

## Inserting or Replacing Valve Seat Ring

Job No.

01-7

The cylinder head of the OM 621 leaves the factory with exhaust valve seat rings only. In case of repair, however, also intake valve seat rings can be installed (see Job No. 01-0). The light metal cylinder head of the OM 636 leaves the factory with exhaust and intake valve seat rings, whereas the grey cast cylinder head has no valve seat rings.

Before inserting a new valve seat ring into the OM 621, the bore or the seat resp. for the intake valve seat ring in the cylinder head should be cautiously turned off or milled, the same applies to the old exhaust valve seat ring (see Figure 01-7/1 and page 01-0/3).

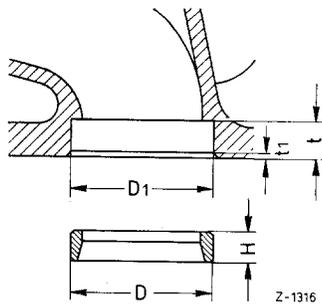


Figure 01-7/1

- D outer dia. of the valve seat ring
- D1 bore dia. in cylinder head
- H height of the valve seat ring
- t depth of bore in cylinder head
- t1 depth of recess or distance between separating surface of cylinder head and front face of valve seat ring

This work can be done with the help of a seat turning tool, part No. 000 589 02 69 (of Messrs. Hunger RDS size 1) or with a seat cutting tool and the suitable cutters.

**Note:** If the old valve seat ring is cautiously removed and the dia. of the bore (D1) lies within the specified tolerance, a valve seat ring of identical bore dia. (D1) and bore depth (t) can be installed accordingly (see Figure 01-7/1 and Page 01-0/3).

After the turning or milling process has been completed, clean the valve seat ring bore and measure the dia. with the internal dial gauge part No. 000 589 10 21 (see Figure 01-7/2) and the depth for the valve seat ring with the depth gauge.

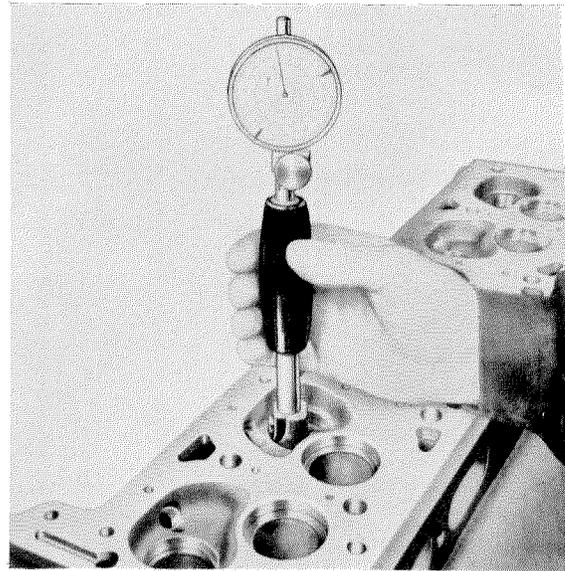


Figure 01-7/2

shown on the Model 220

Do not fail to observe that there exists an overlap of 0.059 to 0.085 mm; if this overlap does not exist, machine the bore to the following repair size and insert a valve seat ring with a larger outer dia. and a larger thickness (see Job No. 01-0, page 01-0/3).

Cool valve seat ring down before inserting and use a pressing in arbor with pressure ring to knock the inserted ring in, so that the valve seat ring snugly contacts the base of the bore.

With inserted valve seat rings, the distance (t1) from the separating surface of the cylinder head to the front face of the valve seat ring should amount to 2.1-2.2 mm with the intake and 0.6 to 2.7 mm with the exhaust (see Figure 01-7/1).

**Note:** for cooling of the valve seat ring use liquid air or a similar agent.