

Change: Third paragraph of item 4 and note following item 7 added.

12. Install the cylinder head cover with faultless gasket. Slide aluminum sealing rings over the fixing studs, screw on the fixing nuts and do not secure too tightly to prevent distortion of the cylinder head cover.
13. Operate the engine and check if oil penetrates at the cylinder head cover.

B. OM 621

The valve stem sealing is different with the intake and exhaust valves of models 190 D and 190 Db, type 621.910. With the exhaust valve, a seal ring holder is firmly attached to the valve spring retainer (9); this holder projects beyond the valve guide (13). There is a rubber seal ring (11) between the seal ring holder (9) and the valve stem (12). Further the seal ring holder serves as an additional oil screen (see Figure 05-11/4). The intake valve is sealed by a seal ring holder (6) with inserted Silicon seal ring (7), which is slid over the valve guide (8) and pressed on through the inner valve spring (see Figure 05-11/5).

For models 190 Dc, 180 Dc, and L and O 319 D, the intake and exhaust valve seals are the same (refer to Fig. 05-16/4).

Replacing valve stem sealing

1. Remove the cylinder head cover. To do this, loosen the mounting screws, the venting pipe and the bracket for the additional control.
2. Loosen the necked-down bolts for the rocker arm bracket mounting and remove the brackets including the rocker arms. To do this, turn the camshaft in such a way that the rocker arms are unloaded.
3. Turn the crankshaft in such a way that the piston of the respective valve stem seal is in top dead centre. This prevents the valves from falling into the cylinders.
4. Loosen the cap nut (7) of the respective exhaust valve, retaining the counternut (8). Then unscrew the two nuts and remove the valve spring retainer including seal ring holder (9). Insert a new rubber seal ring (11) into the seal ring holder and remount the counternut and the cap nut (see Figure 05-11/4).
With the intake valves remove the valve spring retainer (3), the valve springs (4) and (5), the seal ring holder (6) and the Silicon seal ring (7) after loosening the cap nut (1) and the counternut (2). Apply oil to a new seal ring (7) and slide it over the valve stem until it contacts the valve guide. Then mount the seal ring holder, the valve springs, the valve spring retainer and the counternut and cap nut (Figure 05-11/5). When installing valves for **models 190 Dc, 180 Dc, and L and O 319 D**, be sure to replace valve seal (5) (Fig. 05-16/4). Seals for intake and exhaust valves are the same. First insert valve rotating device (6) or, for 180 Dc, filler piece (Fig. 05-16/4). **Place assembly sleeve 000 589 16 61 00 over respective valve** to prevent damaging the Teflon sealing ring in valve seal by threads on valve stem. Slide valve seal over lubricated assembly sleeve until valve seal snaps into valve guide groove, then assemble valve spring (4), valve spring retainer (3), hex. nut (2) and cap nut (1) (refer to Fig. 05-16/4).
5. Mount the rocker arm brackets, turning the camshaft so that the rocker arms are unloaded. The necked-down bolts of the brackets are tightened with a torque of 3.75 mkg.
6. Adjust the valve clearance (see Job No. 00-3, Section B).
7. Mount the cylinder head cover. Observe correct seat of the gasket and also check the wire cable (18) for free movement in the slot of the stop angle on the angular lever (24) (see Figure 00-11/2).

Note: Supplementary installation of Teflon valve stem sealing for models 190 D and 190 Db (type 621.910).

For supplementary installation remove cylinder head, disassemble valves and replace intake and exhaust valve guides (refer to Job No. 01-6).

Install valves with new valve seal (refer to item 4).

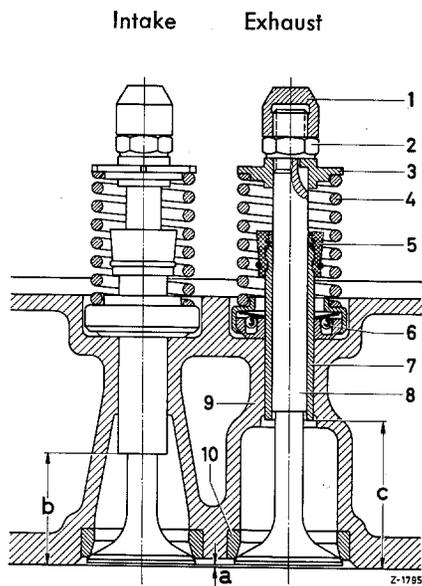


Fig. 05-16/4

Arrangement of valves in cylinder head of model 190 Dc

- 1 Cap nut
- 2 Counter nut
- 3 Valve spring retainer
- 4 Valve spring
- 5 Valve sealing (Teflon sealing ring)
- 6 Valve rotating device
- 7 Valve guide
- 8 Valve
- 9 Cylinder head
- 10 Valve seat ring
- a = Distance between valve retainer and sep. surface of cyl. head
- b = Distance between face end exhaust valve guide and sep. surface cylinder head
- c = Distance between face end intake valve guide and sep. surface cylinder head

Parts required for change

- 4 Valve guides intake (61 mm long)
- 4 Valve guides exhaust (49.5 mm long)
- 4 Valve spring retainers for exhaust
- 8 PC-Valve seals
to slide valve sealing on
Assembly sleeve

- Part No. 621 053 13 29
- 621 053 34 30
- 621 053 10 25
- 000 053 00 58
- 000 589 16 61 00