

D. Disassembly, Cleaning and Reassembly of Oil Filter

The oil filter is located in the main flow and is provided with two filter elements:

- a) a metal filter element and
- b) a fine filter element (micronic element).

The filter housing top has two oil relief valves corresponding to the two filter elements.

If one of the filters is clogged, the oil passes directly through the appropriate oil relief valve so that oil circulation is not impeded.

The metal filter must be cleaned after every 4000 km; the fine filter on the other hand must be replaced after every 8000 km.

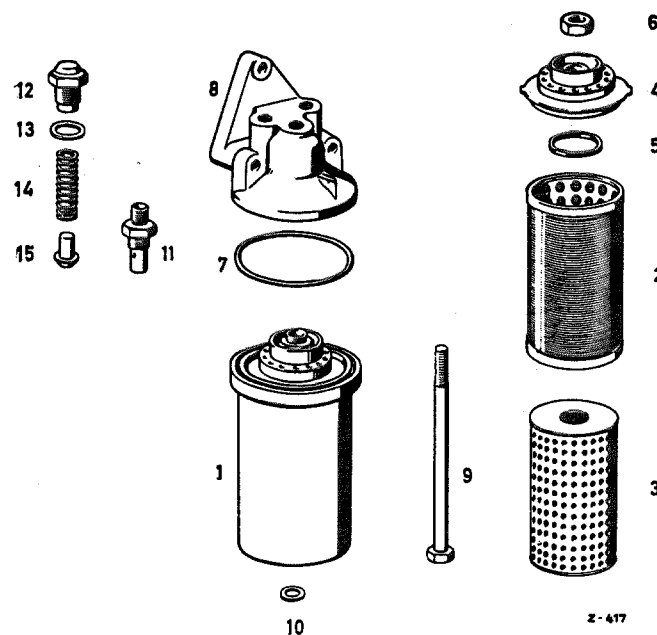


Fig. 18—5/7

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|------------------------------------------|----------------------------------------|
| 1 Oil filter housing base assembly | 9 Hexagon screw M 10×1×160 DIN 960-8 G |
| 2 Metal filter element | 10 Seal |
| 3 Fine filter element (micronic element) | 11 Threaded union |
| 4 Discharge ring | 12 Screw plug |
| 5 Seal | 13 Seal |
| 6 Hexagon nut | 14 Spring |
| 7 Seal | 15 Valve cone |
| 8 Oil filter housing top | |

Disassembly:

1. Screw out the hexagon screw (9) and remove the oil filter housing base from the housing top.

Caution! Keep the housing base vertical as it is filled with oil.

Note: The oil filter housing top (8) should not normally be unscrewed from the engine.

2. Take off the nut (6), then take out the discharge ring (4) and the metal filter and fine filter elements (2) and (3) (Fig. 18—5/8).

3. Clean the metal filter element thoroughly inside and outside with a soft brush in clean gasoline (do not use a wire brush) (Fig. 18—5/9). Then blow out with compressed air from the inside and check to ensure that all the interstices are perfectly clean. If the metal filter element is damaged, it must be replaced.

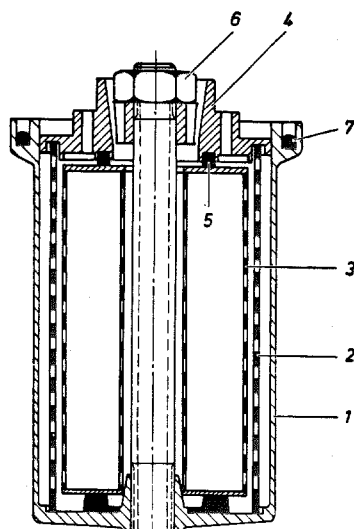


Fig. 18—5/8

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|---------------------------|---------------|
| 1 Oil filter housing base | 5 Seal |
| 2 Metal filter element | 6 Hexagon nut |
| 3 Fine filter element | 7 Seal |
| 4 Discharge ring | |

