

## A. OM 636

Five different water pump designs are installed in the engines of the Model OM 636 (see Job No. 20-8). Apart from the mounting of the fan, the removal and installation is similar for all designs. The fan is either fixed to the belt pulley of the water pump or to the belt pulley at the fan bearing bracket or to the belt pulley on the crankshaft (see Job No. 20-10).

### Removal:

1. Partly drain the cooling water. If the cooling water contains additives the cooling water has to be saved and poured back afterwards.
2. Loosen the hose joint clip at the cooling water outlet pipe on top between engine and radiator.
3. Loosen the fixing of the radiator and press the radiator towards the front.

**Note:** This is necessary to allow the unscrewing of the fan and the removal of the water pump.

On the vehicle engine 636.930, the radiator need not be loosened and the fan need not be removed.

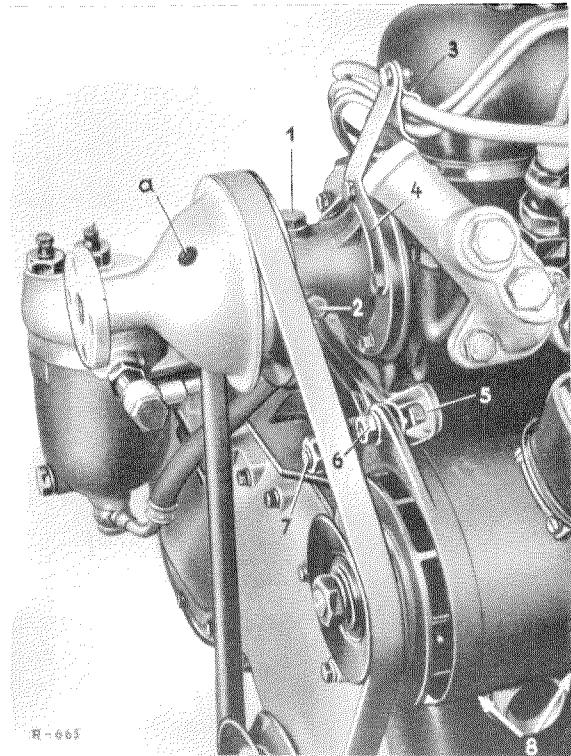


Figure 20-5/1

4. Unscrew the fixing screws of the fan and remove the fan from the belt pulley.
5. Loosen the two fixing screws (8) at the generator support, the fixing nut (7) and the fixing screw (6) at the generator holder (5). Press the generator towards the engine and remove the V-belt (see Figure 20-5/1).
6. Loosen the hexagon screw fixing the pipe clip (3) for the injection and vacuum line to the holder (4) (see Figure 20-5/1).
7. Unscrew the 5 fixing screws of the water pump housing, press the holder (4) side-wards and remove the water pump from the cylinder head.

- 1 Filler cap with vent hole
- 2 Oil level check screw
- 3 Pipe clip for injection and vacuum line
- 4 Holder for pipe clip
- 5 Generator holder
- 6 Fixing screw at generator holder
- 7 Fixing nut for generator holder and front engine support
- 8 Fixing screws at generator holder (not visible)

**Note:** Repairing, see Job No. 20-8, Section A, Paragraph I, II and III.

### Installation:

8. Before the installation of the water pump thoroughly remove traces of the gasket from the contact surface of the cylinder head.

9. Lightly grease the new gasket and seat it on the connecting flange of the water pump.

Now insert the water pump in the cylinder head, so that the filler cap (1) with the vent hole is exactly on top. Screw in the fixing screws of the water pump. Fix the pipe clip holder (4) to the water pump with the two longer screws M 6 x 18. Tighten all screws evenly (see Figure 20-5/1).

10. Tighten the hexagon screw fixing the pipe clip (3) to the holder (4). The pipe clip must properly clamp the lines to prevent vibrating of the lines.
11. Install the V-belt, but do not use sharp-edged tools for this purpose. Tension the V-belt (see Job No. 20-6).
12. Attach the fan to the belt pulley. If hexagon screws M 8 x 32 DIN 931 and/or bolts and nuts are used, the screw heads must face ahead and the nuts have to be mounted with lock washers B 8 DIN 137 (also see Page 20-12/1).

**Note:** If a spacer adjusting the distance between fan and radiator has been removed, reinstall it between the fan and the belt pulley. Such spacer rings are

available 4 mm, 8 mm, and 11 mm thick (also see Page 20-8/10). The outer diameter of the spacer ring is 64 mm or 66 mm.

13. Mount the radiator in such a way that there will be a distance of 15 to 18 mm between the fan and the radiator. This distance must always be observed so that the cooling effect of the fan is not reduced. Tighten the hose joint clip at the cooling water outlet pipe and refill the cooling water.

**Note:** On the vehicle engine for the 180 D, type 636.930, do not fail to keep to the distances  $a = 20$  mm,  $b = 14$  mm (see Figure 20-5/2). If necessary, correct by dislocating the radiator.

14. Fill the water pump housing with Hypoid oil SAE 90. To do this, unscrew the filler plug (1) and also the oil level check screw (2) located at the side of the housing. Fill in until the oil flows out of the level check hole. Reinstall the two plugs (see Figure 20-5/1).

### Caution!

**The water pumps are delivered without oil filling.**

## B. OM 621

### Removal:

1. Carry out operations according to Section A, OM 636, items 1 through 4.
2. Loosen the nuts for the generator mounting (1) and the tensioning device (2-6) and turn the tension nut (4) in clockwise direction until the V-belt can be removed (see Figure 20-6/6).
3. Unscrew the venting line (9) from the water pump to the cylinder head and remove it (see Figure 20-6/6).

4. Unscrew the 3 hex. hd. screws on the water pump and remove the water pump.

### Installation:

5. For mounting the water pump, do not fail to replace the seal ring behind the upper mounting lug on the water pump.
6. Install the venting line (9) ensuring that it is free from tension and use two new seal rings each on the connections (see Figure 20-6/6).