

B.S.A. CYCLES LTD.

Service Sheet No. 69.

March 1937.

MID-SEASON CHANGE.

VALVE ROCKER LUBRICATION — 1937 B21, B22, B24, B25 and B26 Models.

TO modify the valve rocker lubrication to correspond with the 1937 "M" Group machines, the oil feed will in future be taken from the oil return pipe direct to the rocker spindles, this change taking place on and after Engine Nos.:-

HB21-1840 HB22-1426 HB24-1689
HB25-245 HB26-1111

The following parts will be required to effect this modification:-

2 Rocker Fulcrum Pins	} <i>These parts are included in the complete Rocker Box.</i>	{	65-358
1 Felt Washer			65-401
1 Spring			65-403
1 Steel Shim			65-402
1 Fibre Washer			M552A
1 Exhaust Lifter Locating Bush			65-387
2 Rocker Oil Pipe Plugs			65-285
2 Rocker Oil Feed Pipe Union Screws			65-306
1 Rocker Oil Feed Pipe			65-294
1 Oil Return Pipe			65-8389
1 Rubber Connection	66-8338		
2 Rubber Connection Ferrules	66-8339		
1 Crankcase Oil Hole Plug	65-1952		
1 Clip	66-9049		

N.B.—Prior to Engine Nos. HB21-521 on B21 Models and HB22-475 on B22 Models a rocker box complete with sleeves will also be required.

The fitting of the parts mentioned above must be carried out as follows:-

Disconnect the exhaust lifter cable at the rocker box. Remove the saddle front connecting bolt, both the rear tank fixing bolts, and raise the rear of the tank propping it up to give access to the engine.

Remove the carburetter, high tension cable, oil drain pipe from the cylinder head, and the exhaust pipe.

Unscrew the cylinder holding down bolts and remove the push rod cover followed by the cylinder head complete with the rocker box.

Remove the rocker box cover. Unscrew the rocker fulcrum pin retaining nuts and drive out the pins from the rocker box by gently tapping the ends with a hammer and wooden drift.

Withdraw the two small oil pipes from the rocker box; this is a simple operation inasmuch as the pipes are merely pressed in position. Plug up the holes from which the pipes are removed with the two plugs Component No. 65-285, taking the precaution of smearing the plugs with gold size or any other good jointing compound before tapping in position. As a further precautionary measure these plugs can

be permanently retained in position by bruising over the edge of the aluminium by means of a hammer and punch.

Now, unscrew the exhaust lifter spindle locating bush and withdraw the spindle. Face off $\frac{1}{8}$ in. from the boss carrying the exhaust lifter locating bush so as to permit the fitting of a $\frac{1}{8}$ in. fibre washer between the bush and the face of the boss.

If necessary machine or end mill a channel from the exhaust lifter spindle bearing to the hole provided in the rocker box for the exhaust valve push rod. This channel should be taken from the lowest point of the exhaust lifter spindle bearing, as a means of ensuring that no appreciable quantity of oil will accumulate at this point.

Refit the exhaust lifter spindle followed by the exhaust lifter locating bush Component No. 65-387 with the fibre washer M552A between the bush and the rocker box face.

Fit the felt washer Component No. 65-401, then the steel shim Component No. 65-402, followed by the small spring Component No. 65-403 to the end of the rocker spindle and secure this by the exhaust lifter lever.

Solder up the oil hole in the centre of each of the rocker bearings, and refit these rockers with the new fulcrum pins Component No. 65-358.

Now plug the oil hole at the crankcase joint face, and which hole corresponds with the oil way formed in the push rod cover. The plug for this purpose Component No. 65-1952 is taper and should be smeared with a good jointing compound, tapped firmly into position, and secured, if necessary, by caulking over the aluminium.

Re-assemble the cylinder head, rocker box and push rod cover. Before fitting the latter refer to Service Sheet No. 70 giving details of the push rod cover joint washers.

Replace the existing oil return pipe from crankcase to oil tank with the one bearing Component No. 65-8389 and which is accommodated with a small branch pipe. Connect this branch pipe with the rocker oil feed pipe Component No. 65-294 utilising the rubber connection Component No. 66-8338, complete with ferrules Component No. 66-8339.

Secure the end of the rocker oil feed pipe which is fitted with banjo unions to the rocker spindles at the rear side of the rocker box by means of the union screws Component No. 65-306. Secure the pipe to the top frame member by means of the clip Component No. 66-9049.

Finally, replace the carburetter, exhaust lifter cable, oil drain pipe, high tension cable, exhaust pipe and resecure the petrol tank together with the saddle front connecting bolt.

For illustration see Service Sheet No. 69A.