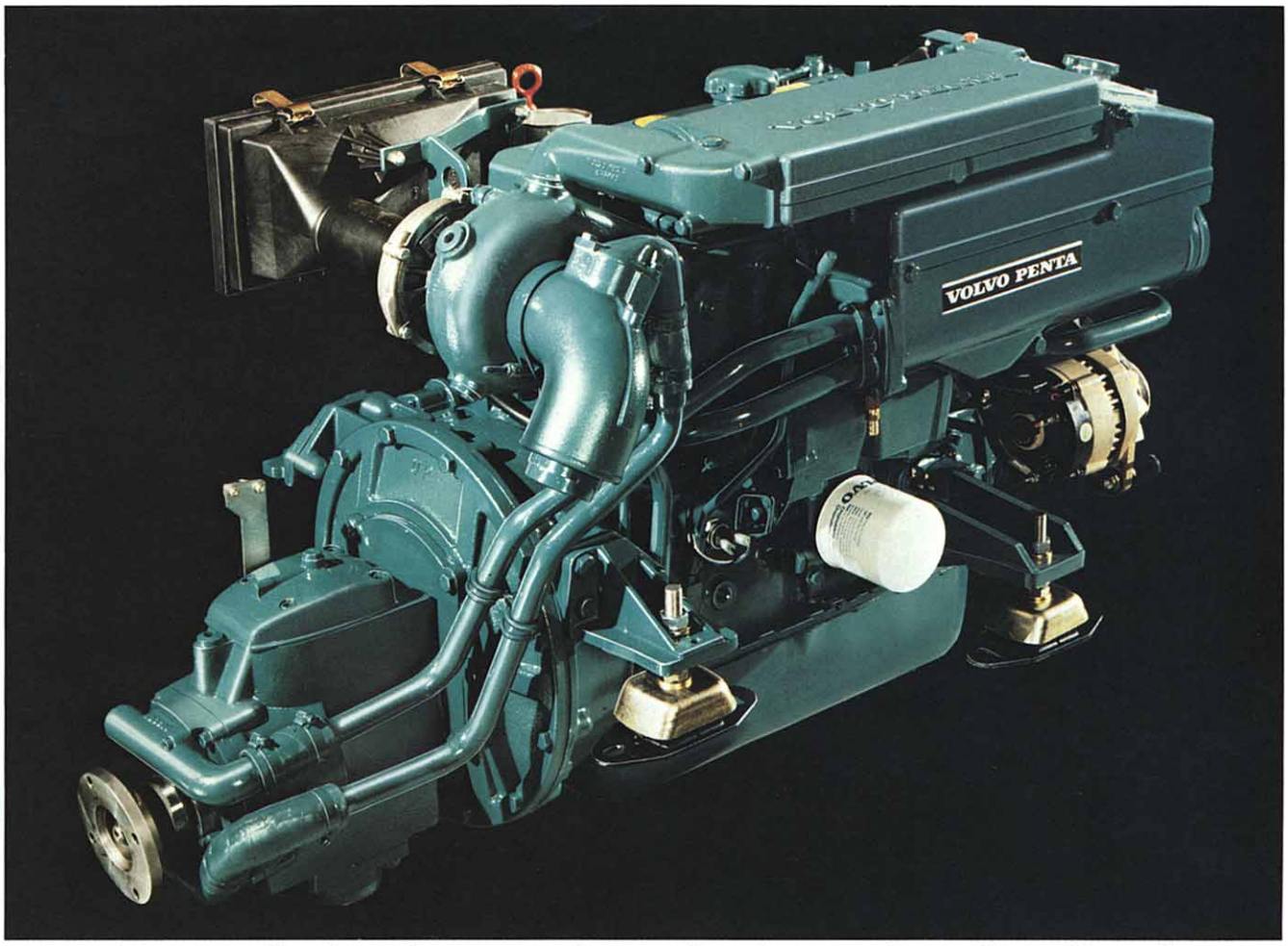
Ref. No. 8522A Eng.

VOLVO PENTA

TMD30
TAMD30



Four-cylinder, four-stroke turbocharged marine diesel of swirl chamber type. TMD30 output* 66 kW (90 hp). TAMD30 output* 81 kW (110 hp).

A compact 2.39 litre diesel of the swirl chamber type. The high torque of this engine together with the Volvo Penta MS3C reverse gear provide a boat with fast acceleration and excellent thrust even at low speed. The engine produces full output at 3800 r/min and has excellent speed resources with good fuel economy. The swirl chamber system and the five-bearing crankshaft, together with flexible engine mountings, contribute to quiet and vibration-free running.

