

B. OM 621

- a) **Vertically installed main line pot-shaped filter**, mounted in engines of type 621.910 (model 190 D or 190 Db) and 621.914 (model 180 Dc).

Removal:

1. Before removing the complete oil filter, unscrew the line for the oil pressure gauge from the fitting (5) (see Figure 18-7/4).
2. Unscrew the mounting screws (1) from the filter housing upper part and remove the filter (see Figure 18-7/4).

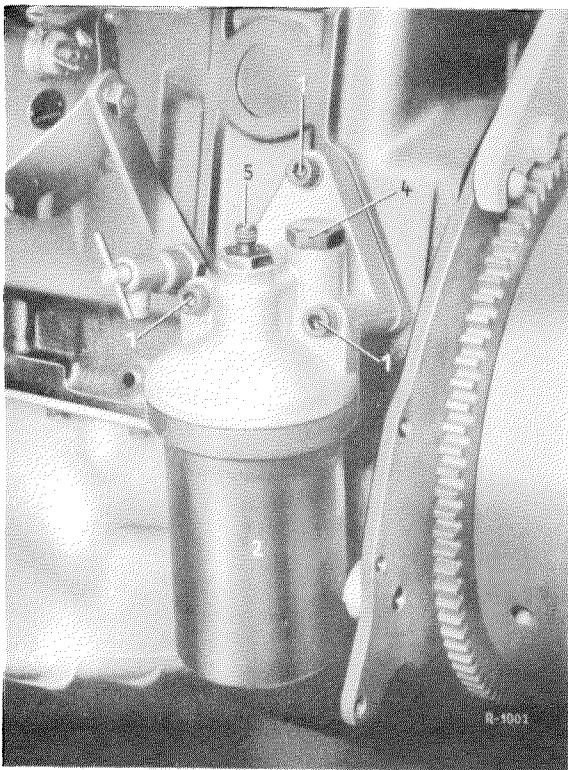


Figure 18-7/4

The figure shows the oil filter on the Model 190

- 1 Hex. socket screw
top: M 8×30 DIN 912-8 G
bottom: M 8×60 DIN 912-8 G
- 2 Filter housing lower part
- 4 Oil pressure relief valve (by-pass valve) 2.2 to 2.5 atm.
- 5 Screw fitting or line to oil pressure gauge

Note: For cleaning the oil filter within the routine lubricating and service work, it is necessary to remove only the filter housing lower part. With the engine installed in the vehicle, completely turn the wheel to

the right, unscrew the hex. hd. screw from the housing lower part and remove the lower part downwards (see Figure 18-7/5).

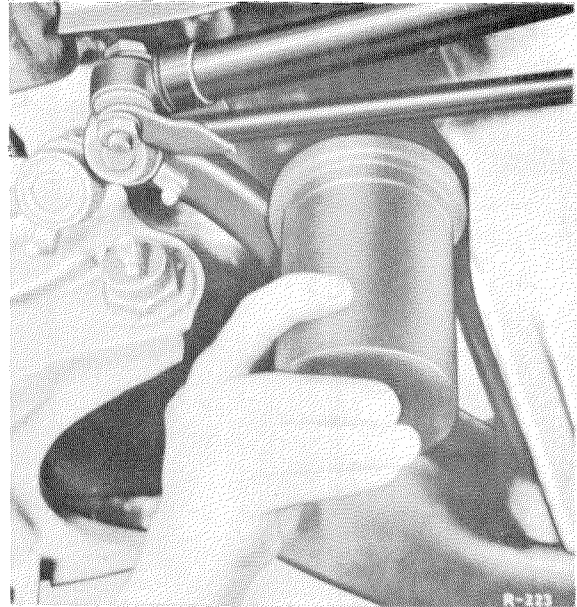


Figure 18-7/5

Cleaning and checking oil filter (see Job No. 18-9, Paragraph B).

