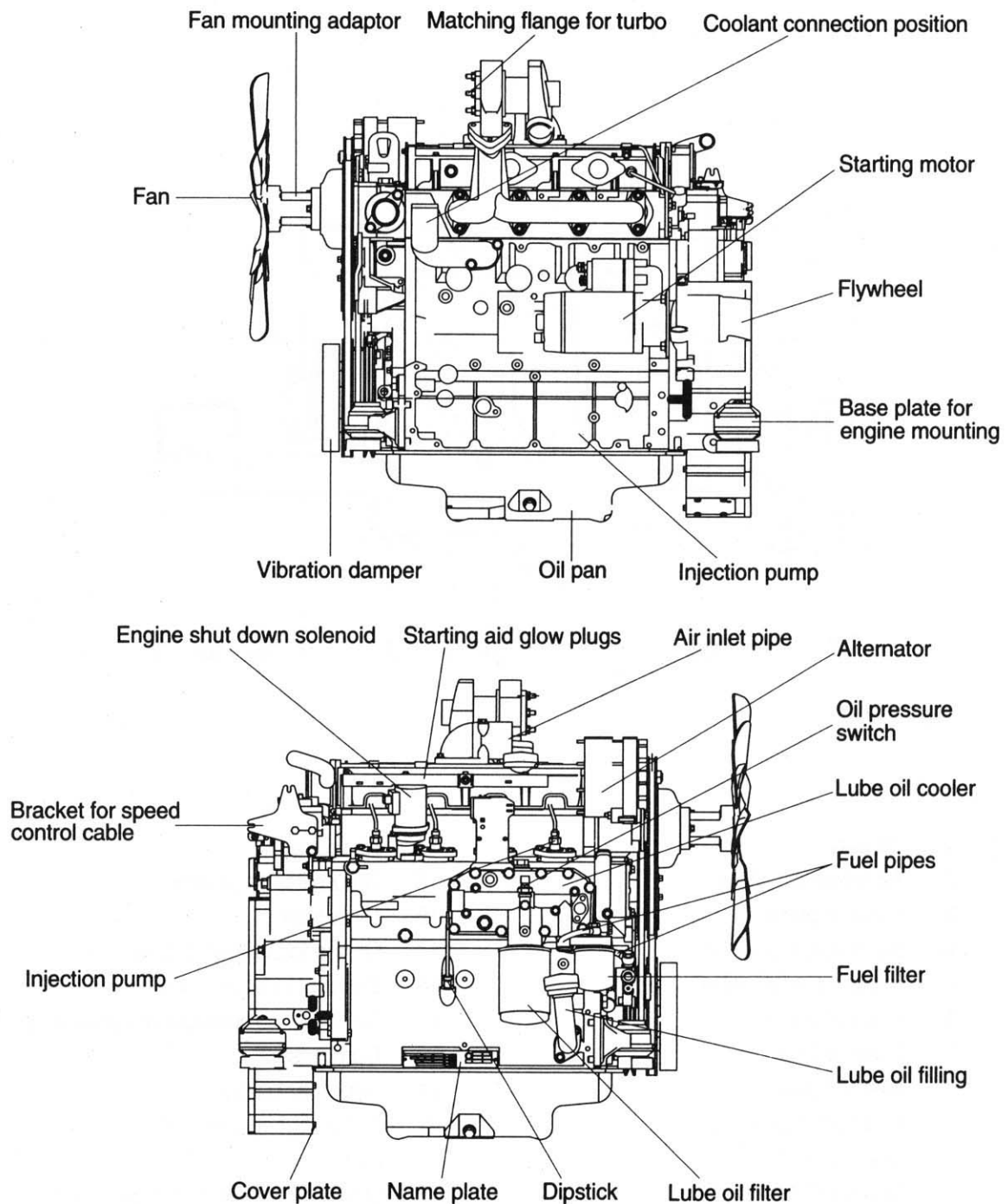


SECTION 2 ENGINE

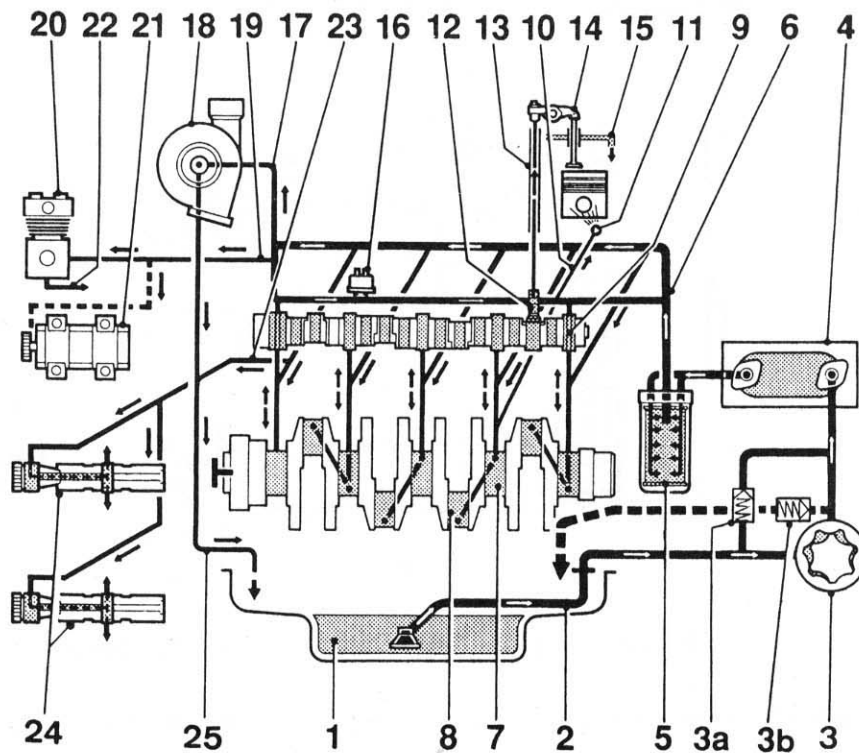
GROUP 1 STRUCTURE AND FUNCTION

1. STRUCTURE



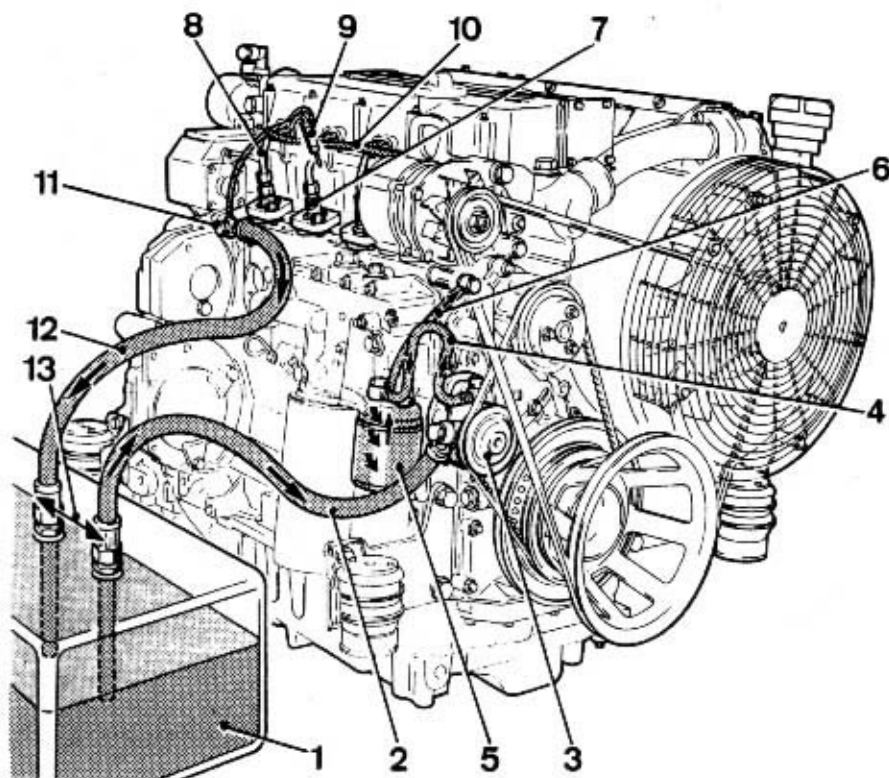
- Direct 4-stroke, 4-cylinders, water-cooling diesel engine in installed, cylinder block and cylinder head are made of case iron and turbocharger is attached.
- Gears in engine gear case are manufactured as helical gear to reduce the noise and arranged in the manner of smooth power transmitting.
- Cylinder block is designed for the oil cooler and cooling pump to be built in each passage for lubrication and cooling water are formed as a set.
- Fan belt is poly V-belt improving the life, and manual tension adjuster of fan belt in installed.

