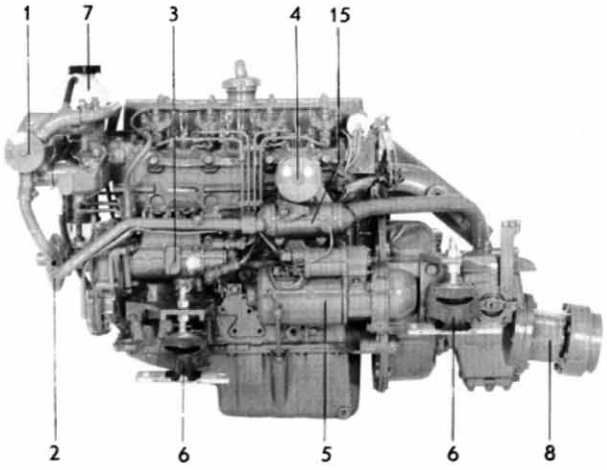
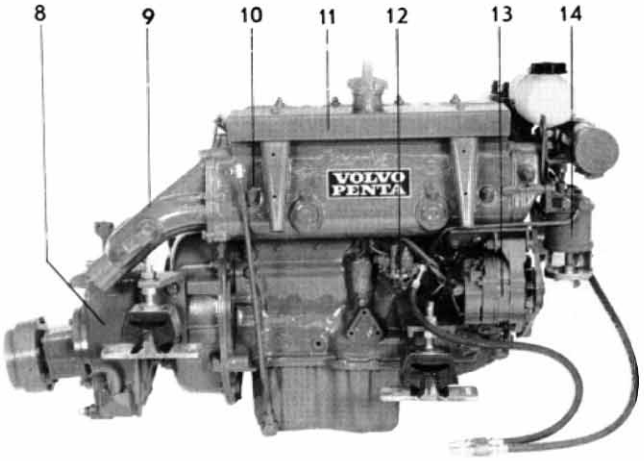
Ref. no 6522 C
Eng.

VOLVO PENTA

MD 21B

4-cylinder, 4-stroke marine diesel engine with swirl chambers
Propeller shaft output 45 kW (61 hp)





STANDARD EQUIPMENT

ENGINE BODY – Cylinder block made of cast iron and cylinder head of light-alloy. Pistons made of light-alloy with three compression rings and one oil scraper ring. Crankshaft journalled in five bearings. Overhead valves with replaceable seats.
Tool kit for minor adjustments supplied with engine.

FUEL SYSTEM – Rotor-type injection pump with mechanical governor for accurate speed regulation (3).
Feed pump (12) with hand primer and flexible hoses with fuel pipe connection for suction and return lines.
Fine filter (14) with water separator.

COOLING SYSTEM – Thermostat-controlled fresh-water cooling with heat exchanger (1) and circulation pump. Expansion tank for firm or separate mounting (7). Sea-water pump with neoprene rubber impeller (2). Cleanable sea-water filter supplied.

LUBRICATING SYSTEM – Pressure lubricating system with full-flow lubricating oil filter of the spin-on type (4). Cleanable, tubural-type oil cooler (15). Sealed crankcase ventilation.

INTAKE SYSTEM – Intake silencer (11) with filter.

EXHAUST SYSTEM – Sea-water cooled exhaust manifold (10) and exhaust manifold elbow of cast iron (9).

ELECTRICAL SYSTEM – Corrosionsproof 12 V electrical system, with complete instrument panel. Main fusing with built-in spare fuse is mounted on engine. Brushless alternator with built-in transistor regulator, 35 A, 420 W (13). Starter motor output 1.3 kW (1.8 h.p.) (5). Automatic alarm for oil pressure and water temperature.

The instrument panel is provided with a key switch, rev counter, temperature gauge, warning lamps for battery charging, oil pressure and for connection of glow plugs, switch for instrument panel light and one extra switch. Cable harness, 7 m (23 ft.) in length, with plug-in contact already fitted.

ENGINE MOUNTING – The engine is supplied with flexible suspension (6).

POWER TRANSMISSION – Mechanical reverse gear RB type, Borg Warner hydraulic type or reverse gear type MS3 with cone clutch and 8° propeller shaft angle. The engine is supplied with reverse gear as follows:

Alt. 1 Revers gear type RB red. ratio 1.91:1, L-H prop.
Without propeller shaft flange
2 Reverse gear type BW red. ratio 2:1, R-H prop.
3 Reverse gear type BW red. ratio 2:1, L-H prop.
4 Reverse gear type BW red. ratio 2.9:1, L-H prop.
Propeller shaft flange, pre-drilled
5 Reverse gear type MS3 red. ratio 1.91:1, L-H and R-H prop. (8).
Without propeller shaft flange.
6 Reverse gear type MS3 red. ratio 3.0:1, L-H and R-H prop.
Without propeller shaft flange.

