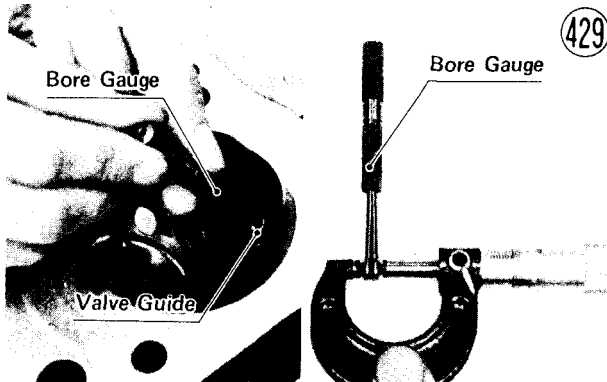


Table 25 Valve Stem Diameter

	Standard	Service Limit
Inlet	7.965-7.980 mm	7.86 mm
Exhaust	7.955-7.970 mm	7.86 mm

Valve guide inspection

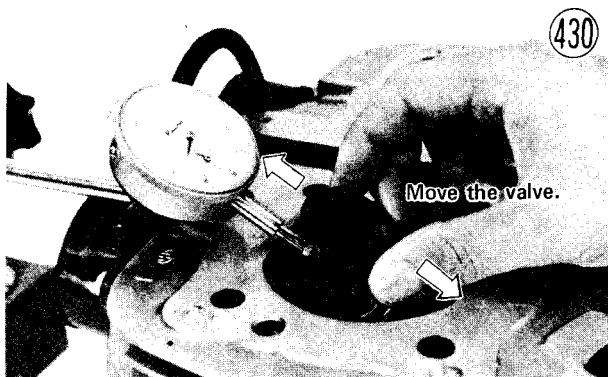
Remove the valve, and measure the inside diameter of the valve guide using a small bore gauge and micrometer. Since the guide wears unevenly, measure the diameter at four places up and down the guide. If any measurement exceeds the service limit, replace the guide.


Table 26 Valve Guide Inside Diameter

Standard	Service Limit
8.000-8.015 mm	8.10mm

If a small bore gauge is not available, insert a new valve into the guide, set a dial gauge against the stem, and move the stem back and forth to measure valve/guide clearance. Repeat the measurement in a direction at a right angle to the first.

If the valve/guide clearance exceeds the service limit, replace the guide.

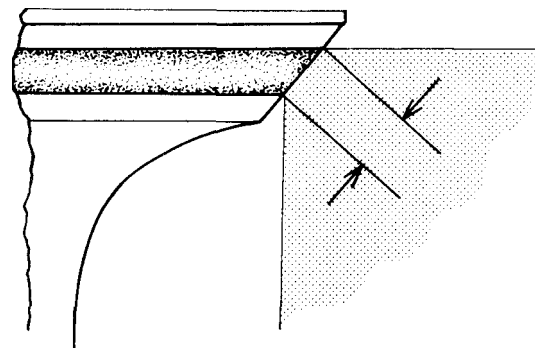

Valve/Valve Seat Contact Area
Table 27 Valve/Valve Guide Clearance

	Standard	Service Limit
Inlet	0.02-0.05 mm	0.1 mm
Exhaust	0.03-0.06 mm	0.1 mm

Valve seat repair

The valve must seat in the valve seat evenly around the circumference over the specified area. If the seat is too wide, the seating pressure per unit of area is reduced, which may result in compression leakage and carbon accumulation on the seating surface. If the seating area is too narrow, heat transfer from the valve is reduced and the valve will overheat and warp. Uneven seating or seat damage will cause compression leakage.

Valve Seating Width


Table 28 Valve Seating Width

Standard
0.7-1.0 mm

To determine whether or not the valve seat requires repair, first remove the valve, apply machinist's dye to the valve seat, and then use a lapper to tap the valve lightly into place. Remove the valve, and note where the dye adheres to the valve seating surface. The valve seating surface should be in the middle of the valve face (Fig. 431). The distribution of the dye on the seating surface gives an indication of seat condition (Fig. 432). **NOTE:** The valve and valve guide must be in good