

C. Oil Bath Air Filter

In this filter design the aspirated air flows into the fresh air chamber and through the inlet gap between the insert and the housing to the oil bath chamber in which some of the impurities are already separated. The remaining dirt particles and the oil carried by the air are caught by the filter element wetted with oil by the air flow, with the excess oil dripping back from there into the oil bath (see Figure 09-8/2).

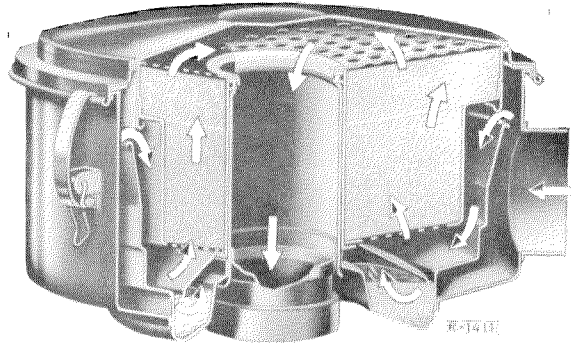


Figure 09-8/2

The oil bath air filter with function perfectly only when it is **cleaned in time in accordance with the dust deposits and is provided with the specified fresh oil**. In time means, **as soon as the oil has become dark and thick as a result of the caught dirt**.

The filter element should be thoroughly washed in diesel fuel, kerosene or non-acid cleaning agents and then centrifuged, dried or blown dry with compressed air.

Never use gasoline, water, lye or acid-containing liquids for washing and rinsing (using P 3 or Tri, for example, will destroy the filter packing).

Remove the old oil from the filter base completely and wash the base. The oil level in the bath chamber should be neither **too low** nor **too high, therefore fill in fresh oil only up to mark "Normal Oil Level"** (refer to arrow figure 09-8/3). In the various filter makes the oil level is indicated either by marking arrows (Figure 09-8/3) or by a red ring (6) in the base (3) (Figure 09-8/4) or by a bead in the base (Figure 09-8/5). When a bead is used its lower edge shows the normal level and its upper edge the maximum level.

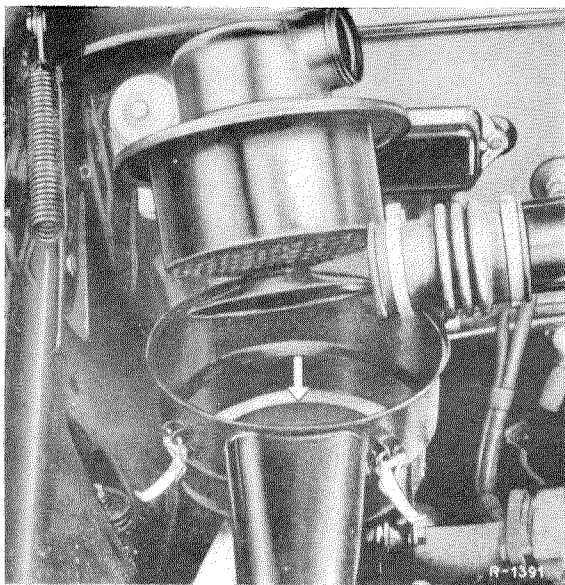


Figure 09-8/3

Model 190 Dc

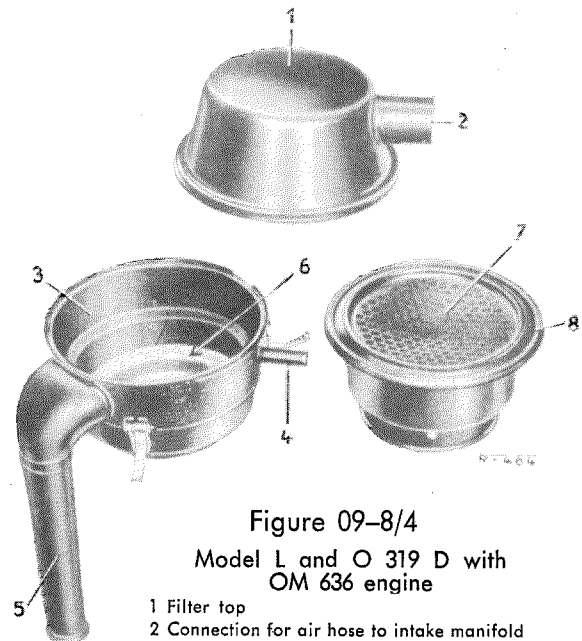


Figure 09-8/4

Model L and O 319 D with
OM 636 engine

- 1 Filter top
- 2 Connection for air hose to intake manifold
- 3 Filter base
- 4 Connection for bleeding crankcase
- 5 Fresh air intake pipe
- 6 Oil level marked by red ring
- 7 Filter element
- 8 Rubber gasket

If the oil level is too low there is insufficient filter action. If the oil level is too high, the intake air is carrying oil along in upward direction and through the filter packing into the combustion chamber of the engine. Oil and dust will form an abrasive compound which will cause early wear of cylinders and pistons.

With a warm engine the oil level should not be checked immediately, but approximately one hour after stopping the engine. Only then will the oil from the filter element have come back into the oil bath chamber.

Normally oil need not be refilled because a well dimensioned and serviced oil bath filter will not loose oil.

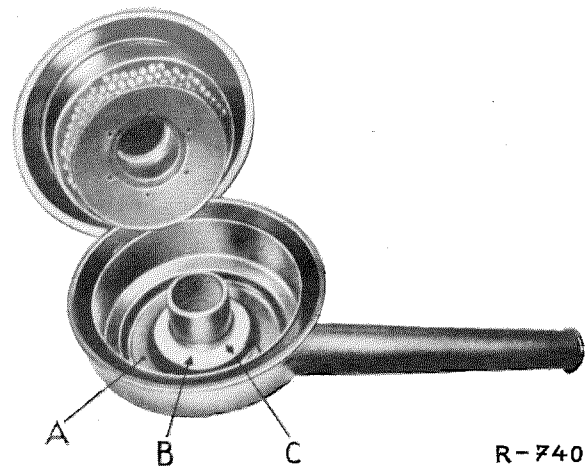


Figure 09-8/5

A Oil bath chamber
B Maximum oil level
C Normal oil level

For checking the oil level remove the top or bottom with its insert, depending on filter type, after loosening the locks (refer to Figure 09-8/3).

Following a check or a refill of oil insert filter element (do not wet filter element with oil), place the top or bottom (depending on type) in position and close the locks. When attaching the cover and filter insert watch out for perfect seating of oil rings. Replace swollen or deformed sealing rings.

Also watch out for an airtight intake line and a close connection of the air filter on or to the throttle duct. If leaks show up, they should be repaired immediately to keep the filter efficiency at a maximum level. In addition, leaks at the intake pipe will cause incorrect vacuum values for pneumatic injection control.

Oil capacities of oil bath air filters of vehicle models 180 Dc, 190 Dc and L/O 319 D with OM 621 engine.

Model	Capacity cc	Oil grade	Oil bath air filter	
			Knecht Part No.	Mann and Hummel Part No.
180 Dc (621.914)	220	Unblended or HD engine oil SAE 20, or also SAE 10 or SAE 30	003 094 0302	003 094 0202
190 Dc (621.912)	350		002 094 9102	003 094 0602
L and O 319 D (621.913)			—	002 094 9902