

Engine designations – Year of manufacture

Designation	Year	Characteristics, notes	Cyl. Ø / stroke (mm)	Power (hp/rpm)	As from engine no.
MD1	1958-1960	Designed in inches, 35° injector angle.	79.37/90	5.0 /2000	100
MD1	1960-1962		-"	5.5/6.0 /2000	1095
MD1	1962-1963	Designed in metric, 35° injector angle.	-"	6.0 /2000	4000
MD1	1963-1964	Injector sleeve Ø 14 mm	-"	6.3 /2000	
MD1A	1964-1970	20° injector angle, injector sleeve Ø 14 mm	-"	7.0 /2300	10000
	as from 1968	Gear wheel lube oil pump	-"	-"	16218
	as from 1969	Heinzman regulator	-"	-"	16326
MD1B	1970-1976	Dynastart	88.9/90.0	10.0/2500	18000
MD2A	1964-1967	20° injector angle, injector sleeve Ø 14 mm	79.37/90	15.5/2300	100
	1967-1970		-"	16.5/2300	7263
	as from 1968	Gear wheel lube oil pump	-"	-"	7362
	as from 1969	Heinzman regulator	-"	-"	8033
MD2B	1970-1975	Dynastart or starter motor + alternator	88.9/90.0	23.0/2500	10500
MD3B	1971-1975	Starter motor + alternator	-"	35.0/2500	100
MD5A	1974-1978	Cylinder angle 45°	84.0/80.0	7.5/2500	100
MD5B	1978-1981	Modified engine brackets etc.	-"	-"	15000
MD5C	1981-1982	MB21 Oil pump, malleable iron crankshaft	-"	9.5/3000	30000
MD6A	1971-1975	Dynastart	70.0/82.0	10.0/2400	100
MD6B	1975-1976	Starter motor + alternator, full flow filter	-"	-"	8000
MD7A	1976-1981	Starter motor + alternator	76.0/82.0	13.5/2600	10975
MD7B	1981-1983		-"	17.5/3000	32550
MD11C	1975-1981	Wet cylinder liners, malleable iron crankshaft	88.9/90.0	24/2500	33000
MD11D	1981-1983		-"	25.0/3000	55700
MD17C	1975-1981	Wet cylinder liners, malleable iron crankshaft	-"	35/2500	9000
MD17D	1981-1984		-"	36/3000	18400

Design and function

Engine, general

The engines are in-line 1, 2, 3 or 4 cylinder, 4-cycle directly injected diesel engines with overhead valves. The valves are operated by rocker arm mechanisms, push rods and valve lifters. The camshaft is driven by the crankshaft, via timing gear wheels. The engine block and cylinder head are manufactured of alloyed cast iron. The MD11 and MD17 have loose engine blocks, one for each cylinder. The blocks are held in place by the cylinder head, which is fixed by long studs from the crankcase. The MD5 and MD7 have the engine block and crankcase cast in one unit. The MD5, MD11 and MD17 have replaceable, wet cylinder liners. The MD7 has its cylinder bore drilled directly through the block.

Engine lubrication is provided by a pressure lubrication system which uses an efficient, gearwheel pump to pump the oil out through a reduction valve and oil filter to the lubrication points. The oil filter is a full-flow filter.

The cooling system is a thermostatically controlled seawater system. A fresh water system is available as an optional extra.

The fresh water system (optional) is thermostatically controlled and cools the engine block and cylinder head. Sea water cools the fresh water system via a heat exchanger.

The fuel system consists of a feed pump, fuel filter, injector pump, fuel supply pipes and injectors. The injectors are mounted in the cylinder head, inside copper injector sleeves which are surrounded by cooling water.

The exhaust system consists of a seawater cooled, cast iron exhaust pipe and manifold, with a pipe stub for attaching a hose to the hull fitting.

Electrical system, 12 V with alternator. Please refer to "Technical Data" for a detailed specification.