

wise into the advanced position by means of a screwdriver located in the end slot and hold in this position as the screw is tightened. On removing the screwdriver the ignition cam will now stay locked in the advanced position.

Place the machine on the centre stand and remove both sparking plugs. Switch on the ignition, engage top gear and turn the engine by rotating the back wheel forward until the top set of contacts are closed. Continue to rotate the wheel until the ammeter needle flicks to zero, indicating that the points have opened.

Remove the screwed plug, at the front end of the primary chaincase, and the timing marks, now visible through the hole in the chaincase, should be in line.

If the timing is incorrect, adjust by slackening the two screws marked "C" in Fig. 4 and rotating the top contact breaker plate by turning the eccentric headed screw marked "D" (anti-clockwise to advance) Re-tighten screws "C" and again go through the procedure of rotating the back wheel and checking the alignment of the timing marks.

When the timing is correct for the top set of points, carry out a similar check for the bottom set and make any necessary adjustment using screws "E" and "F".

When satisfied that both contact sets are adjusted correctly, remove the centre screw, replace the original plain washer, and re-tighten the screw. Check that the cam is moving freely on the centre.

If the engine has been dismantled or the timing has slipped it will first be necessary to re-time the contact breaker cam centre before making any adjustments on the contact breaker plate. To do this, first unscrew and remove the centre screw securing the contact breaker cam centre to the shaft. Screw the extractor, provided in the tool kit, into the centre of the cam and tighten. A light tap on the head of the extractor will free the cam centre from the driving shaft. Remove the extractor and refit the cam centre loosely on to the shaft with the correct centre screw and washer. Loosen the two screws which secure the circular contact breaker back plate and set the plate central in its slots. Tighten the screws.

Rotate the top and bottom contact breaker plates into their extreme clockwise positions by means of screws "C", "D", "E", and "F", as previously described. With the machine on the centre stand and both sparking plugs removed, engage top gear and turn the engine by rotating the back wheel forward until the timing side (R.H.) piston is on T.D.C. of the compression stroke (both valves closed).

Switch on the ignition and rotate the cam centre in a clockwise direction until the top set of contacts are closed. Continue turning until the ammeter needle flicks to zero. Give the cam centre

a sharp tap endways to secure it on the shaft and lock up with the centre screw. The cam centre is now locked in a position where correct timing can be obtained by close adjustment of the small separate contact breaker plates and to do this, follow the procedure given previously for checking the ignition timing. After the correct timing has been obtained, check that the cam is moving freely on the centre.

If a Timing Light is available, this can be used on the timing marks, visible through the hole in the chaincase. The engine must be run at 3,000 r.p.m. to ensure that the ignition is in the fully advanced position, and, if the timing is correct, the two marks will appear to be in line. Make this test on both cylinders.

Occasionally apply two drops of clean engine oil to the rear end of the felt pads bearing against the contact breaker cam and apply a smear of grease to the moving contact pivot post.

24. Primary Chain Adjustment

The tension of the primary chain can be checked through the inspection cover in the primary chain case and, should it require adjustment, access to the adjuster is gained by removing the chain case cover, which is held in position by a single nut. Before removing the nut, place a tray under the engine to catch the oil from the chaincase.

Beneath the bottom run of the chain is a curved slipper on which the chain rests and which may be raised or lowered by turning the adjusting screw after having first slackened the locknut.

A rubber button is fitted to the end of the adjusting screw to prevent the transmission of chain noise to the chaincase and this is held against the chaincase by a hairpin spring, which prevents it from bouncing.

Do not adjust the chain to be dead tight but rotate the engine slowly and, while doing so, test the tension of the top run of the chain by pressing it up and down with the fingers. Adjust the tension so that there is $\frac{1}{4}$ in. up and down movement at the tightest spot.

Re-tighten the locknut on the adjusting screw, replace the chain cover and replenish with oil to the height of the level plug.

25. Timing Chain Adjustment

Before adjusting the tension of the timing chain, turn the engine until the chain is in its tightest position, checking the chain between all sprockets.

Adjust the tension so that there is $\frac{1}{4}$ in. movement of the chain.

The tension of the timing chain is altered by moving the quadrant after slackening the nut A which secures it (see Fig. 6). This rotates the eccentric spindle on which the chain tensioner jockey sprocket is mounted. Tightening of the chain