

Fig. 3-59 ① Cylinder gauge

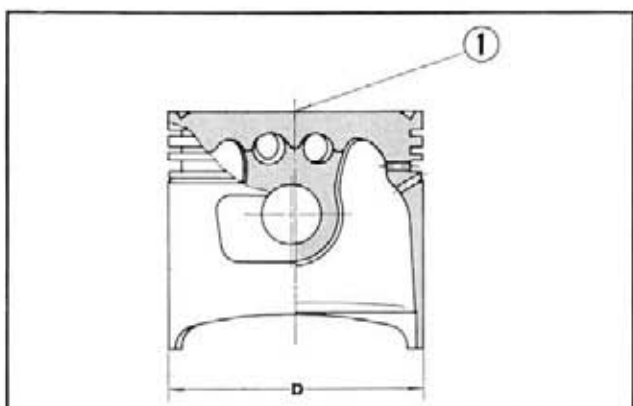
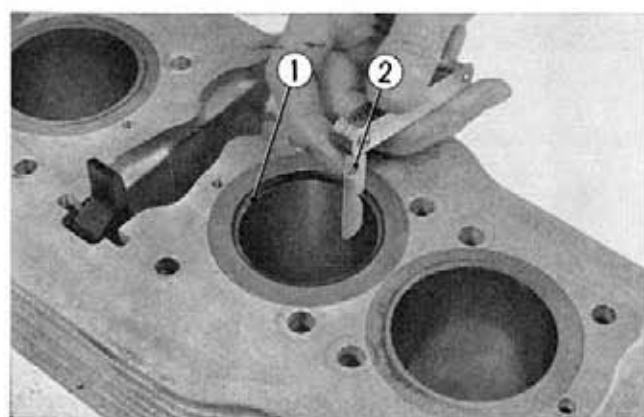


Fig. 3-60 ① Piston

Fig. 3-61 ① Micrometer  
② PistonFig. 3-62 ① Piston ring  
② Thickness gauge

### c. Inspection

1. Measuring the cylinder bore, taper and out of round. (Fig. 3-59)

Measure the cylinder bore at the top, center and bottom, measuring in both X and Y axes, using a cylinder gauge.

If the diameter is greater than **2.406 in. (61.1 mm)**, the cylinder should be rebored and honed. Further, if the taper and the out of round is greater than **0.0020 in. (0.05 mm)**, the cylinder should be repaired in same manner as above.

Measure the cylinder diameter at the point of maximum wear. Next, select the proper oversize piston to be used (0.25 mm to 1 mm oversize in increments of 0.25 mm) and determined the proper boring dimension. When boring is completed, finish up by honing. The minimum clearance between the piston and the cylinder is at the skirt section with a dimension of **0.0004~0.0016 in. (0.01~0.04 mm)**.

- Oversize piston diameter (Fig. 3-60)

|     | Oversize | Piston diameter (D) |
|-----|----------|---------------------|
| O/S | 0.25     | 61.215~61.235 mm    |
| O/S | 0.50     | 61.465~61.485 mm    |
| O/S | 0.75     | 61.715~61.735 mm    |
| O/S | 1.00     | 61.965~61.985 mm    |

2. Measuring the diameter of the piston  
Measure the piston diameter at the skirt, 90° from the pistonpin hole, using a micrometer. If the dimension is less than **2.3939 in. (60.85 mm)**, it should be replaced. (Fig. 3-61)
3. Removing the carbon  
Remove the carbon from the piston top and the ring groove by using a carbon scraper.  
If the ring groove is damaged or excessively worn, the piston should be replaced.
4. Measuring the piston ring end gap (Fig. 3-62)

Fit the ring into the cylinder bore and measure the gap at the end of the ring using a thickness gauge. When only the ring is to be replaced without boring the cylinder wear, the ring gap should be measured at the skirt of the bore.