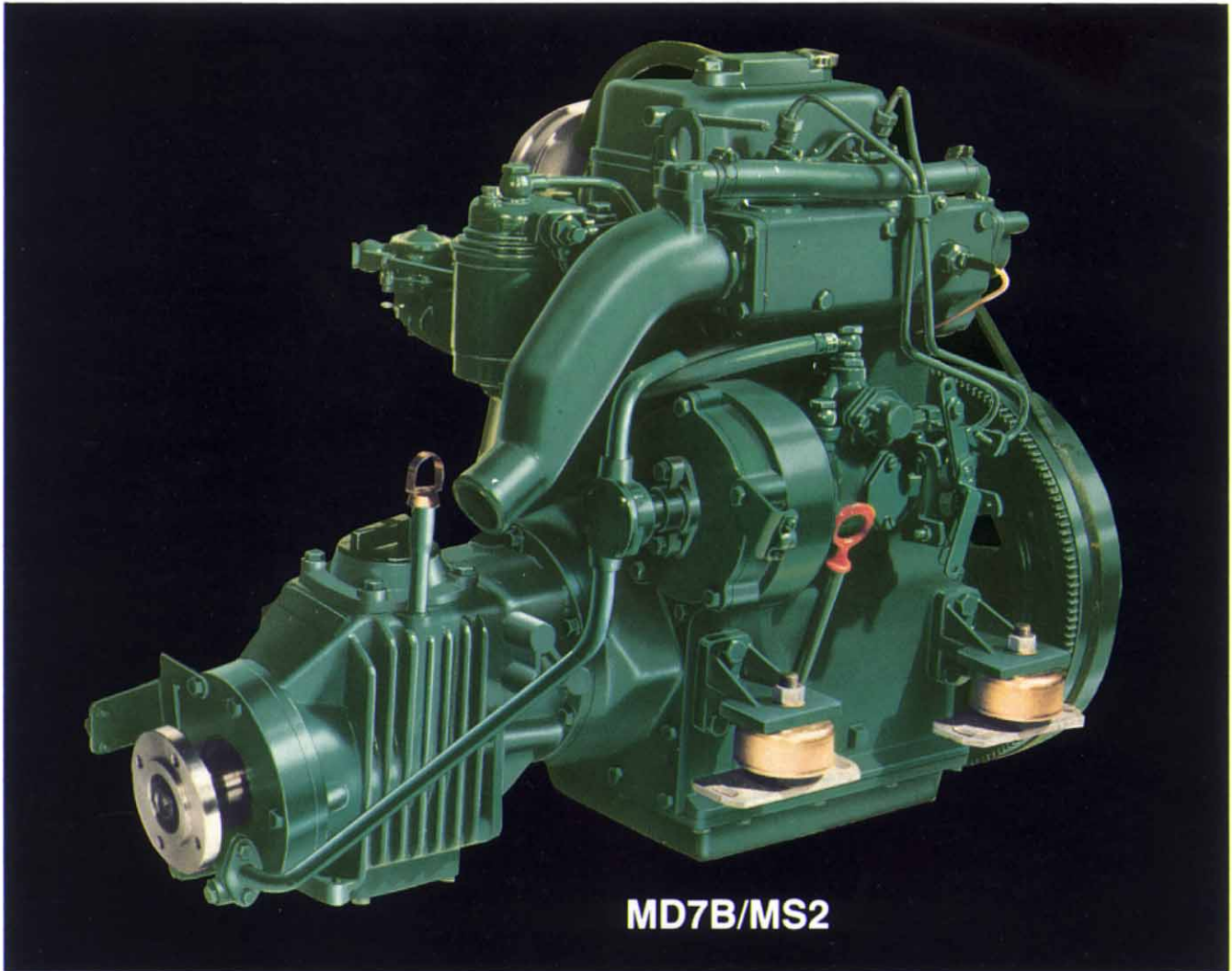
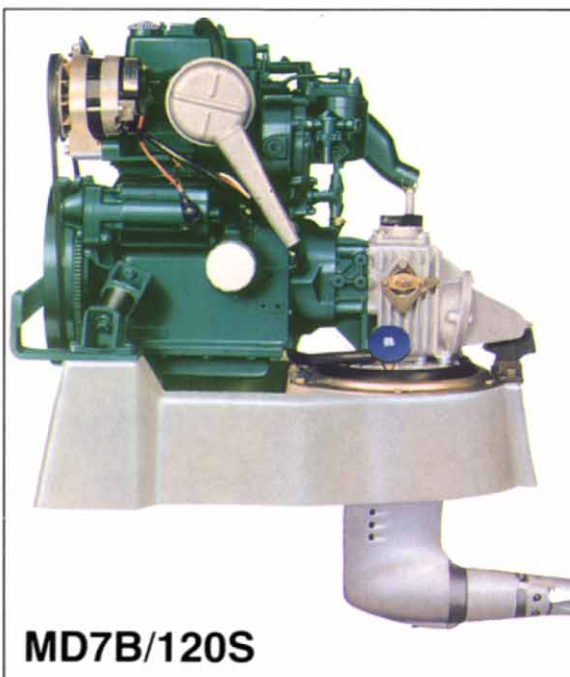


