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VOLVO PENTA

D 1 · MD 1
D 2 · MD 2

WORKSHOP MANUAL

DIESEL ENGINES

AB VOLVO PENTA

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GENERAL

DESCRIPTION

Engines with type designations D1 and MD1 are one-cylinder, four-stroke Diesel engines with overhead valves. The total capacity is 445 c.c.

Engines with type designation D2 and MD2 are two-cylinder, four-stroke Diesel engines with overhead valves. The total capacity is 890 c.c.

MD1 and MD2 are marine Diesel engines. D1 and D2 are industrial Diesel engines. The combustion chambers in the engines are designed for direct fuel injection, this resulting in low fuel consumption, smooth running and immediate starting.

The engines are fitted with a manual or electric starter. A decompression device on the rocker arm cover facilitates starting.

The marine engines are sea-water cooled and the industrial engines are fitted with a cellular type radiator. A thermostat maintains the operating temperature of the engine automatically within the correct values.

The fuel system includes a filter with a replaceable element and is thus well protected from running interruptions. D2 and MD2 units are fitted with a feed pump.

Engine lubrication is through a pressure system where an oil pump supplies lubricating oil to all the points in the correct quantities at different speeds. The D2 and MD2 are fitted with a full flow oil filter. The big-end bearing shells are replaceable and are accessible through the oil sump crankcase covers. Major repair work can also be carried out through these covers.

The engines have closed circuit crankcase breathing and this prevents crankcase gases from getting out into the engine compartment. This device consists of a filter with connections and an oil trap located in the space above the valve tappets. Crankcase gases are then sucked directly into the engine induction manifold and into the cylinders.

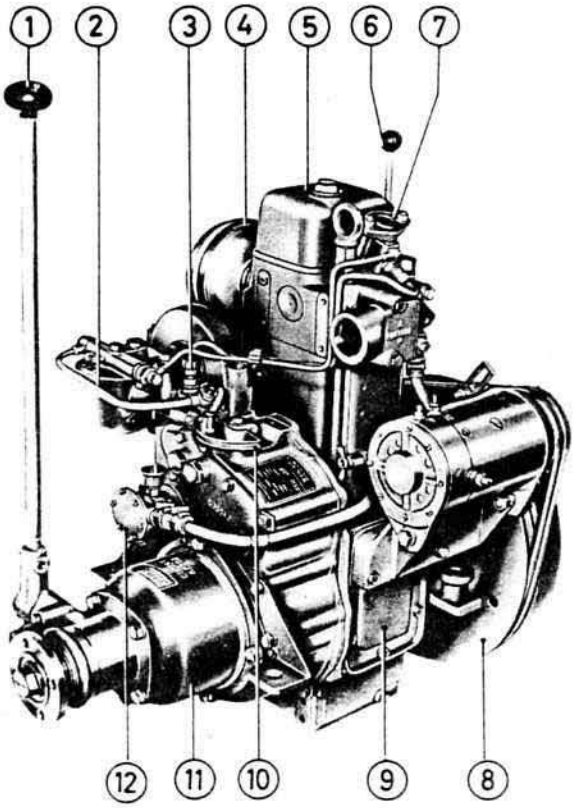


Fig 1. MD1 engine

1 Control lever
2 Fuel filter
3 Fuel injection pump
4 Air cleaner
5 Rocker arm cover
6 Decompression device
7 Injector
8 Flywheel
9 Crankcase cover
10 Control arm
11 Reduction - reverse gear
12 Sea-water pump

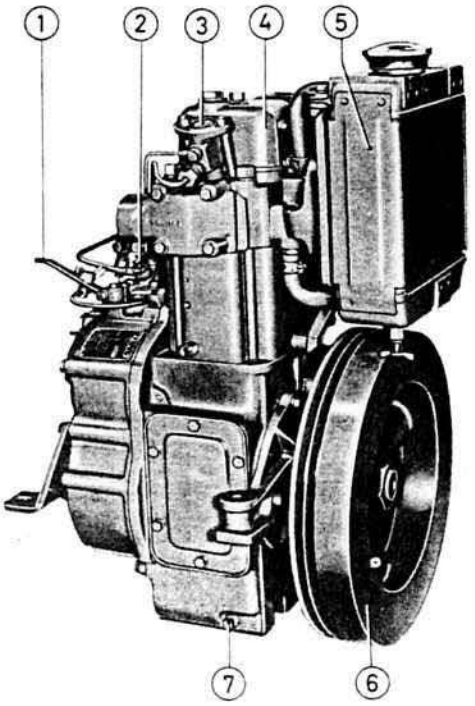


Fig 2. D1 engine

1 Control arm
2 Fuel injection pump
3 Injector
4 Rocker arm cover
5 Radiator
6 Flywheel
7 Oil plug