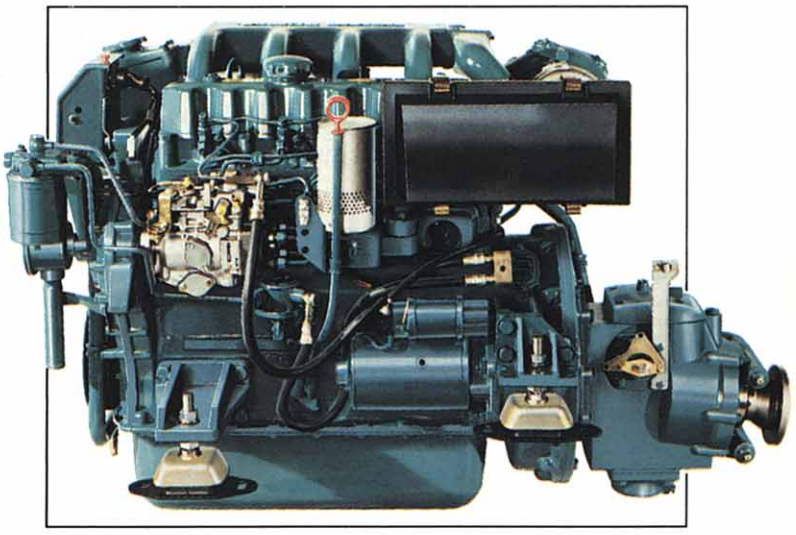
The turbocharger with a fresh-water cooled turbine housing together with effective oil-cooling, provide high output, a steady working temperature and a long lifetime. TAMD30 is also equipped with raw-water cooled aftercooler. The block and cylinder head of cast-iron and the oil-cooled light-alloy pistons with replaceable, wet cylinder liners mean a longer lifetime and simplified servicing.

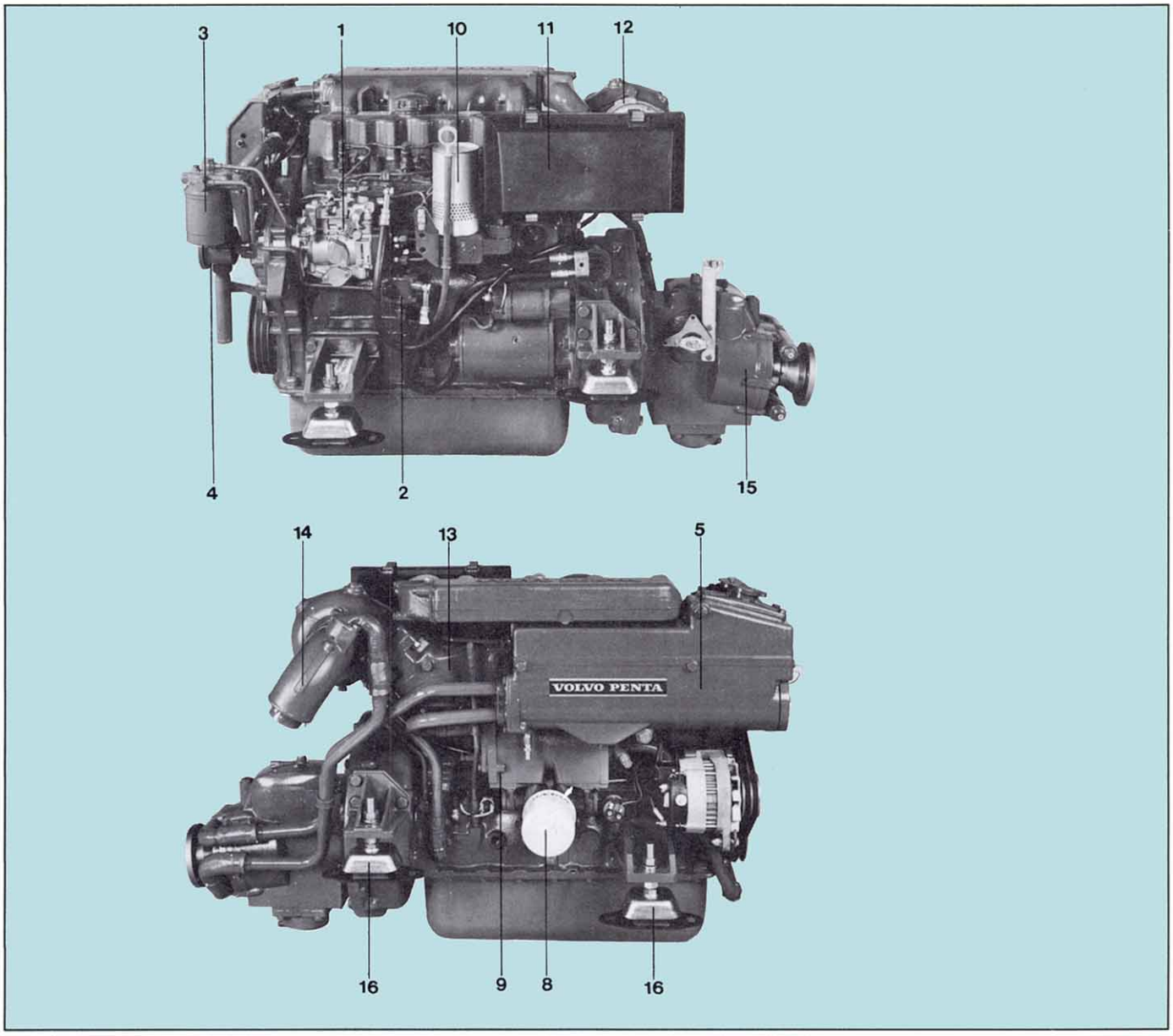
The 12 V electrical system has a brushless 50 A alternator with a built-in electronic regulator providing a high charging capacity and good electrical resourses (50 A, 600 W).