Installation:

3. When installing the oil filter, replace the gasket between the filter housing upper part and the cylinder crankcase.

Tighten the oil filter and connect the line for the oil pressure gauge.

Note: If the housing lower part had been removed, **observe that the seal ring does not jam when fastening the lower part to the upper part.**

4. If the oil filter had been dismantled and no oil change is made, re-fill 0.5 lit. of motor-oil.
5. Operate the engine, check filter and connections for leaks (oil loss).

- b) Combination main and by-pass oil filter,** installed in engines of types 621.912 (model 190 Dc) and 621.913 (L and O 319 D) (see Figure 18-7/6).

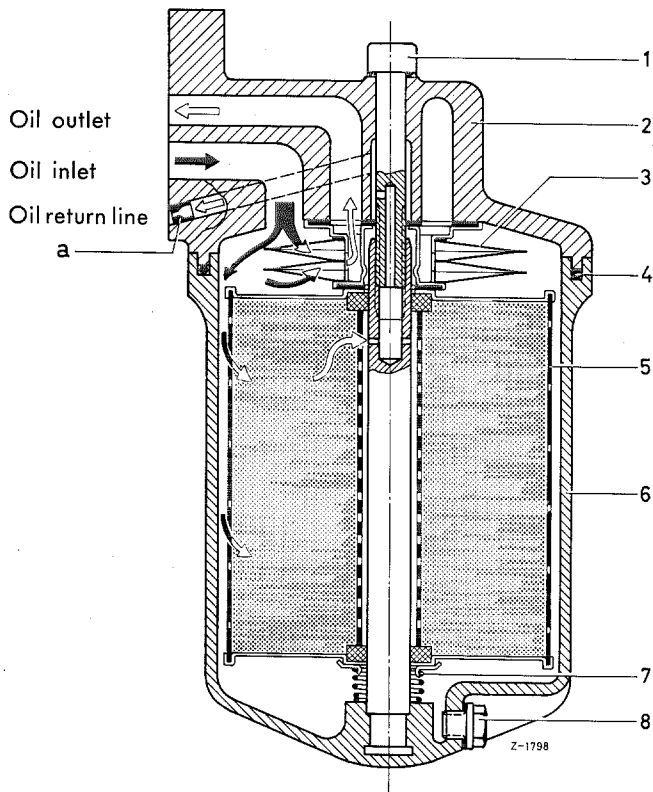


Figure 18-7/6

Combination main and by-pass oil filter

with old oil drain screw. The new drain screw is fitted approx. 20 mm higher on outer jacket of filter, lower part (see Figure 18-9/11).

- 1 Cylinder bolt for mounting of oil filter, lower part
- 2 Oil filter, upper part
- 3 Main oilway filter element
- 4 Rubber seal
- 5 By-pass filter element
- 6 Oil filter, lower part
- 7 Compression spring with spring plate
- 8 Oil drain screw
- a Throttle hole

Removal:

Removal of the complete oil filter is similar to procedure described under a).

For removal and installation of bottom part of oil filter, proceed as follows:

1. Engage reverse gear, turn steering wheel completely toward the right and release hand brake.
2. Screw out oil drain screw (8) in bottom part of filter, drain oil. If drain screw is badly

accessible, loosen cylinder screw (1) lightly and turn bottom part accordingly (See Figure 18-7/6).

3. Remove bottom part of filter by unscrewing cylinder bolt (1). Use special wrench Part No. 110 589 00 07 00 with SW 8 for the purpose.
4. Remove bottom part of filter (6) and take out main filter element (3). Then take out bottom part (6) between tie rod and front axle support (see Figure 18-7/7). If there is not sufficient space to remove it, have somebody else pull the steering toward the right until the bottom part is removed. In addition, raise engine slightly.

