

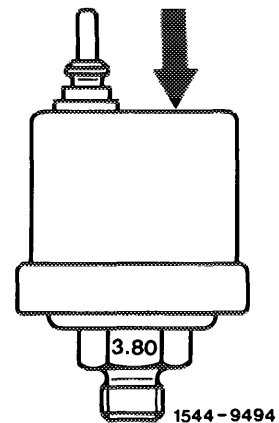
Oil pressure and oil pressure indication

At operating temperature, the oil pressure at idle speed may drop to 0.3 bar gauge pressure.

During acceleration, the oil pressure should immediately rise again and should reach a minimum of 3 bar gauge pressure at 3000 rpm.

The oil pressure indication in the instrument cluster is electrically controlled by oil pressure transmitter. The oil pressure transmitter on engines in the model 107 is screwed into the flange (between oil filter lower part and crankcase) and on the engines in the model 126 in the oil filter housing lower part.

The oil pressure transmitter was modified in March 1980 (improved housing seal) and in March 1981 (housing interior ventilation). In the event of repairs due to a fluctuating needle of the oil pressure indicator, install only oil pressure transmitter starting with production code number 3.80 (March 1980). The production code number is stamped into the hexagon screw connection.



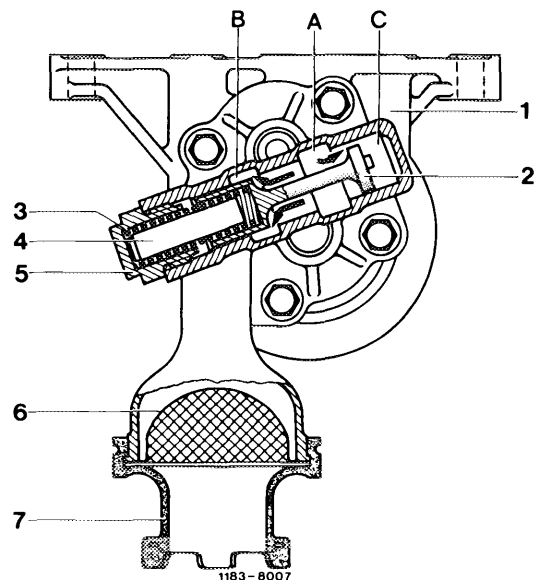
Oil pressure relief valve

The oil pressure relief valve is integrated in the oil pump cover.

At a gauge pressure of 8 bar (up to April 1985) and of 5.5 bar (as of April 1985), the oil from the feed opening (A) shifts the piston (2) against the force of the compression spring (3).

As soon as the control edge of the piston (2) arrives at the return flow opening (B), the oil pressure recedes towards the suction side of the oil pump (arrows).

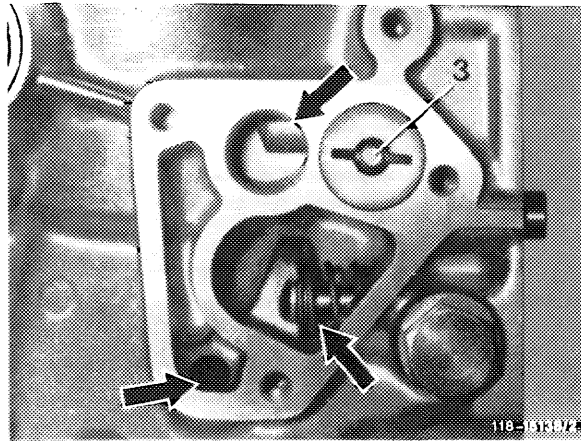
The resulting control movements of the piston (2) are damped by oil which flows behind the piston into the damping chamber (C) across a flat on the piston (arrow).



- | | |
|----------------------|----------------------|
| 1 Oil pump housing | 6 Strainer |
| 2 Piston | 7 Compensating piece |
| 3 Compression spring | A Feed opening |
| 4 Guide pin | B Return opening |
| 5 Plug | C Damping chamber |

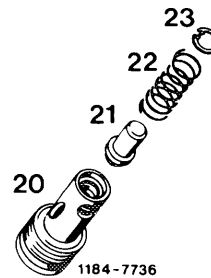
Bypass valve oil filter insert

The bypass valve (3) for the oil filter insert is located in the oil filter flange in the crankcase and leads into the main oil gallery. When the differential pressure between clean and dirty oil filter sides exceeds approx. 4.0 bar, e.g. when the oil filter is severely contaminated, this valve opens and the oil reaches the bearing points in the unfiltered state.



