

TMD 41 B

6-cylinder, 4-stroke, direct-injected and turbocharged marine diesel engine—crankshaft power* 110 kW (150 hp)

A compact 3.6 litre direct-injected marine diesel. Direct injection brings benefits in the form of lower thermal load, at the same time as fuel consumption is reduced and the engine's service life is extended. The outstanding characteristic of this engine is its excellent fuel economy, a result of the engine's high output ratio. Up to 15 % lower fuel consumption throughout the engine's speed range.

The engine's high torque level in combination with Volvo Penta's MS4 reverse gear results in resounding performance when the unit is installed in a boat. The torque curve ensures excellent acceleration characteristics. Since torque increases if engine speed decreases from the maximum owing to added load, there is less speed reduction as a result of such factors as increased wave resistance.

The cast iron engine block and cylinder head, the aluminium pistons and the replaceable, wet cylinder linings all ensure a long service life and simple service. The pistons are oil-cooled so as to minimize the risk of deposits, particularly on the top-most piston ring. This increases the engine's service life.

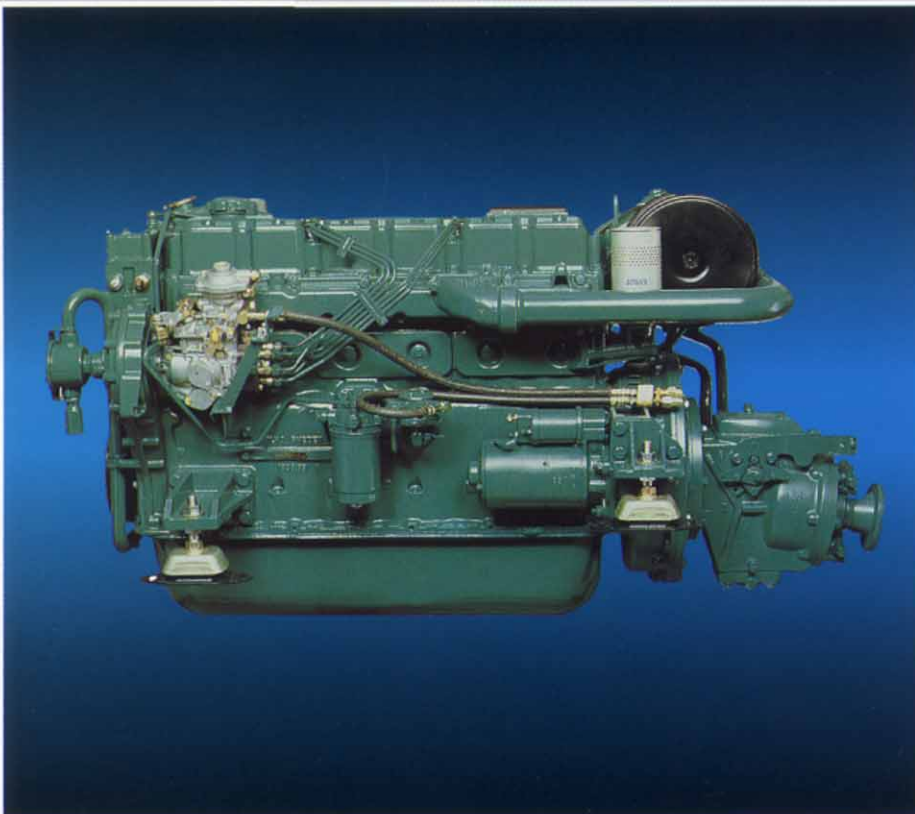
The engine produces extremely low exhaust emission levels during starts and at low load conditions. This has been achieved in a variety of ways, such as a new design of combustion chamber, higher compression ratio and a new type of six-hole nozzle with "minisack". As a result, the engine no longer needs to be equipped with either an exhaust pressure regulator or heater plugs.

The 12 volt electric system features a brushless alternator with an integrated electronic regulator, it offers a high charge capacity (14 V/50 A) and excellent operational reliability. The regulator is equipped with a sensor cable which can be used to compensate for voltage drops in the battery cables. In most installations, this results in significantly improved charge capacity.

The MS4 reverse gear has been angled 8° downwards so as to permit a lower installation profile.

Volvo Penta has a well developed service network in more than 100 countries. Authorized workshops manned by qualified personnel using genuine parts ensure that you get the best service.

* Crankshaft output according to ISO 8665.



Technical description of the engine:

Engine block:

- Cylinder block and cylinder head of cast iron for excellent corrosion resistance and long service life.
- Replaceable wet cylinder liners.
- Oil-cooled pistons with two compression rings and one oil scraper ring.
- Replaceable valve seats rings in the cylinder head.
- Crankshaft with 7 main bearings.