The starter motor has a rating of 2.2 kW (3 hp).

In order to ensure compact installed dimensions, the reverse gear has an ''8° down-angle'' on the output shaft.

*** Flywheel output acc. to DIN 6270 Leistung B.**





Standard equipment

ENGINE BODY

Cylinder block and cylinder head of cast-iron. Replaceable wet cylinder liners. Oil-cooled pistons, each with two compression rings and one oil scraper ring. Crankshaft carried in five bearings. Replaceable valve seats in cylinder head.

FUEL SYSTEM

Rotary type fuel injection pump with mechanical governor for accurate speed control (1). Feed pump (2) with hand primer. Fine filter (3) with water deflector. Electrically actuated stopping system.

COOLING SYSTEM

Thermostat-controlled fresh-water cooling with tubular heat exchanger (5) expansion tank and circulation pump. Raw-water pump with neoprene impeller (4).

LUBRICATING SYSTEM

Pressure lubricating system with full-flow filter of spin-on type (8). Tubular oil cooler (9) accessible for cleaning.
Filter for crankcase ventilation (10).

INTAKE SYSTEM

Intake silencer with replaceable filter (11).

TURBOCHARGING SYSTEM

Exhaust-powered turbo-compressor with fresh-water cooled turbine housing (12). TAMD30 is equipped with raw-water cooled after-cooler to decrease temperature of air fed by turbocharger, the result being improved fuel efficiency.

EXHAUST SYSTEM

Fresh-water cooled exhaust manifold (13). Raw-water cooled exhaust elbow of cast-iron (14) with stainless steel insert.

TRANSMISSION

MS3C reverse gear, reduction ratio 1.93:1 or 2.73:1 (15). Output shaft 8° down-angle.

ENGINE MOUNTINGS

Flexible mountings consisting of

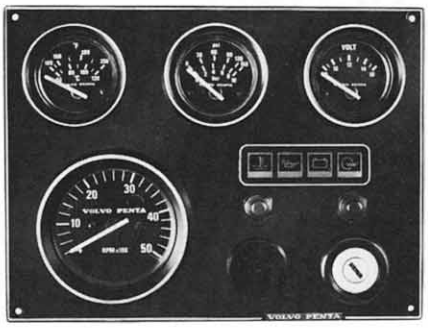
four adjustable rubber blocks (16), for noise and vibration insulation.

ELECTRICAL SYSTEM

Corrosion-protected 12 V electrical system with instrument panel. 50 A, 600 W alternator. Automatic fuse with resetting button fitted on engine. Starter motor rating 2.2 kW (3 hp) (17).

INSTRUMENT PANEL

(Optional on some markets)
Fitted with key switch, tachometer, temperature gauge, oil pressure gauge and voltmeter. Control display for low oil pressure, high engine temperature, low charge and cut-in of glow plugs. Acoustic alarm for oil pressure and water temperature. Test button for alarm and switch for instrument lighting. 5 m (16.4 ft) cable harness with plug-in terminals for simple and fast connection to engine and instruments.



