

Boring and Honing

When boring and honing a cylinder, note the following:

- The are two sizes of oversize pistons available.
 - Oversize Piston and Rings
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 - 0.5 mm Oversize
 - 1.0 mm Oversize
- Before boring a cylinder, first measure the exact diameter of the oversize piston, and then, according to the standard clearance in the Service Data Section, determine the rebore diameter. However, if the amount of boring necessary would make the inside diameter greater than 1.0 mm oversize, the cylinder block must be replaced.
- Cylinder inside diameter must not vary more than 0.01 mm at any point.
- Be wary of measurements taken immediately after boring since the heat affects cylinder diameter.
- In the case of a rebored cylinder and oversize piston, the service limit for the cylinder is the diameter that the cylinder was bored to plus 0.1 mm and the service limit for the piston is the oversize piston original diameter minus 0.15 mm. If the exact figure for the rebored diameter is unknown, it can be roughly determined by measuring the diameter at the base of the cylinder.

Piston Ring, Piston Ring Groove Inspection

- Visually inspect the piston rings and the piston ring grooves.
- ★ If the rings are worn unevenly or damaged, they must be replaced.
- ★ If the piston ring groove are worn unevenly or damaged, the piston must be replaced and fitted with new rings.

Piston Ring End Gap

- Place the piston ring inside the cylinder, using the piston to locate the ring squarely in place. Set it close to the bottom of the cylinder, where cylinder wear is low.
- Measure the gap [A] between the ends of the ring [B] with a thickness gauge.
- ★ If the gap is wider than the service limit, the ring is worn excessively and must be replaced.

Piston Ring End Gap

	Standard	Service Limit
Top	0.25 – 0.40 mm	0.70 mm
Second	0.25 – 0.40 mm	0.70 mm

