, rotate the cam clock-



CONTACT BREAKER ASSEMBLY

Fig. 4