

Fig. 3.18 Checking cylinder head warpage
① Cylinder head
② Bluing or red lead

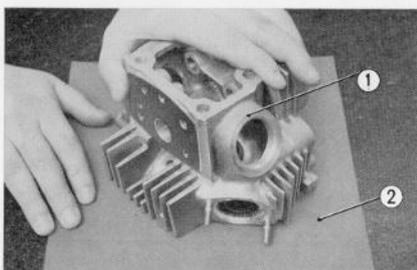


Fig. 3.19 Repairing warpage cylinder head
① Cylinder head
② Sand paper

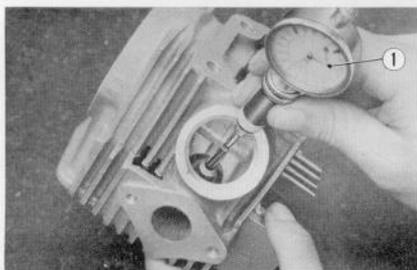


Fig. 3.20 Checking the valve guide diameter
① Cylinder gauge

C. Inspection and Repair

The cylinder head ① is exposed to the high pressure and temperature resulting from the combustion of the fuel mixture; further, when the cylinder head is unevenly torqued, it may develop cracks or warpage and will be the cause of defective sealing between the head and the cylinder and result in gas leak, air sucking, with consequent drop in compression.

The warpage of the cylinder head does not develop suddenly and it may be overlooked, therefore, caution should be exercised during reassembly since the uneven torquing of the cylinder head is a very common fault.

To inspect for warpage of the cylinder head ①, apply a thin coat of bluing or red lead ② on a surface plate and work the mating surface of the cylinder head on the surface plate; the warpage can be determined by the transfer of the bluing on to the cylinder head. (Fig. 3.18)

To correct the warpage, lap the cylinder head on the surface plate with a #200 sandpaper, finally finish by using a #400 sandpaper and then inspect again with the bluing. (Fig. 3.19)

1. Inspect the combustion chamber, inlet and exhaust ports for cracks.
2. Cylinder head combustion chamber.

Item	Standard value
Head volume (with the spark plug installed)	18~18.4 cc (1.098~1.122 cu. in)

3. Inspect the valve guide and valve stem.

Valve clearance	Standard value	Serviceable limit
Inlet	0.01~0.03 mm (0.0004~0.0012 in)	0.08 mm (0.0028 in)
Exhaust	0.03~0.05 mm (0.0012~0.0020 in)	0.1 mm (0.0032 in)

Check the valve guide diameter at the top, center and bottom in both the X and Y axes, using a precision cylinder gauge ①. Check the valve stem with a micrometer. (Fig. 3.20)