**VOLVO  
PENTA****MD7B**

**2-cylinder marine diesel engine with direct injection  
Propeller shaft output, leisure craft – 12.5 kW (17 hp)**



The new Volvo Penta MD7B with its higher speed (3.000 r/min) and greater output (17 hp) together with the latest and unique Volvo Penta transmission gives significant improvements in propeller thrust.

In practice this new combination means better manoeuvrability, better boat acceleration and, faster stopping plus reduced speed loss in heavy seas and high headwinds.

This robust purpose built marine engine with features like extra wall thickness in the cooling passages makes the MD7B very resistant to corrosion and wear.

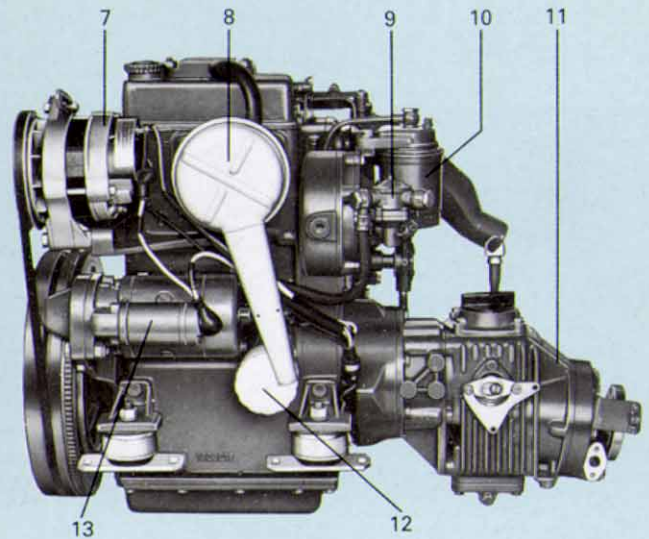
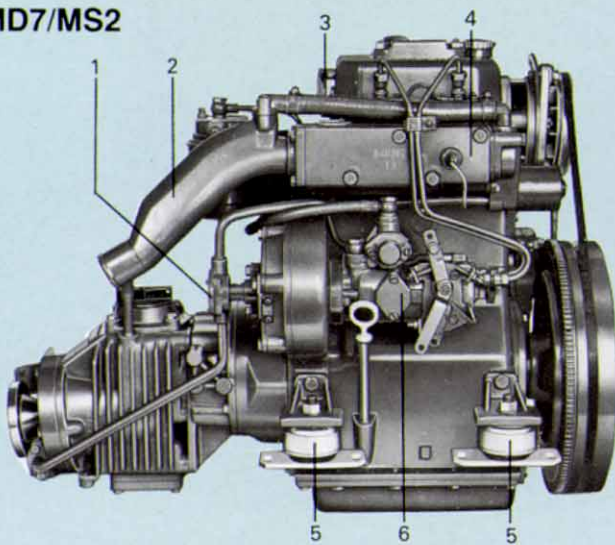
The very accurate fuel metering even at full throttle means extremely clean exhaust gases and a miserly fuel consumption.