Bypass valve for oil filter insert

- 20 Valve housing
- 21 Valve cone
- 22 Compression spring
- 23 Circlip

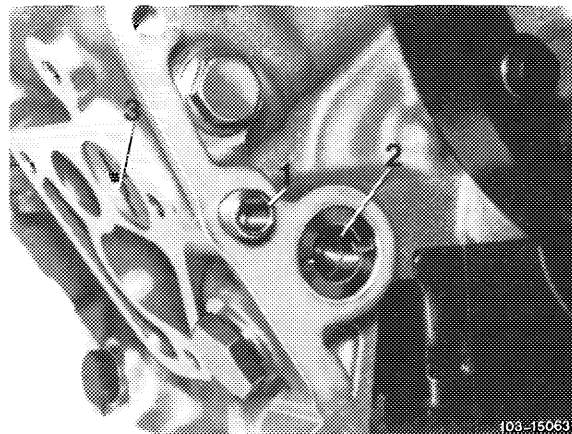


Bypass valve air oil cooler

The bypass valve (2) for the pressure-controlled air oil cooler in the face of the crankcase opens whenever the flow resistance in the air oil cooler exceeds 1.5 bar gauge pressure with cold oil. The oil will then flow directly to the oil filter, bypassing the air oil cooler.

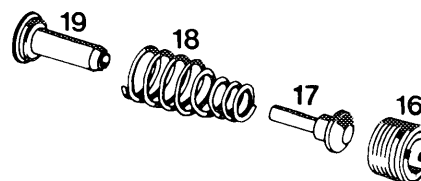
The bypass valve is covered via plug in the timing case cover, or by the timing case cover without plug.

In the event of repairs (e.g. exchange engine) no bypass valve should be used on vehicles without air oil cooler.



Bypass valve for air oil cooler

- 16 Valve seat ring
- 17 Valve cone
- 18 Compression spring
- 19 Valve guide



Oil filter and thermostat model 126

The oil filter is designed as a full flow filter. The engine oil flows through the oil filter element (6) from the outside to the inside and continues in a cleaned state via the riser (8) and the duct (b) to the main oil gallery and further to the bearings.

Vehicles with oil cooler:

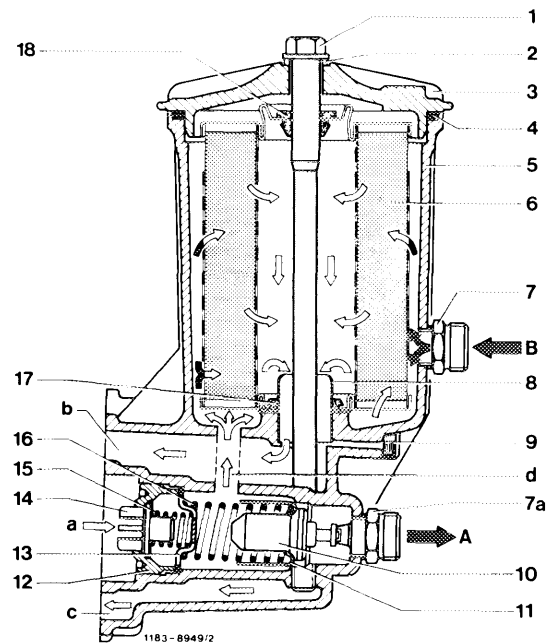
Starting at an oil temperature of approx. 110 °C, the thermostat (10) starts to move the control valve (11) against the force of the compression spring (16) until the final position is reached at approx. 125 °C.

In the final position, the oil flows via the connection (A), an oil damper and oil hose to the air oil cooler, is cooled down there, returns to the oil filter housing via connection (B) and flows through the oil filter element from the outside to the inside.

Below 110 °C oil temperature, the oil flows in the oil filter via the short-circuit duct.

- | | |
|--|---------------------------------------|
| 1 Center bolt | 14 Valve cone return shut-off valve |
| 2 Sealing ring | 15 Compression spring |
| 3 Oil filter cover | 16 Compression spring ¹⁾ |
| 4 O-ring | 17 Seal oil filter element bottom |
| 5 Oil filter housing | 18 Seal oil filter element top |
| 6 Oil filter element | A Uncleaned oil to the air oil cooler |
| 7 Screw fitting ¹⁾ | B Uncleaned oil to the air oil cooler |
| 7a Screw fitting ¹⁾ | a From the oil pump |
| 8 Riser | b To the bearings |
| 9 Connection for electrical oil pressure transmitter | c Oil return to the sump |
| 10 Oil thermostat ¹⁾ | |
| 11 Control valve ¹⁾ | |
| 12 Valve seat ring return shut-off valve | |
| 13 Valve retainer | |

¹⁾ Not applicable on engines without air oil cooler.



Caution!

If for any reason the air oil cooler has to be disconnected or the connections on the oil filter to be blanked off, the thermostat (10), the control valve (11) and the compression spring (16) must be removed. Failure to do so will interrupt the oil supply to the bearings at an oil temperature above 110 °C.