EXTRA EQUIPMENT

FUEL SYSTEM

Water-separating filter with or without flexible hoses
Fuel line kit with copper piping and installation parts

COOLING SYSTEM

Cooling water intake complete with cock and hose

EXHAUST SYSTEM

Exhaust manifold flange
Hull through fitting
Exhaust rubber hose
Exhaust boot

ELECTRICAL SYSTEM

Charging distributor for charging 2-battery system
Instrument panel for extra instrument
Master switch
Cable harness extension for instrument panel

POWER TRANSMISSION

Extra belt pulley

BOAT ACCESSORIES

Electrically operated bilge pump
Original paint
Oils
Electro-mechanical trim tabs

CONTROLS AND CONTROL SYSTEM

VP single-control lever for both speed and forward-reverse operation, top-mounted or side-mounted. Single or twin installation.
Neutral position switch – automatic safety interlock, VP controls
Two levers control – side mounted
Control cables
Steering gears
Steering wheels
Steering cables
Ball joint and fork kit for steering cable

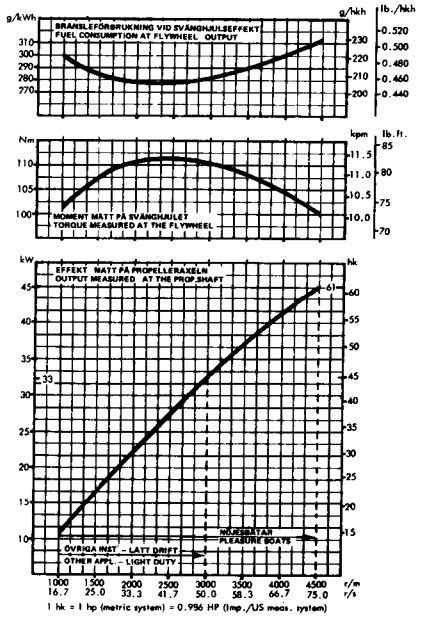
PROPELLER EQUIPMENT

Flexible coupling
Clamp coupling
Propeller shaft
Propeller shaft sleeves
Propellers

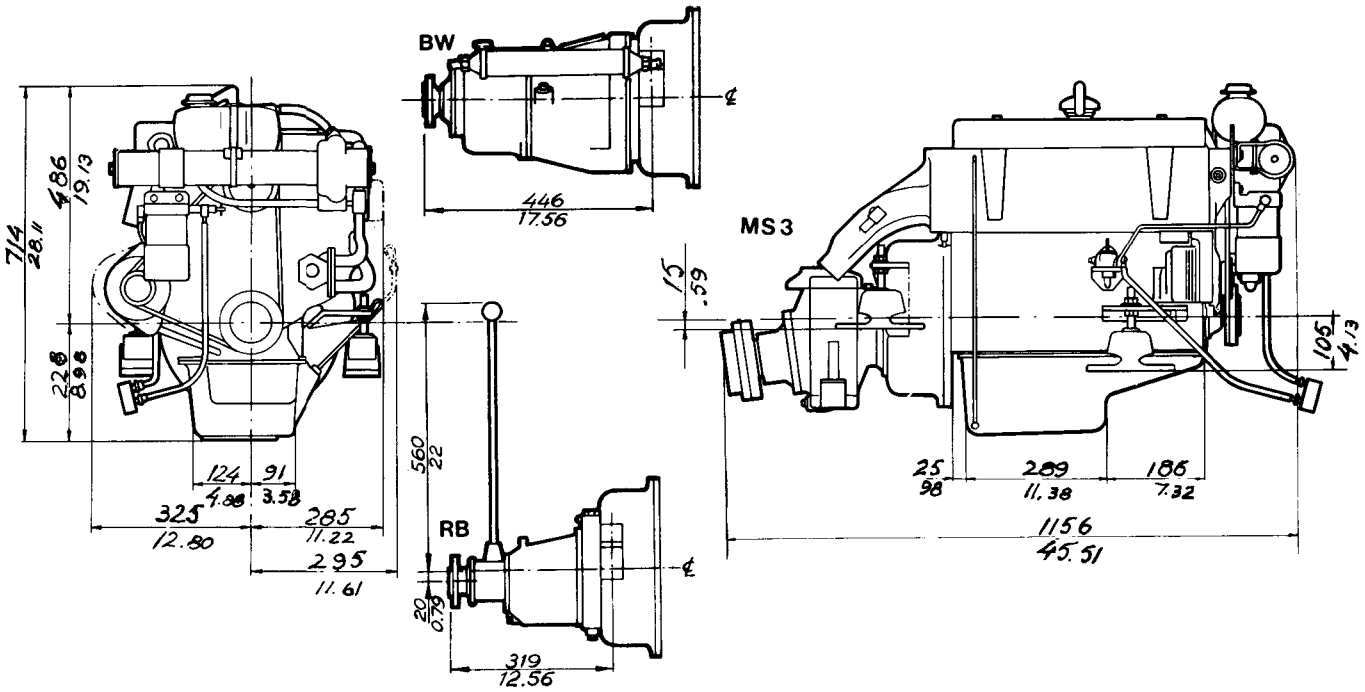
DATA

Type of operation	4-stroke diesel engine with swirl chambers
Designation	MD21B
Propeller shaft output[1]	45 kW at 75 r/s (61 hp at 4500 rpm)
	33 kW at 50 r/s (45 hp at 3000 rpm)
Number of cylinders	4 in-line
Capacity, dm^3 (in^3)	2.112 (129)
Bore/stroke, mm (in)	90.0/83.0 (3.54/3.27)
Valves	overhead
Weight, engine with RB rev. gear, approx	275 kg (607 lb)
Weight, engine with MS3 rev. gear, approx	285 kg (629 lb)
Weight, engine with BW rev. gear, approx.	310 kg (684 lb)

1) The diagram indicates the propeller shaft output for a run-in engine with reverse gear type RB or MS3 according to DIN 6270 Leistung B. The engine flywheel output is approx. 5% higher. To calculate the propeller shaft output with a hydraulic reverse gear type BW, reduce the indicated output by 17% at maximum speed. The engine is delivered to be used for pleasure boats adjusted to 75 r/s (4500 rpm). For other installations – light operation, the engine is adjusted to 50 r/s (3000 rpm) according to the adjacent curve.



DIMENSION DRAWING



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