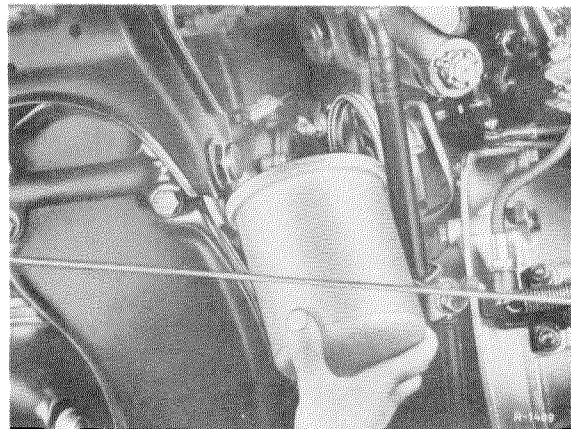


Figure 18-7/7

5. Remove by-pass filter element (5) and compression spring (7) with plate and wash bottom part of filter with gasoline.

Check by-pass line, or hollow cylinder screw (1), as well as return hole in riser pipe of filter, bottom part, and blow out with compressed air, if required (see Figure 18-7/6).

6. Check rubber ring in bottom part of filter and replace, if required.

Note: Use only recommended sealing rings Part. No. 621 997 00 45.

7. Use **new** sealing rings for oil drain screw (8) and cylinder screw (1); screw in oil drain screw and tighten.

8. Place compression spring with spring retainer (7) and then new bypass filter insert into base.
9. Wash cleanable main flow filter insert in gasoline. **Note that no dirt should reach the good end, that is, the inner surface of the element.** Penetration of dirt can be effectively prevented by closing the upper and lower opening of the main flow insert by means of covering pliers, part No. 110589 0068, or by means of two washers and one screw. After the covering pliers or the washers have been removed the main flow filter insert should be **lightly** blown out with compressed air.

Caution: Excessive blowing may damage the plastic fabric.

Note: As of late the main flow filter insert is supplied with cast-on sealing lips (refer to Figure 18-7/9) instead of the seals glued-on with Dichtin sealing compound (refer to Figure 18-7/8).

Installation:

10. Then take filter base again in-between tierod and front axle support—vice-versa to item 4. Place main flow filter insert in position on bypass filter insert with the large hole pointing up and attach filter base with cylinder head screw (1) to filter top; in doing so turn filter top in such a manner that the oil drain plug (8) points downwards (refer to Figure 18-7/6). Tightening torque of cylinder head screw (1) is approx. 4.0–0.5 mkg. For special wrench to tighten

cylinder head screw (1) refer to group 18 in tools catalog.

Important! Cylinder head screw (1) may definitely not be replaced by a normal hexagon screw. When using a normal screw the bypass will not function. The screw supplied by the factory has a through-hole for the bypass.

11. If the oil filter has been removed and no oil change has been completed, add 1 liter of engine oil.

Note: The oil quantity for the new combination oil filter is approx. 1 liter.

During an oil change **with** oil filter service also fill 5 liters of engine oil into the engines having a new combination oil filter. When changing oil **without** oil filter service fill 4 liters oil into engine as before.

12. Run engine, check filter and connections for leaks (oil losses) and set controls and steering into center position.

Note: Be sure that no engine is run without bypass filter insert because this will also make the main flow filter insert ineffective.

Whenever bypass filter inserts are hard to obtain abroad they can be ordered directly from the firms of Fram (model C 4), Knecht (model ENT 305) or Mann und Hummel (model P 1145) in the dimensions of 110 mm dia. and 125–3 mm height.

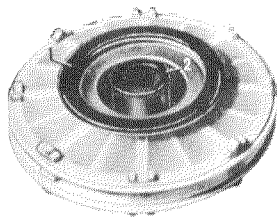


Figure 18-7/8

with glued-on rubber seals

1 outer seals
2 inner

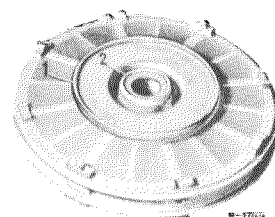


Figure 18-7/9

with cast-on sealing lips

1 outer sealing lips
2 inner