

Figure 3-36. Camshaft height

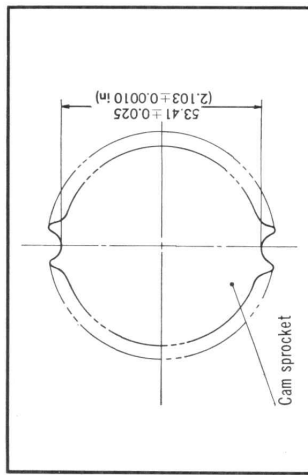


Figure 3-37. Cam sprocket teeth base contour

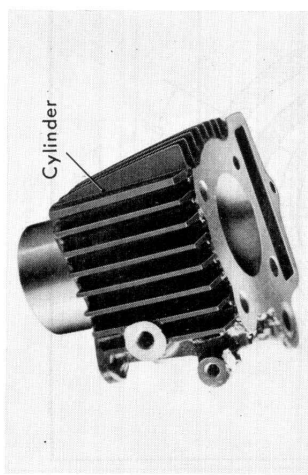


Figure 3-38. Cylinder

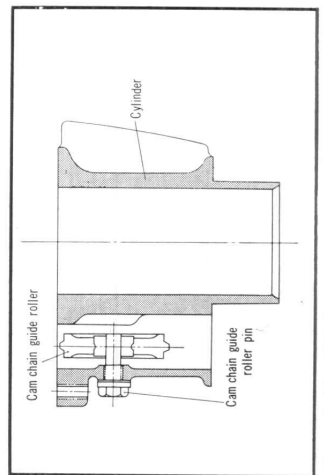


Figure 3-39. Cylinder cross section

The inlet valve opens at 5° (top dead center for C50, C50M, C65, C65M) before top dead center of the piston movement and closes at 30° (20° for C50, C50M, C65, C65M) after bottom dead center, permitting an open duration of 215° (200° for C50, C50M, C65, C65M). The exhaust valve opens at 40° (25° for C50, C50M, C65, C65M) before bottom dead center and closes 5° (5° before top dead center for C50, C50M, C65, C65M) after top dead center. This allows 225° (200° for C50, C50M, C65, C65M.) of exhaust valve open duration. This sequence is shown in Fig. 3-35 and is called the valve timing diagram.

a. Inspection

- (1) Camshaft (Fig. 3-36)

	Standard Value	Serviceable Limit
Left end dia.	29 mm (1.140 in.) -0.060 (0.0020 in.) -0.073 (0.0030 in.)	Replace if under 28.8 (1.135 in.)
Right end dia.	"	"
Shaft runout		Replace if over 0.05 (0.0020 in.)
Cam height	5.076 (0.200 in.)	Replace if under 4.9 (0.190 in.)
Left end bearing dia.	29 mm (1.140 in.) +0.021 (0.0008 in.) +0.00 (0.000 in.)	Replace if over 29.06 (1.145 in.)
Right end bearing dia.	"	"

- (2) Cam sprocket root diameter
Standard value → 53.41 ± 0.025 (2.104 ± 0.001 in.)
Serviceable limit → Replace if under 53.0 (2.09 in.)

5. CYLINDER

The cylinder is made of special cast iron. The inside cylinder wall is exposed to high temperature and pressure together with the wearing action of the reciprocating piston operating at high speed to produce a great wearing effect. Added to this, the dust in the air and the foreign object and the metallic dust contaminating the oil will hasten the rate of wear, therefore, adequate attention should be given to the cleaning of the air filter and the oil change. A gasket is installed between the cylinder and the cylinder head to maintain a seal. (Fig. 3-37, 3-38)

c. Disassembly

- (1) Remove the cylinder head in accordance with section 3.21a.
- (2) Remove the 6mm cylinder HS bolts.

- (3) Remove the 6 × 14 hex bolt and draw out the cam chain guide roller, this will permit the cylinder to be separated from the crankcase. (Fig. 3-39, 3-40)

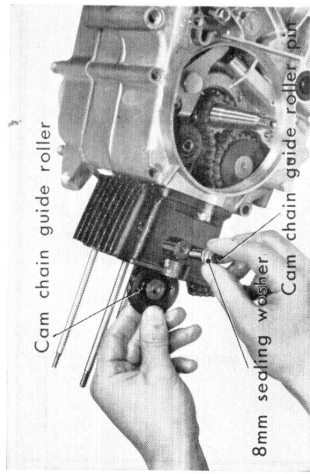


Figure 3-40. Removing cam chain guide roller

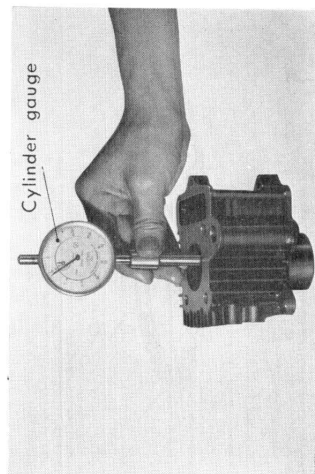


Figure 3-41. Measuring cylinder inside diameter

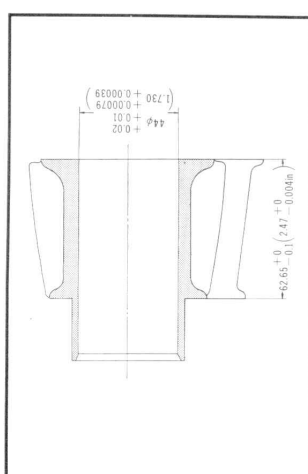


Figure 3-42. Cylinder dimensions



Figure 3-43. Piston

b. Inspection

- (1) Cylinder bore, [] is for C50, C50M, S50 (Fig. 3-41, 3-42)
Standard value → 44mm [39mm] (1.750 in) [1.54 in]
+0.02 (0.0008 in)
+0.01 (0.0004 in)
Serviceable limit → Repair by re honing if over
44.1 (1.74 in)
- (2) Cylinder oversize
Standard oversize → 0.25 (0.01 in)
- (3) Cylinder barrel
Standard value → 62.65 +0 (0.0000 in)
(2.47 in) -0.1 (0.004 in)

c. Reassembly

- (1) When assembling the cylinder, make sure that the cylinder gasket and the two dowel pins are installed.
- (2) Install the cylinder.

6. PISTON

The piston is made from material corresponding to JIS AC8B aluminum casting. This material is light and suitable for high speed, in addition to having good heat conducting property to dissipate the heat rapidly. Furthermore, the coefficient of heat expansion is small thus minimizing the warpage at elevated temperature and permitting a small piston to cylinder clearance design. The shape of the piston is an elliptical taper. The head of the piston, compared to the skirt, is exposed to higher temperature and since the expansion is greater, it is tapering smaller toward the top. The tapering of the piston also tends to lessen the piston slap when the throttle is lightly snapped without the engine being loaded.