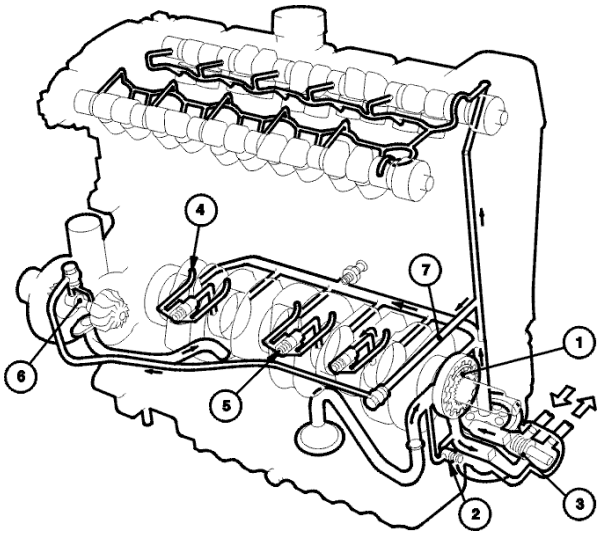
Lubricating system Turbo



1. Oil pump
2. Relief valve
3. Oil thermostat
4. Piston cooling nozzle
5. Spring loaded piston type valve
6. Compressor shaft
7. Drilled oilway from the main oilway

The high power output has placed greater demands on the engine lubricating system and cooling. The following have been changed in comparison to the other 5-cylinder engines:

- The oil pump (1) capacity has been increased by a wider pump wheel and a modified profile.
- The relief valve (2) has a more rigid spring and opens at 6 bars of pressure (B5254's opens at 5 bar).
- An oil thermostat (3) regulates the flow of oil to the oil cooler. The oil thermostat begins to open at approximately 95°C and is fully open at an oil temperature of approximately 150°C.
- The piston cooling nozzle (4) brings oil to the underside of the pistons. The oil is supplied to the nozzles from the main bearing oil supply ducts and flows through spring loaded valves (5) which open at 2 bars of oil pressure to preserve good oil pressure at low engine speed (RPM) when piston cooling is not necessary. A common ball valve is used for cylinders 2-3, and 4-5 while cylinder 1 has its own valve.
- Compressor shaft (6) lubrication oil is supplied via a drilled oilway (7) from the main oilway in the block. The return pipe is connected to the sump.

Oil capacity

Replacing oil and filter : 5.3 liters
Dry engine, after reconditioning: 6.2 liters (applies if the oil cooler is drained which contains approximately 0.9 liters).

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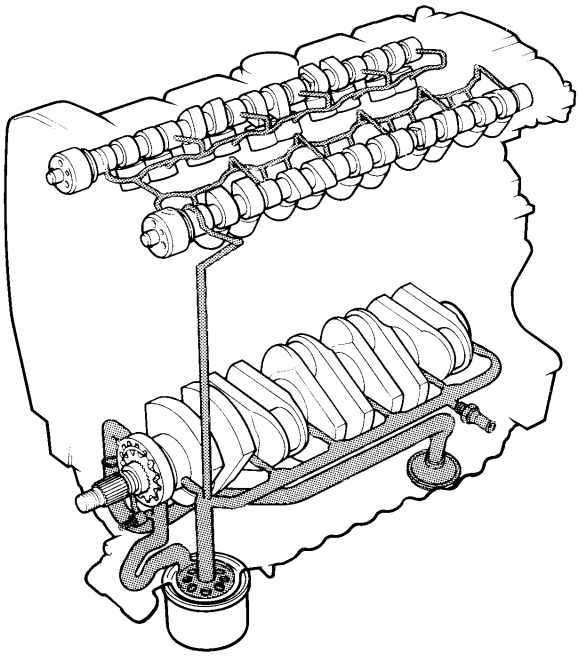

Lubrication system

The oil passes from the oil pump to the oil filter which is of the full-flow type. The filter is located directly ahead under the oil pump and seals against the oil sump which is part of the lubricating system.

From the filter the oil is pumped through an oilway in the intermediate section to the main bearings. The oil is then pumped through drilled channels in the crankshaft to the big ends.
The camshafts and the hydraulic tappets are lubricated via a drilled channel in the front left edge of the block. The oilway continues through the cylinder head discharging into the underside of the upper half of the cylinder head. From here the oil is pumped via an oilway to the left camshaft bearing and tappets (intake side).
The right side camshaft bearing and tappets (exhaust side) are supplied via a cast transverse oilway in the front edge of the upper half.
The oil then returns from the cylinder head and the crankshaft bearings to the oil sump via the drains in the block.