

### VALVE STEM-TO-GUIDE CLEARANCE

Inspect each valve for bending, burning, scratches or abnormal stem wear.

Check valve movement in the guide.

Measure and record each valve stem O.D.

**STANDARD:**

IN: 5.455–5.465 mm (0.2148–0.2152 in)

EX: 5.435–5.445 mm (0.2140–0.2144 in)

**SERVICE LIMIT:**

IN/EX: 5.40 mm (0.213 in)



**NOTE**

Ream the guide to remove any carbon build-up before checking clearance.

Measure and record each valve guide I.D. using a small hole gauge or inside micrometer.

**STANDARD:**

IN/EX: 5.475–5.485 mm  
(0.2156–0.2159 in)

**SERVICE LIMIT:**

IN/EX: 5.50 mm (0.2165 in)

Determine the stem-to-guide clearance.

**STANDARD:**

IN: 0.010–0.030 mm (0.0004–0.0012 in)

EX: 0.030–0.050 mm (0.0012–0.0020 in)

**SERVICE LIMIT:** IN: 0.08 mm (0.003 in)

EX: 0.10 mm (0.004 in)

If the stem-to-guide clearance exceeds the service limits, determine if a new guide with standard dimensions would bring the clearance within tolerance. If so, replace the guides as necessary and ream to fit.

If the stem-to-guide clearance exceeds the service limits with new guides, replace the valves and guides.

**NOTE**

Reface the valve seats whenever the valve guides are replaced (page 6-10).

