

# Service Bulletin.

## Oil filter, full-flow type

The B 16 engine is fitted with a full-flow type oil filter.

This means that all the lubricating oil in the engine which passes out to the various lubricating points, first passes through the filter element where any impurities are trapped.

The design of the filter housing and element differs considerably from that of the partial-flow type (as, for example, on the B4B), where only a certain portion of the oil passes through the element via a by-pass.

The full-flow type element, which consists of specially treated paper, has very effective filtering properties which, however, decrease in proportion to the degree of blockage. The element should, therefore, be replaced at regular intervals. In order to prevent the oil flow from being cut off by a clogged element, a relief valve is fitted which permits oil to by-pass the element when the resistance in this reaches a certain amount. It is clear that clogging of the element should not be allowed to reach such a degree that the relief valve comes into operation as if this happens dirty oil can circulate in the engine.

There are two different makes of cleaners - AC or Mann & Hummel. They are the same in principle and are interchangeable, even as regards the elements. Differences in construction are shown in the figures.

## Replacing oil filter element

In a new or reconditioned engine the filter element should be replaced for the first time after 5000 km (3000 miles) driving and for the second time after a total of 10,000 km (6000 miles), thereafter at 10,000 km (6000 miles) intervals.

1. Clean off the oil filter housing and the adjacent engine parts to that no dirt can enter the lubricating system when disassembling.
2. Slacken the center bolt (1) and collect up the oil which runs out.
3. Remove the filter. Remove the old element (6, 7) and wash the housing in kerosene. The element itself cannot be cleaned but should be scrapped and replaced by a new one. Always be careful to use genuine Volvo spare parts which are made just for these filters.  
If elements of the wrong type are used, the whole lubricating system can be jeopardized and in this case the guarantee obviously becomes null and void at the same time.
4. Fit the new element and the gasket (8, 9) together with the filter. Guide the housing with the hand so that it fits correctly into the groove in the cylinder block. Tighten the bolt to a tightening torque of 1.4 kgm (10 lb/ft.).
5. If the element is changed without at the same time changing the engine oil, then the engine should be topped up with 0.75 liters (1 1/2 U.S. pints) of oil.

6. Carefully clean off the parts adjacent to the filter. Start the engine and check to see that no oil leaks out of the joint between the filter and the engine at the bolt.

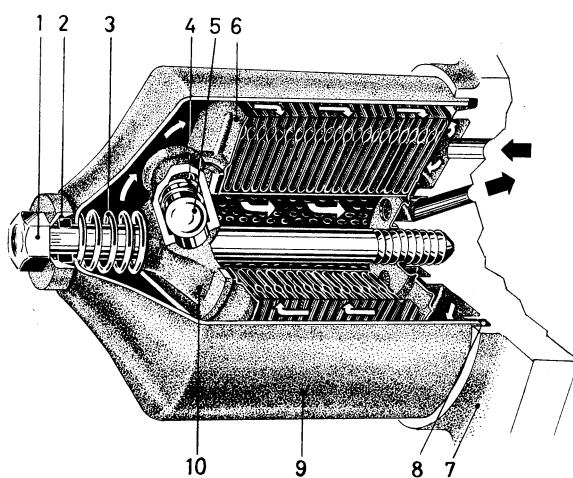


Fig. 1. Oil filter, AC.

1. Bolt
2. Washer and gasket
3. Spring
4. Relief valve spring
5. Valve ball
6. Element
7. Cylinder block
8. Gasket
9. Filter housing
10. Valve housing

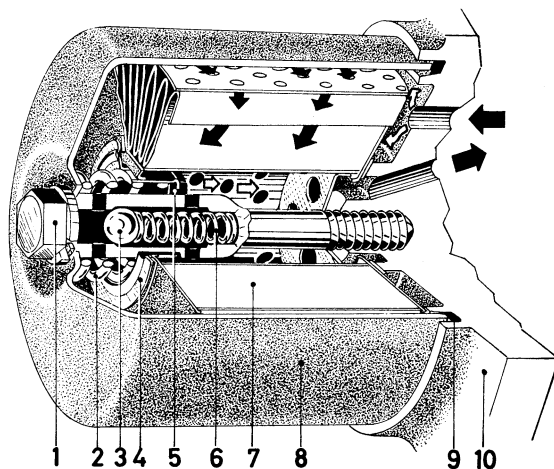


Fig. 2. Oil filter, Mann & Hummel.

1. Bolt with copper washer
2. Spring
3. Valve ball
4. Sealing flange
5. Gasket
6. Relief valve spring
7. Element
8. Filter housing
9. Gasket
10. Cylinder block