

# Disassembly, Checking, Repairing and Assembly of Rocker Mounting, OM 636

Job No.

05-2

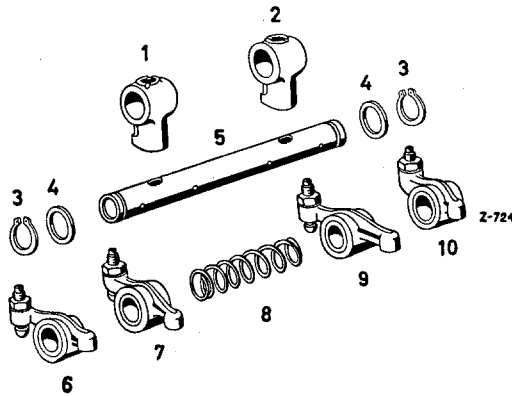


Figure 05-2/1

- 1 Rocker bracket of 1st and 3rd cylinder
- 2 Rocker bracket of 2nd and 4th cylinder
- 3 Guard ring
- 4 Thrust washer
- 5 Rocker shaft
- 6 Rocker for exhaust valve, cylinder 1 and 3
- 7 Rocker for inlet valve, cylinder 1 and 3
- 8 Pressure spring
- 9 Rocker for inlet valve, cylinder 2 and 4
- 10 Rocker for exhaust valve, cylinder 2 and 4

## a) Disassembly of Rocker Mounting

Remove the guard rings (3) from either end of the rocker shaft. Take the thrust washers (4), the rockers, the rocker brackets and the tension springs (8) off the rocker shafts (see Figure 05-2/1).

## b) Checking and Repairing Rocker Mounting

Check the rocker shafts for wear. Replace rocker shafts which are smaller in diameter than 16.960 mm or scored. Check the plugs in either end of the rocker shafts for tight seating. Replace the old plugs by new ones if necessary. The plugs must be absolutely tight, so that the oil pressure will not be reduced.

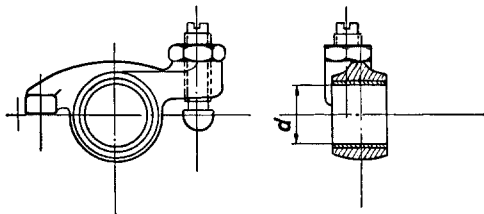


Figure 05-2/2

Check wear of rocker bushes; if a bush is worn, scored, or smaller in diameter than 17.02 mm, press in a new bush.

For this purpose press out the old bush and measure the base bore in the rocker. Generally, a new bush can be pressed in again with a force-fit of 0.014 to 0.056. If the bore is out-of-round, however, or larger than 20.021 mm, ream the bore to the overhaul stage. The bushes for the overhaul stage have an outer diameter of 20.256 to 20.235 mm.

After pressing-in of the bush, ream or bore to the specified diameter of 17.000 to 17.018 mm.

Reground worn thrust surfaces of the rockers.

Damaged ball-head bolts and nuts must always be replaced.

## c) Assembly of Rocker Mounting

1. Clean all parts before assembly. Especially the inside of the rocker shafts must be thoroughly flushed and blown through. In addition force compressed air through the oilways and oil lines before installing the rockers.
2. Install the guard ring (8) in the groove on one end of the rocker shaft (see Figure 05-2/3).
3. Oil the rocker shaft and the rocker bushes with graphited oil.
4. Put the thrust washer (10) and the rocker (7) on the rocker shaft (see Figure 05-2/3).
5. Slide the rocker bracket (11) on the shaft, so that the oil groove at the bottom of the rocker bracket faces towards the ball-head bolt end of the rocker (see Figure 05-2/3).