Data

Type of operation .Four-stroke diesel engine with swirl chamber
TMD30
Flywheel output* ..... 66 kW (90 hp) at 3800 r/min
Propeller shaft output* ..... 63 kW (86 hp) at 3800 r/min
TAMD30
Flywheel output* ..... 81 kW (110 hp) at 3800 r/min
Propeller shaft output* ..... 77 kW (105 hp) at 3800 r/min

No. of cylinders 4
Bore/stroke, mm (in) 92/90 (3.62/3.54)
Capacity, dm³ (in³) 2.39 (146)
Valves ..... Overhead
Weight TMD30 with MS3C reverse gear, approx, kg. (lb) 369 (814)
Weight TAMD30 with MS3C reverse gear, approx, kg. (lb) 375 (827)

*according to DIN 6270 Leistung B

DIAGRAM TMD30

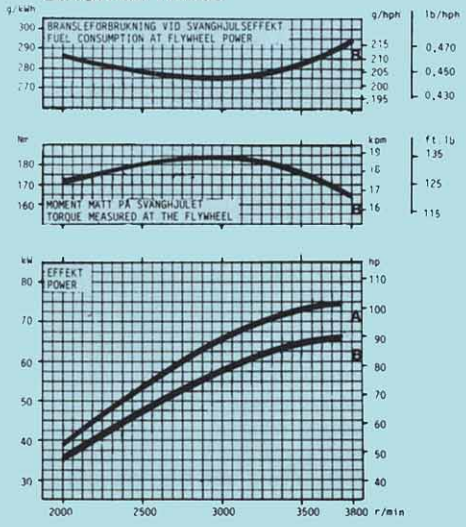
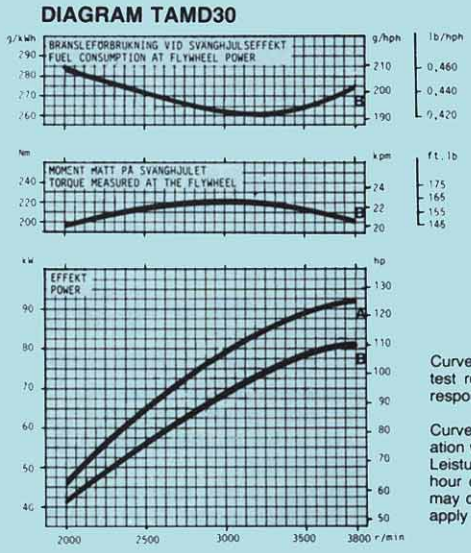
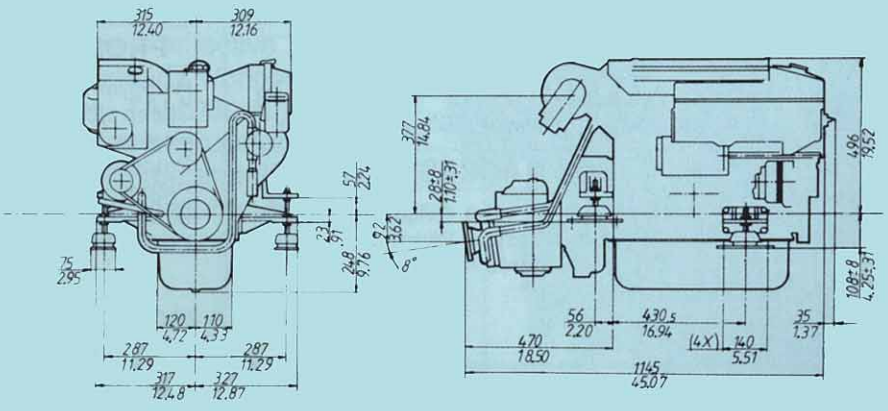