The new Volvo Penta MS2 reverse reduction gear has a slip coupling built in and easy shift cone clutch, features also found in the model 120 S-drive.

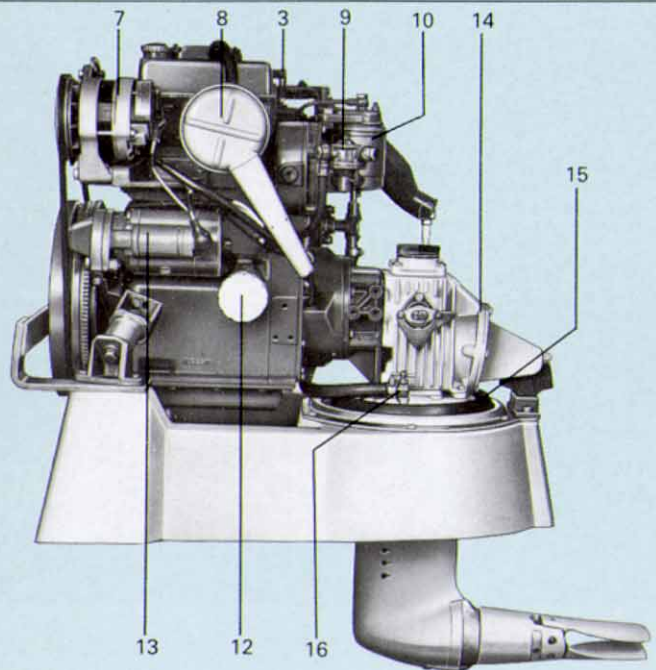
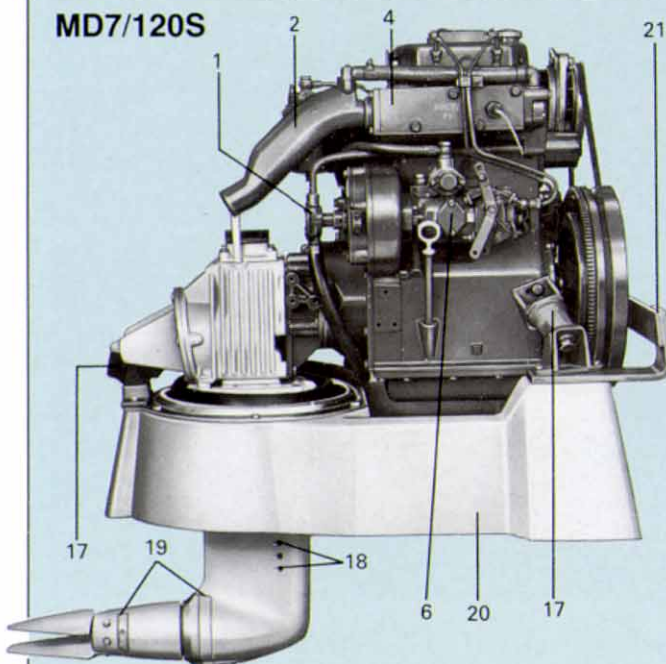
An experienced and strategically placed network of authorised Volvo Penta workshops ensures you of the best service and parts backup.

**3000**  
SERIEN

## MD7/MS2



## MD7/120S



# Standard equipment

### ENGINE BODY

Engine block and cylinder head of cast iron. 3-bearing crankshaft dimensioned for long service life.

### FUEL SYSTEM

Distributor – type injection pump with centrifugal governor for accurate speed regulation (6). Automatic cold starting device. Stop lever with bracket for push-pull mechanism. Exchangeable fuel filter (10). Feed pump with hand primer (9). Flexible fuel hoses (approved by DNV, LR, GL and BV) with copper pipe unions for the suction and return lines.

### COOLING SYSTEM

Thermostatically controlled sea-water cooling. Sea-water pump (1) with easily replaceable pump impeller.

### LUBRICATING SYSTEM

Pressurized lubricating system with exchangeable oil filter (12). Closed-circuit crankcase ventilation.

### INTAKE SYSTEM

Intake silencer (8) with cleanable air filter.

### EXHAUST SYSTEM

Sea-water cooled exhaust manifold of cast iron (4). Exhaust manifold elbow (2) with coolant outlet for connection to rubber exhaust hose.

