

SUPPLEMENTARY INSTRUCTIONS

for the 1958

Royal Enfield

★ ★ 'Made like a Gun' ★

“ CONSTELLATION ”

This Supplement must be used in conjunction with
“ Super Meteor ” Instruction Book, Ref. 521.

Basically, the design of the “ Constellation ” follows that of the “ Super Meteor ” and, except for the points mentioned here, the instructions given in the main instruction book will serve.

Controls.—Reference to the use of the controls and to the plan of the controls shown in Fig. 1 of the instruction book will reveal two omissions. In the “ Constellation,” which has magneto ignition, the control of the ignition point is manual instead of being automatic. Therefore, a magneto control lever is added to the left handlebar.

Again, in view of the superior performance of this machine and the uses to which it is likely to be put, a steering damper is included, operated by a wing nut from the top of the steering head above the instrument “ Casquette.”

Lubrication.—Engine lubrication is in accordance with well known Royal Enfield practice in which twin pumps, one for delivery and one for return of lubricant, are employed. Oil is contained in a separate compartment of the crankcase.

In the removal of the oil filter element for cleaning, it is reached by removing the nut and the end cap from the casing when the element may be withdrawn.

Gearbox Lubrication.—A modification in gearbox design places the oil filler hole towards the top-front of the box and the level plug at the rear. To replenish with lubricant, pour the correct grade through the filler hole until oil

overflows from the level hole, the plug for which should first have been removed. Replace both plugs after the operation.

Grease Gun Lubrication.—Paragraph 12 of the main instruction book mentions, especially, the greasing of the clutch push rod:

This no longer applies with the newly designed clutch, neither is grease gun lubrication provided for the wheel hubs.

Clutch Control.—Precise adjustment of the clutch control must be maintained if drag or slip are to be avoided. The hand lever should move about $\frac{1}{4}$ in. away from its stop before clutch spring tension is felt.

Slackness in the control is taken up by removing the plug to be found towards the rear of the chain cover, this reveals a screw with a locknut. Slacken the locknut, turn the screw in an anti-clockwise direction to take up slack or clockwise to eliminate clutch slip and, afterwards, retighten the locknut and replace the chain cover plug. Stretch in the clutch cable may be remedied by operating the cable adjuster provided.

Removal of Valves.—No steel thimbles are fitted to the ends of the valve stems as in previous models, otherwise the instructions in the main book for valve removal may be followed.

Tappet Adjustment.—When adjusting the tappets, make certain that the appropriate valve is on its seat by turning the engine slowly until the other valve in the same head is fully open. Make the adjustment in the manner given in the main instructions.

Removal of Engine from Frame.—While following the general instructions for this, it may not be necessary to remove the footrest bar or to swing the lower engine plates down.

Ignition Timing.—To set the ignition timing, remove the engine oil filler and then the timing case cover, which is held by twelve screws. Remove the magneto sprocket nut and withdraw the sprocket. Set the contact points to

.012 in., fully opened. Remove the sparking plugs and set the piston in the left hand cylinder to $\frac{3}{8}$ in. before top dead centre on the compression stroke; i.e., both valves closed. Set the points to be just breaking with the ignition control fully advanced. Refix the driving sprocket, replace the timing case cover and oil filler.

Magneto Chain Adjustment.—Some adjustment may be obtained by removing the timing case cover and undoing the three bolts which hold the magneto and its adaptor plate to the timing case. The slots in the latter are slightly elongated and the magneto may be slid in the desired direction to give about $\frac{3}{8}$ in. up and down movement of the chain midway between the sprockets.

Sparking Plugs.—The following are the plugs most suited to this engine:—

LODGE 3HLN ; KLG FE100 ; CHAMPION NA10.

Carburettor.—This is an Amal type 10TT, having a choke diameter of $1\frac{1}{16}$ in. It is flange mounted on a Y-shaped induction stub attached to the cylinder heads. The float chamber is attached to the mixing chamber body by a large hexagon which also forms the jet holder. Beneath this is a jet holder plug screw which must be removed to gain access to the jet.

On the side of the mixing chamber is formed the mixture control boss. Air is fed into this through a long slot and is controlled by a slide operated by a cable from a lever on the handlebar. An adjuster and a locknut are provided for this cable. Alongside the mixture control boss is a milled screw with a spring retaining catch and this is the pilot needle for adjusting the slow running.

The twist grip operates the throttle slide and the needle controlling the needle jet. The cable for this control also has an adjuster and locknut. Alongside this adjuster is a small, square headed screw which adjusts the lock plunger securing the screwed ring encircling the mixing chamber cap. Hexagon headed screws secure the float chamber lid, a tickler for flooding the carburettor is provided, and the nut holding the twin banjo to the float chamber has provision for a locking wire.

The following are the correct carburettor settings :—

Main jet	..	..	..	480
Needle jet	..	..	..	109
Throttle valve	..	..	..	No. 7
Needle clip in third groove from top.				

Removing Camshafts.—When employing the machine for special purposes involving performances differing from the normal road performance, it may be desirable to employ different cams. On this engine it is comparatively easy to change the camshafts.

It will be noticed that opposite the end of each camshaft a cap is fitted to the side of the crankcase. To withdraw the camshafts, remove the engine oil filler, timing case cover, magneto sprocket, exhaust and inlet sprockets and the chain tensioner. Remove the three screws holding each of the camshaft end caps, compress the valve springs and withdraw the shafts. It will be necessary to rotate the shaft back and forth a little while withdrawing it since it will come out only when it is in a certain position. Also, when replacing the shafts, hold the inlet and exhaust tappets on the driving side out of the way.

Rear Suspension.—Each rear suspension unit may be adjusted for load by turning the knurled ring which is just above the sliding member.

Rear Wheel Removal.—Remove the wheel spindle from the right hand side of the machine ; remove distance pieces, speedometer drive and oil seal. Withdraw the wheel from the driving pegs.

Petrol Tank Removal.—Turn off the petrol, detach the petrol pipe, remove the front tank holding bolt. Pull up the rear end of the tank to free the clip which encircles the frame top tube.

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