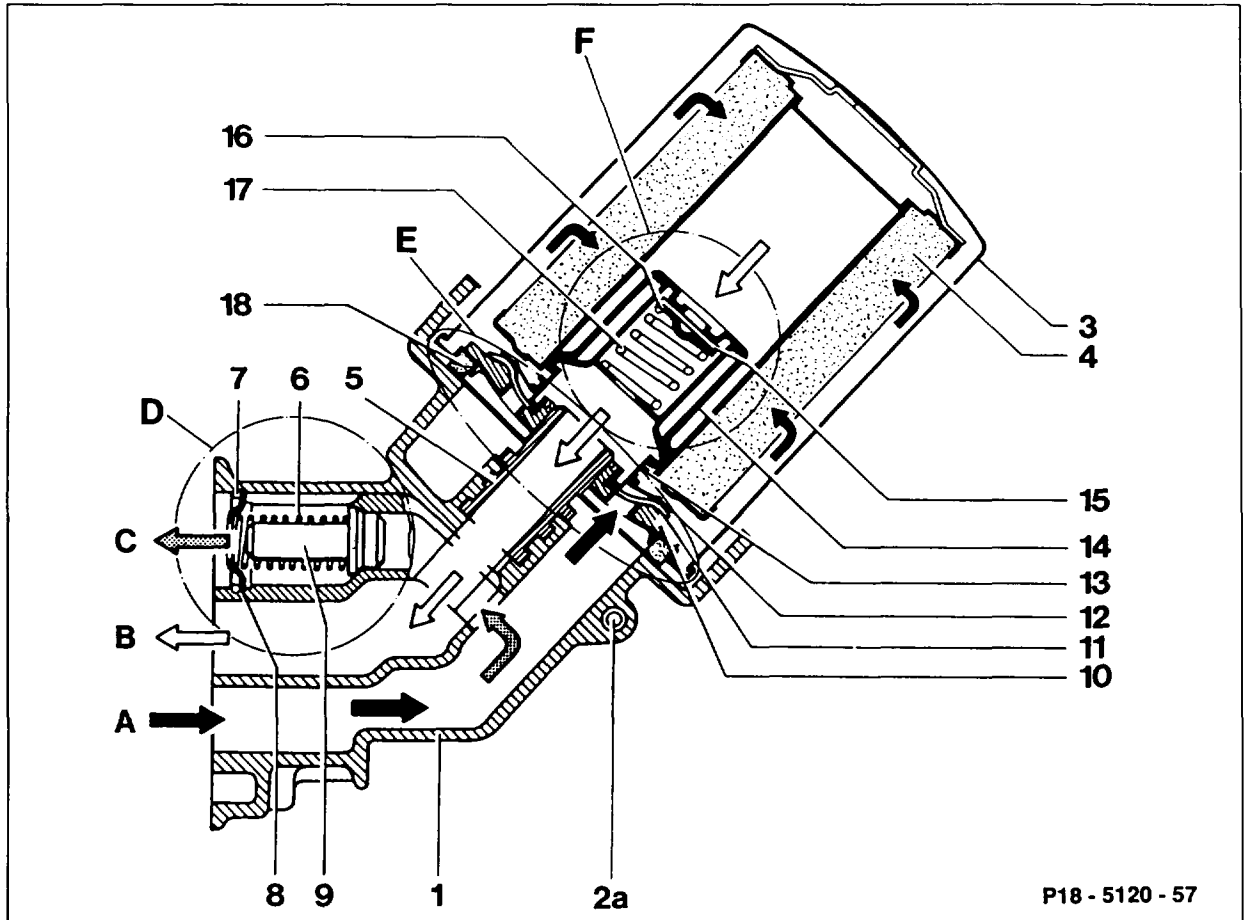


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- |   |  |    |   |
|---|--|----|---|
| 1 | Oil pump with oil pressure relief valve  | 10 | Oil feed in hollow-drilled camshaft and camshaft bearings                         |
| 2 | Oil longitudinal gallery to oil filter   | 11 | Oil longitudinal gallery in cylinder head   |
| 3 | Oil filter   | 12 | Oil feed to camshaft lubricating tube at 4th camshaft bearing                     |
| 4 | Electrical oil pressure sensor   | 13 | Oil feed to rocker arms and hydraulic valve clearance compensating elements (12x) |
| 5 | Main oil gallery   | 14 | Camshaft lubricating tube   |
|   | <b>Note</b>  | 15 | Oil gallery in hollow-drilled camshaft to camshaft bearings                       |
|   | Crankcase 2nd version has an oil transverse gallery at the front like engine 104 | X  | Drilling aid gallery sealed with cylinder head gasket                             |
| 6 | Oil riser gallery to chain tensioner   |    |   |
| 7 | Chain tensioner  |    |   |
| 8 | Oil riser gallery to cylinder head   |    |   |
| 9 | Oil return lock  |    |   |