**Make sure of this, because the oil groove at the bottom of the rocker bracket must coincide with the oilway in the cylinder head.**

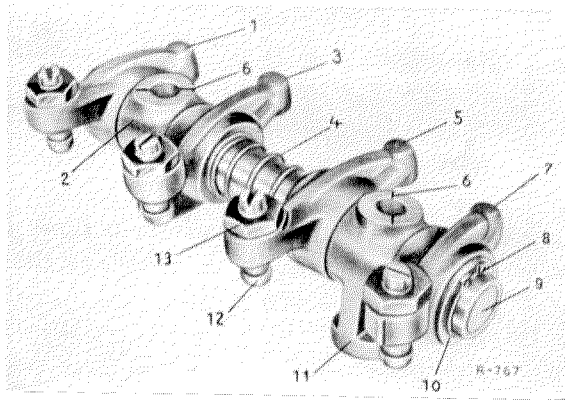


Figure 05-2/3

- 1 Rocker for exhaust valve; cylinder 2 and 4
- 2 Rocker bracket for the 2nd and 4th cylinder
- 3 Rocker for inlet valve; cylinder 2 and 4
- 4 Tension spring
- 5 Rocker for inlet valve; cylinder 1 and 3
- 6 Oil groove for splash oil exit
- 7 Rocker for exhaust valve; cylinder 1 and 3
- 8 Guard ring
- 9 Plug in rocker shaft
- 10 Thrust washer between rocker and guard ring
- 11 Rocker bracket for 1st and 3rd cylinder
- 12 Ball-head bolt
- 13 Lock nut

Furthermore, the oil groove (6) at the top of the rocker bracket (11) must point towards the ball-head bolt of the exhaust rocker (7) (see Figure 05-2/3).

6. Put the rocker (5), the tension spring (4) and the rocker (3) on the rocker shaft (see Figure 05-2/3).
7. Put the rocker bracket (2) on the shaft, so that the oil groove at the bottom of the rocker bracket coincides with the oilway in the cylinder head; in addition the oil groove (6) at the top of the rocker bracket (2) must point towards the ball-head bolt of the exhaust rocker (1) (see Figure 05-2/3).
8. Put the exhaust rocker (1) and the thrust washer (10) on the rocker shaft and install the guard ring (8) (see Figure 05-2/3).

**Note:** The assembled rocker shafts are interchangeable.

Formerly the rocker mounting was assembled in such a way, that the oil groove (6)

in the rocker bracket (11) pointed towards the ball-head bolt of the rocker (5) for the inlet valve and the oil groove (6) in the rocker bracket (2) towards the ball-head bolt of the rocker (3) for the inlet valve (see Figure 05-2/4).

In this arrangement the oil from the grooves of the rocker brackets splashed exactly in the direction of the oil filler. On the engines, on which the filler cap of the oil filler also serves to ventilate the crankcase, this arrangement caused loss of oil through the oil filler. By exchanging the rocker brackets (11) and (2) the oil splashes now on the ball-head bolts of the rockers (7 and 1) for the exhaust valves (see Figure 05-2/3). By this a loss of oil through the oil filler and/or air vent filter is prevented.

On the engines of the type 636.930, 636.919 and 636.934 the rocker brackets must be mounted as shown in Figure 05-2/3.

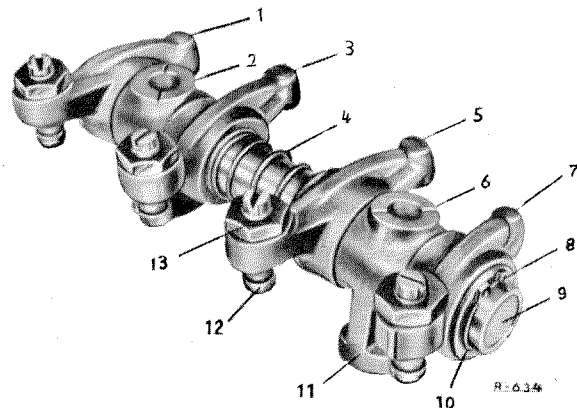


Figure 05-2/4

old version

- 1 Rocker for exhaust valve; cylinder 2 and 4
- 2 Rocker bracket for the 2nd and 4th cylinder
- 3 Rocker for inlet valve; cylinder 2 and 4
- 4 Pressure spring
- 5 Rocker for inlet valve; cylinder 1 and 3
- 6 Oil groove for splash oil exit
- 7 Rocker for exhaust valve; cylinder 1 and 3
- 8 Guard ring
- 9 Plug in rocker shaft
- 10 Thrust washer between rocker and guard ring
- 11 Rocker bracket for the 1st and 3rd cylinder
- 12 Ball-head bolt
- 13 Hex. nut