2. LUBE OIL CIRCUIT SCHEMATIC



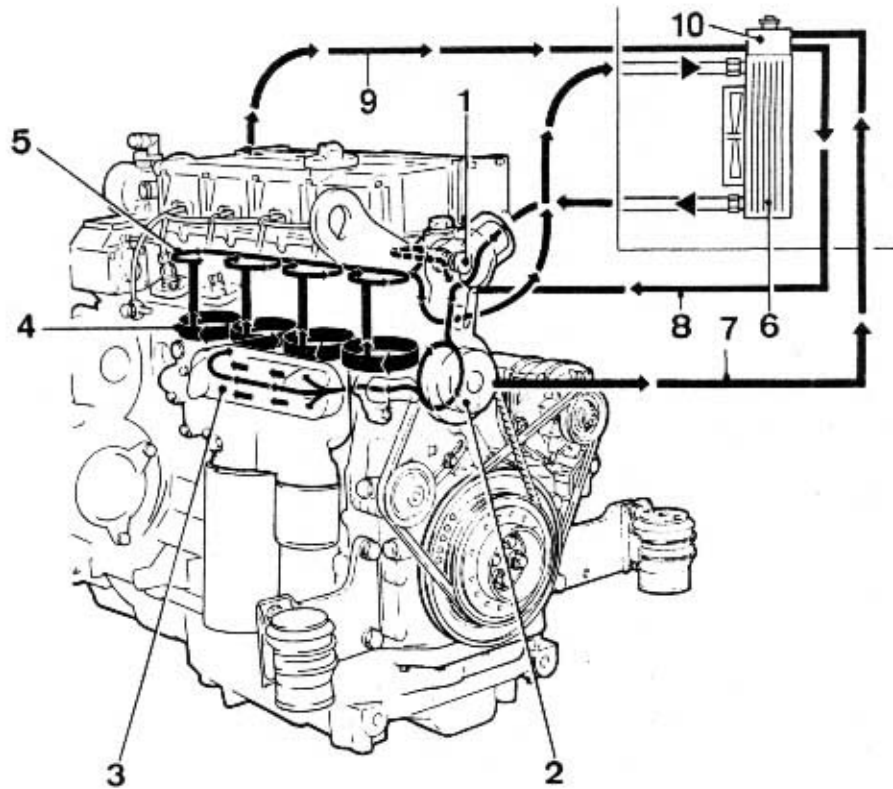
- | | |
|---|--|
| 1 Oil pan | 14 Rocker arm |
| 2 Air intake manifold | 15 Return line to oil pan |
| 3 Lube oil pump | 16 Oil sensor |
| 3a Back leak fuel valve | 17 Oil line to exhaust turbocharger |
| 3b Pressure relief valve | 18 Exhaust turbocharger |
| 4 Lube oil cooler | 19 Oil line to compressor or hydraulic pump |
| 5 Lube oil filter | 20 Compressor |
| 6 Main oil gallery | 21 Hydraulic pump |
| 7 Crankshaft bearing | 22 Return line to compressor or hydraulic pump |
| 8 Conrod bearing | 23 Line to mass balancing gear(2EA) |
| 9 Camshaft bearing | 24 Counterbalancing shafts |
| 10 Line to spray nozzle | 25 Exhaust turbocharger return to crankcase |
| 11 Spray nozzle for piston cooling | |
| 12 Tappet w/control bore for pulse lubrication of rocker arms | |
| 13 Pushrod(Designed for lube oil supply of rocker arms) | |

3. FUEL SYSTEM SCHEMATIC



- | | | | |
|---|-------------------------|----|---|
| 1 | Fuel tank | 8 | Line to injector |
| 2 | Line to fuel pump | 9 | Injector |
| 3 | Fuel pump | 10 | Back leak fuel pipe |
| 4 | Line to fuel filter | 11 | Banjo bolt with pressure regulating valve |
| 5 | Fuel filter | 12 | Return line to fuel tank |
| 6 | Line to injection pumps | 13 | Keep this spacing as wide as possible |
| 7 | Injection pump | | |

4. COOLING SYSTEM SCHEMATIC



- | | | | |
|---|---|----|---|
| 1 | Thermostat housing | 8 | Compensator line from compensator reservoir/thermostat housing |
| 2 | Coolant pump | 9 | Vent connection from cylinder head to heat exchanger(Compensator reservoir) |
| 3 | Lube oil cooler | 10 | Compensator reservoir |
| 4 | Cylinder cooling | | |
| 5 | Cylinder head cooling | | |
| 6 | Heat exchanger | | |
| 7 | Vent connection for coolant pump/ compensator reservoir | | |