## Oil filter



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	<b>Oil filter</b>		
1	Oil filter bottom part	11	Rubber diaphragm
2a	Oil pressure sensor connection	12	Spring plate
3	Replaceable cartridge	13	Compression spring
4	Filter element		
5	Connection fitting	F	<b>Non-return valve</b>
		14	Valve holder
<b>D</b>	<b>Oil filter bypass valve</b>	15	Valve plate
6	Compression spring	16	Valve plate carrier
7	Circlip	17	Compression spring
8	Spring retainer	18	Gasket
9	Valve cone		
		A	Feed from oil pump
<b>E</b>	<b>Outlet lock</b>	B	Filtered oil to main oil gallery
10	Pressure plate	C	Unfiltered oil to main oil gallery

### D Oil filter bypass valve

The bypass valve opens once the flow resistance in the replaceable cartridge exceeds  $2 + 0.3$  bar, and unfiltered engine oil flows into the oil circuit.

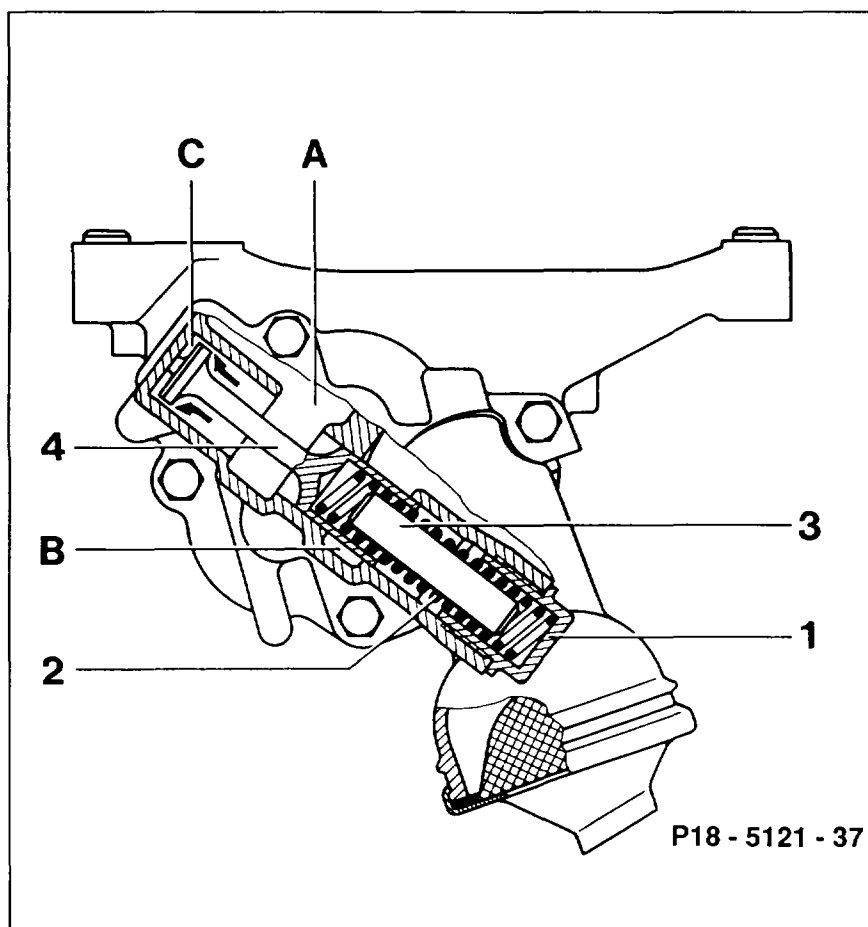
### E Outlet lock

The spring-tensioned rubber diaphragm (11) in the replaceable cartridge prevents unfiltered oil flowing out of the replaceable cartridge when the engine is switched off or when changing the filter.

## F Non-return valve

The non-return valve (16) in the replaceable cartridge prevents clean oil flowing off out of the replaceable cartridge via the bearing points when the engine is switched off.

## Oil pressure relief valve (Opening pressure 5 bar)



- |   |                                    |   |                          |
|---|------------------------------------|---|--------------------------|
| 1 | Screw plug                         | A | Pressure chamber (feed)  |
| 2 | Compression spring (102.9 mm long) | B | Suction chamber (return) |
| 3 | Guide pin (45 mm long)             | C | Damping chamber          |
| 4 | Piston                             |   |                          |