### REVERSE REDUCTION GEAR

MS2 (11), ratio options 2.4:1 or 3.0:1. Sea-water cooled. Output shaft downward angle 7°. Supplied without propeller shaft flange.

### DRIVE

Type 120S (14) ratio 2.2:1. Complete with rubber diaphragm, sealing ring and mounting collar (15) which fits to bed. Coolant inlet (18) in leg. Cock (16) for coolant. Sacrificial anode ring of zinc (19) to counteract corrosion.

### ENGINE MOUNTING

Flexible mountings for optimal quiet and vibration-free running. *MD7B/MS2* – Engine/reverse reduction gear has engine mounting brackets (5) complete with rubber blocks. *MD7B/120S* – S-drive for fitting directly to the engine. The engine/drive unit is insulated from the hull by a 3-point flexible mounting system (17) and a rubber diaphragm (15).

Bed of glassfibre reinforced plastics (20). Engine movement limiter (21) prevents excessive movement should the drive touch bottom. (Drive 120S).

### ELECTRICAL SYSTEM

12V corrosion-proof electrical system complete with instrument panel. Alternator (7) 50 A, 600 W, approved for marine use. Voltage regulator with fast-charge mode. Alternator prepared for retrofitting of twin diode kit which gives automatic distribution of charge current to two or more batteries.

### STARTING SYSTEM

Electric starter (13), output 0.8 kW (1.1 hp). Manual starting crank for extra security with decompression knob (3) for easier cranking.

### INSTRUMENT PANEL

Complete with ignition key starter switch, warning lamps for charging, cooling water temperature and oil pressure. Automatic alarm with buzzer for low oil pressure and high cooling water temperature. Recess for extra instrument (diam. 52 mm) with blind cover. Master fuse with built in spare fuses.



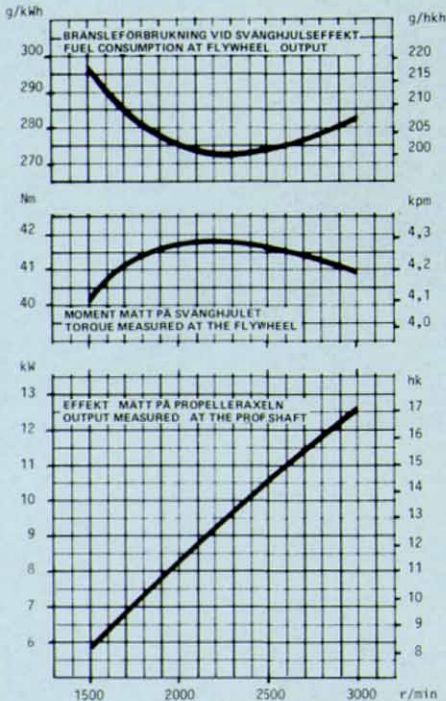
Cable harness, length 4 m, with connector.

