

3. Measuring the valve spring

Measure the free height of the valve spring using a vernier caliper and make sure that it conforms with this specification listed on the next page.

The spring forces are also listed the reference. (Fig. 3-52)

Item	Standard value in. (mm)	Serviceable limit in. (mm)	Standard spring force
Inner valve spring	1.50 (38.1)	1.4566 (37.0)	22.8~25.8 kg/26 mm
Outer valve spring	1.6220 (41.2)	1.4748 (40.0)	45.6~51.6 kg/28 mm

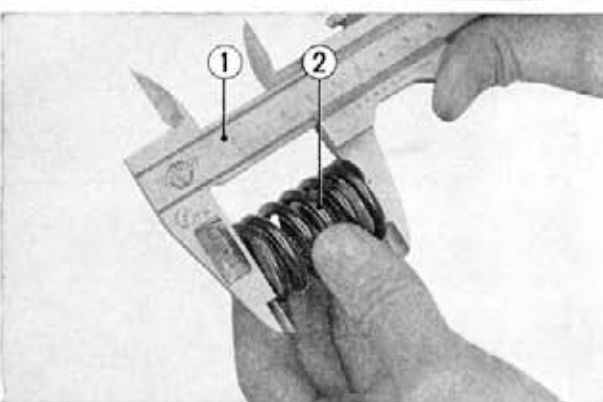


Fig. 3-52 ① Vernier caliper
② Spring

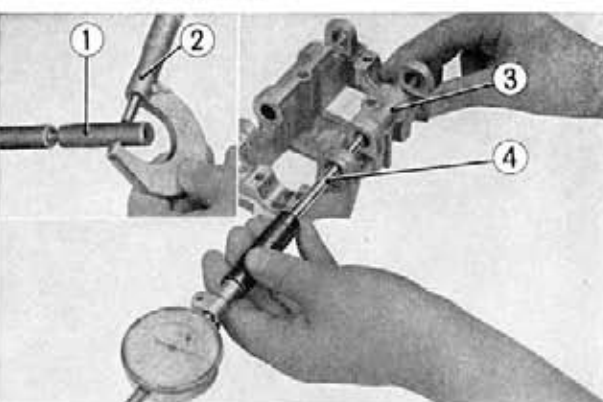


Fig. 3-53 ① Rocker arm shaft
② Micrometer
③ Camshaft holder
④ Inner dial gauge

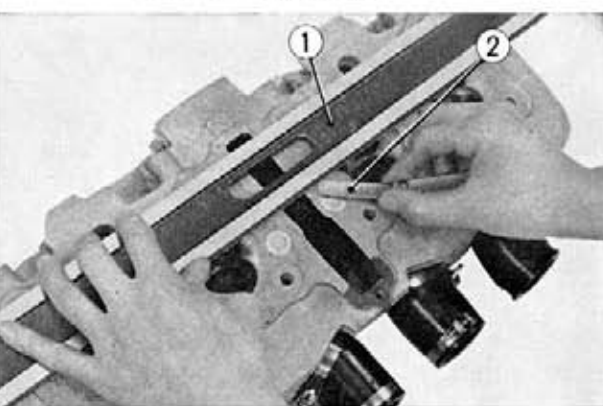


Fig. 3-54 ① Stretch
② Thickness gauge

4. Measure the rocker arm shaft support area with a micrometer and measure the rocker arm shaft bearing diameter bore using inside micrometer. Calculate clearance and if it is greater than **0.0047 in. (0.11 mm)**, replace either one or both of the parts. (Fig. 3-53)

5. Removing carbon from the combustion chamber.

Assemble the valve into the combustion chamber and remove the carbon using a carbon brush or a scraper, being careful not to scratch or damage the parts.

6. Measuring flatness of the cylinder head

Place a straight across the mounting surface of the cylinder head and check the clearance with a thickness gauge at several points to make sure that the head is not warped. If the clearance between straight edge and the head mounting surface is greater than **0.009 in. (0.25mm)**, the head should be reworked or replaced by a new head. In any event, the warp of the head should be less than **0.002 in. (0.05 mm)**.

(Fig. 3-54)