

# B.S.A. CYCLES LTD.

SERVICE SHEET No. 56.

Service, July 1936

MOTOR CYCLE.

ALL MODELS.

## RENEWAL OF VALVE SPRINGS.

It is only to be expected that valve springs will weaken and probably distort, as the result of continued use, and it is therefore essential that the springs be periodically replaced if the best results are to be obtained.

When decarbonising, or preparing a machine for high duty work, particular care should be taken to check over both the strength and the truth of the springs, and if there be any doubt whatsoever in respect of either of these points, then both the inner and outer springs must be replaced.

To test for truth, place the valve springs on a flat surface and lay a straight edge across the top coil as a means of ascertaining that the ends of the springs are parallel to one another and square with the axis.

To test for strength a new and unused spring will be required for comparison. Place these springs—*i.e.*, the used and unused—end to end between vice jaws so that they are at right angles to the jaws and gradually compress them until their overall length is reduced by approximately  $\frac{1}{4}$ ".

Now compare the overall length of each spring while in this compressed condition. Obviously each spring should be compressed to the same overall length, but if it be found that the used spring is shorter than the new one by an amount exceeding approximately  $\frac{1}{32}$ ", then the new spring should be fitted.