### TOOL KIT

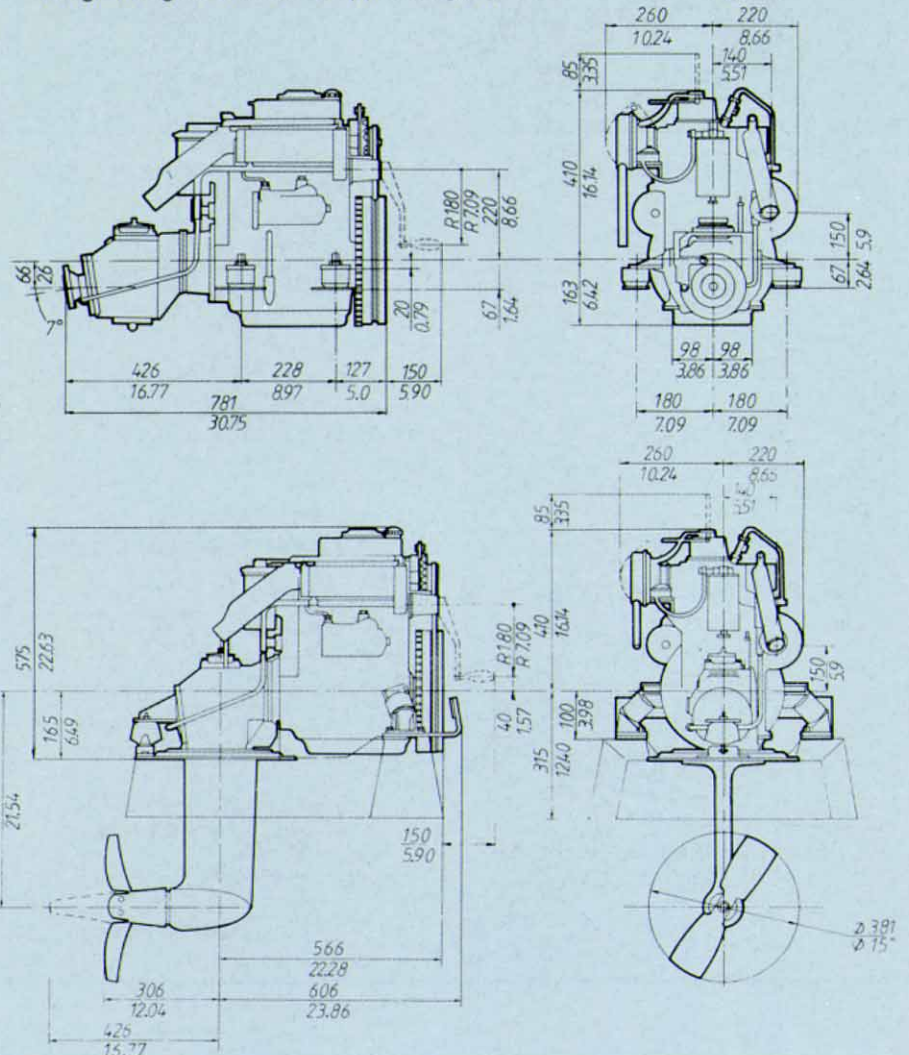
Sufficient for less extensive service work.

## Data

Engine type ..... 4-stroke diesel with direct injection  
 Propeller shaft output\*  
 MD7B/MS2, MD7B/120S ..... 12.5 kW (17 hp at 3000 r/min)  
 No. of cylinders ..... 2  
 Bore/stroke, mm (in) ..... 76/82 (2.99/3.23)  
 Swept displacement volume, dm<sup>3</sup> (in<sup>3</sup>) ..... 0.744 (45.4)  
 Valve system ..... Top  
 Reverse reduction gear type MS2, ratio ..... 2.4:1 or 3.0:1  
 Weight, engine with reverse/reduction gear approx. kg (lb) ..... 166 (366)  
 Drive type 120S ratio ..... 2.2:1  
 Weight, engine with drive approx. kg (lb) ..... 181 (399)

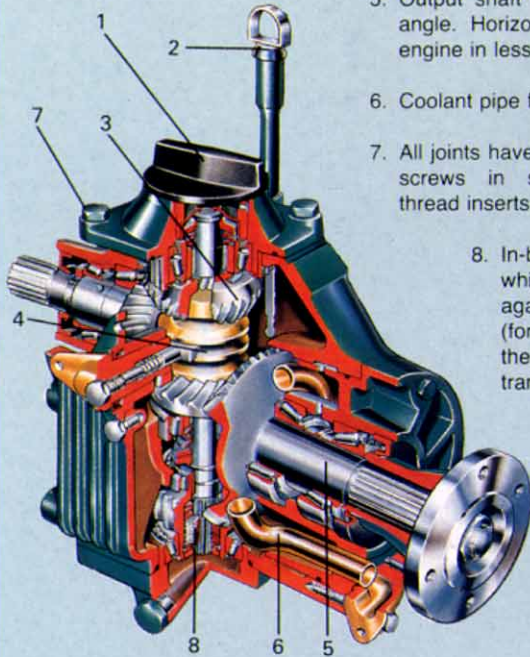


\* The diagrams show propeller shaft output for a run-in engine and reverse reduction gear/drive as per DIN 6270 Leistung B für Dauerbetrieb.