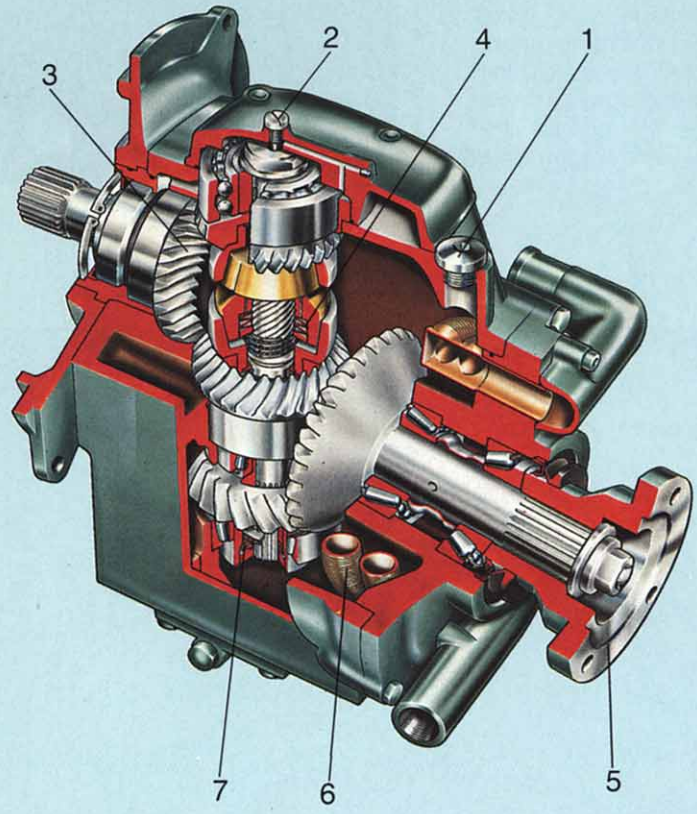
DIAGRAM TAMD30



Curve A: Max flywheel output that can be utilized in test room without thermal overloading. Output corresponding to DIN 6270 "Höchstleistung".

Curve B: Propeller shaft output for leisure craft operation with MS3C reverse gear according to DIN 6270 Leistung B (corresponds for practical use also to one-hour output according to BS649, 1958). Full output may only be utilized occasionally. All measurements apply to run-in engine.





MS3C Reverse gear

1. Easy access oil filler.
2. Oil dipstick.
3. Spiral bevel gears for quiet, efficient operation.
4. Spring-loaded cone clutch gives smooth quiet engagement of forward and reverse.
5. Output shaft with 8° downward angle.
6. Coolant pipe for oil cooling.
7. Built-in slip coupling which safeguards against over-loading (say running aground) thereby protecting the transmission.
8. Uses same oil as engine.
9. Ability to operate propeller in either direction for counterrotation.

Accessories

FUEL SYSTEM

Water-separating filter with or without flexible hoses.
Copper fuel pipes.
Cover with connections for fuel tank.

COOLING SYSTEM

Hot-water outlet fittings.
Cooling water intake with valve.
Cooling water hose.
Vacuum valve.
Raw-water strainer, accessible for cleaning.

LUBRICATING SYSTEM

Electrically operated oil scavenging pump, 12 V or 24 V.

EXHAUST SYSTEM

Through hull fitting
Wet exhaust rubber hose
Wet exhaust silencer
Wet elbow, 45°
Dry silencer
Dry compensator

ELECTRICAL SYSTEM AND INSTRUMENTS

Extra alternator, 12 V, 50 A
Extra alternator, 24 V, 25 A
Distributor for charging of two independant battery systems
Extra instrument panel for "Flying Bridge"
Instrument panel for two extra instruments
Extra instruments: Electric operating hour gauge, rudder indicator, fuel and water tank gauges, log, clock, ammeter and extra temperature gauge
Master switch
Extension cable harness for instrument panel. Length 3 m (9.8 ft), 5 m (16.4 ft) or 7 m (23 ft)
Safety switch to stop engine.

POWER TAKE-OFF

Vee-belt pulley for crankshaft, 3B grooves, diameter 165 mm (7.28 in)

BOAT ACCESSORIES

Electric bilge pump. Original paint. Oils
Electro-mechanical trim tabs
On-board spares kit. Batteries
Tool kit

CONROLS AND OPERATING SYSTEMS

Volvo Penta single-lever control for both speed regulation and gear-changing, top or side fitted. Single or twin installation. Neutral position switch for Volvo Penta control – engine can only be started with gear control in neutral position.
Control systems for dual station.
Dual station speed control kit
Control cables
Steering gears
Steering wheels
Steering cables
Ball joint and fork for control cables

PROPELLER EQUIPMENT

Propeller shaft output coupling
Clamp type coupling
Flexible propeller shaft coupling
Propeller shaft sleeves
Propeller shafts
Stuffing boxes
Propellers

Printed in Sweden. Falkenbergs Tryckeri AB 83 232

All specifications are subject to change without notice.

VOLVO PENTA
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