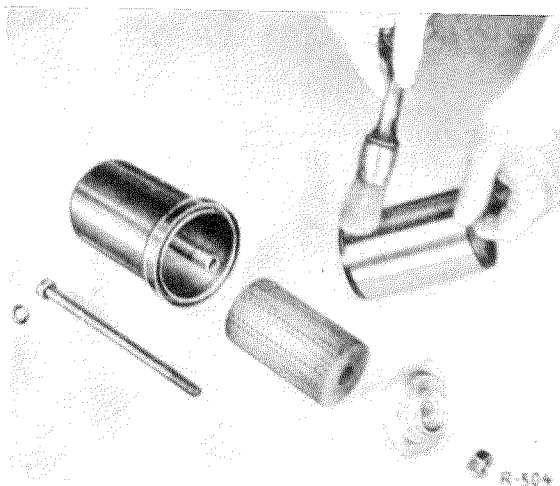
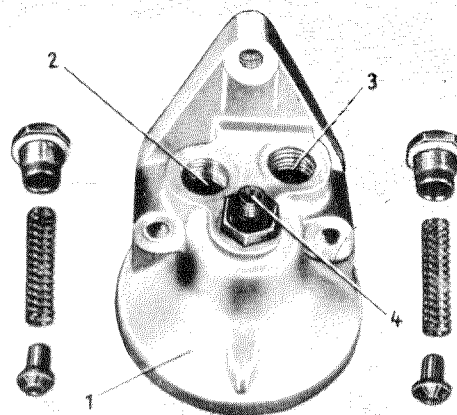


Fig. 18—5/9

Then carefully clean the base and the discharge ring in the same way. The oil from the paper filter element should only be shaken off. The paper filter element cannot and must not be cleaned; it must in any case be replaced by a new one after 8000 km. If a new fine filter element is not available it can, if necessary, be left out altogether but then the filtering will obviously be rather less effective.

4. Screw out the oil relief valves from the housing top and disassemble and clean them.



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Fig. 18—5/10

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|--------------------------------------|
| 1 Oil filter housing top |
| 2 Bore for oil relief valve 1.2 atm. |
| 3 Bore for oil relief valve 2 atm. |
| 4 Threaded union |

5. Check the valve springs, the valve cones and the valve seats. The springs are identical for both oil relief valves. The different opening pressures of the valves are obtained by means of a different initial tension of the springs.

The opening pressure for the oil relief valves is:

- | | |
|----------------------|-------------------------------|
| for the metal filter | $2 \pm 0.2 \text{ kg/cm}^2$ |
| for the paper filter | $1.2 \pm 0.2 \text{ kg/cm}^2$ |

Test Values for the Springs of the Oil Relief Valves

Length L and Pressure P					Gage of wire d mm	External diameter D mm
free length L mm	valve closed		valve open			
	L ₁ mm	P ₁ kg	L ₂ mm	P ₂ kg		
49	32	2.5	24	3.30	1.25	12.25

Reassembly:

6. Install the valve cones (15) and the valve springs (14) in the housing top, then screw in the screw plugs (12) together with a new seal (13) (see Fig. 18 — 5/7).
7. Install the fine filter and metal filter elements (2) and (3) in the base. Place the seal (5) in the discharge ring (4) and after fitting the discharge ring onto the base, screw up with the nut (6) (see Fig. 18 — 5/8).

Note: When fitting the discharge ring make sure that it is centered in the bore of the base.

8. Insert the seal (7) in the groove in the base and screw the top and the base together

with the screw (9). Do not forget the seal (10) between the screw and the base (see Fig. 18 — 5/7).

The screw must be tightened up sufficiently for the base to be secured against leakage. But under no circumstances must the screw be tightened up too much as otherwise the bottom of the base will be collapsed.

Note: Only a 160 mm screw (9) and a new seal (10) between the base and the fixing screw may be used; if a longer screw is used, the bores for the oil pressure gage line in the top (8) might be covered and this would result in a false indication of the oil pressure.