# Reverse reduction gear MS2

1. Easy access oil filler
2. Oil dipstick
3. Spiral bevel gears for quiet, efficient operation



4. Volvo Penta's patented cone clutch gives smooth quiet engagement of forward and reverse. Single lever control of both speed and forward/reverse.

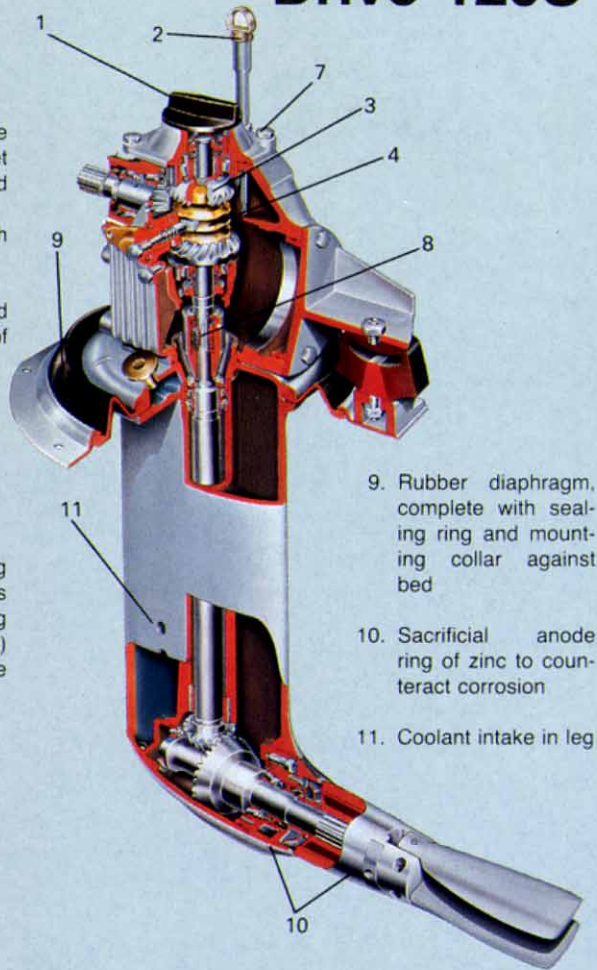
5. Output shaft with 7° downward angle. Horizontal installation of engine in less space.

6. Coolant pipe for oil cooling

7. All joints have stainless steel screws in stainless steel thread inserts

8. In-built slip coupling which safeguards against over-loading (for running aground) thereby protecting the transmission

# Drive 120S



9. Rubber diaphragm, complete with sealing ring and mounting collar against bed

10. Sacrificial anode ring of zinc to counteract corrosion

11. Coolant intake in leg

## Accessories

### FUEL SYSTEM

Electric fuel pump.  
Water-trap and fine filter, with or without flexible hoses.  
Water trap.  
Fuel tank.  
Cap with union for supply from fuel tank.  
Copper fuel pipe kit complete with unions.

### COOLING SYSTEM

Sea-water filter, complete with mountings.  
Vacuum valve.

### EXHAUST SYSTEM

Rubber exhaust hose.  
Hull passthrough for exhaust pipe.  
Water-cooled silencer, complete.

### ELECTRICAL SYSTEM AND INSTRUMENTATION

Twin diode kit for charging of two or more batteries.  
Extra instruments: Electric hour counter, fuel and water tank gauges, voltmeter and rudder indicator.  
Master switch.  
Cable harness extension.  
Instrument panel for extra instruments.

### BOAT ACCESSORIES

Electric bilge pump.  
Genuine touch-up paint.  
Oils.

### CONTROLS AND STEERING SYSTEM

Volvo Penta single lever control for

speed and selection of forward/reverse, top or side-mounted. Neutral-position switch for Volvo Penta control.  
Push-pull control.  
Control cables.  
Steering gears.  
Steering cables.  
Ball joint and yoke for steering cables.

### PROPELLER EQUIPMENT – MS2

Propeller shaft coupling.  
Flexible coupling.  
Clamping coupling.  
Propeller shafts.  
Propeller shafts sleeves.  
Propellers.

### PROPELLERS – DRIVE 120S

2-blade, folding.  
2-blade I.O.R. and 3-blade.



S-405 08 Göteborg, Sweden