Fuel system:

- Injection pump of rotor type with mechanical regulator for accurate engine speed regulation.
- Fine filter for filtering of water.
- Feed pump with manual pump.
- Flexible fuel pipe connections (approved by the Swedish Administration for shipping and Navigation and DNV) for connection of copper pipes.
- Electrically operated stop control.

Cooling system:

- Thermostat-regulated freshwater cooling with tubular heat exchanger, expansion tank and circulation pump.
- Cooling system prepared for hot water extraction.
- Seawater pump with pump rotors made of neoprene rubber.

Lubrication system:

- Pressurized lubrication system with full-flow oil filter of spin-on type.
- Cleanable tubular oil cooler.
- Filter for crankcase ventilation.

Induction system:

- Induction silencer with replaceable filter.

Turbocharger:

- Exhaust gas driven turbo-compressor with freshwater-cooled turbine housing.

Exhaust system:

- Freshwater-cooled exhaust system.
- Seawater-cooled exhaust elbow of cast iron with stainless steel insert.

Transmission:

- MS4 reverse gear, ratio 1.93:1 or 2.63:1.
- Seawater-cooled.
- Output shaft angled 8° downwards.
- Supplied with propeller shaft flange.

Engine suspension:

- Elastic suspension consisting of 4 rubber pads with adjustable anchorage plates for dampening of sound and vibration.

Electrical system:

- 12 V corrosion-protected electrical system with instruments.
- Alternator with 14 V/50 A charge capacity, designed for marine applications.
- Automatic fuse with reset button fitted to the engine.
- Starter motor output 2.6 kW (3.5 hp).

Instrument panel:

- ("Extra equipment on certain markets").
- Key-operated main switch.
- Tachometer.
- Temperature gauge.
- Oil pressure gauge and voltmeter.
- Display monitor for low oil pressure.
- High engine temperature and charge.
- Audible alarm for oil pressure and water temperature.
- Test button for alarm and switch for instrument illumination.

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- 5 m long cable with pre-connected plug-in contacts for connection to engine and instruments.

Extra equipment

Cooling system:

- Seawater inlet with tap.
- Hose for seawater inlet.
- Sea-water filter.
- Vacuum valve.
- Hose for vacuum valve.
- Hot water outlet.
- Water heater.
- Hose for water heater.
- Hull pass through for outlet cooling water (for dry exhaust systems).

Fuel system:

- Copper pipes for suction and return lines.
- Fuel filter with water separator.
- Fuel tap.
- Separate connection cover for fuel tank.
- Electrical fuel pump.

Control system:

- Single-lever control for single installation.
- Single-lever control for dual installation.
- Control cables.
- DS units (mechanical units which connect the control cables from two manoeuvre panels to one common outgoing control cable).
- Manual stop control.

Electrical system:

- Reversed instrument panel (main panel).
- Instrument panel for "Flying Bridge" upper control station.
- "Flying Bridge" T-connector.
- Display for alarm panel.
- Panel for extra instruments.

Extra instruments:

- Time gauge.
- Rudder indicator including sensor.
- Fuel tank gauge.
- Water tank gauge.
- Extension cable for instrument panel.
- Extra alternator.
- "Twin Diode" charge distributor.
- Main current cut-out switch.
- Battery.

Power transmission:

- Universal bracket at the front for extra power take-off.
- Extra crankshaft pulley.
- Propeller shaft joint with clamp connection.
- Propeller shaft joint with conical locking pin and V-groove.
- Flexible propeller shaft joint.
- Rubberpackbox.
- Propellers.

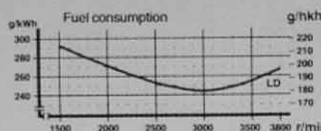
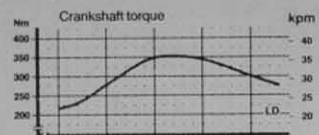
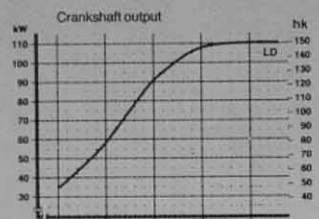
Exhaust system:

- Rubber exhaust hose.
- Watercooled silencer.
- Exhaust elbow 45°, wet exhaust pipe.
- Bordgenomföring for wet exhaust hose.
- Silencer, dry.
- Compensator (for dry exhaust pipe).

Miscellaneous:

- Tool kit.
- On-board kit.
- Oil bilge pump.
- Bilge pump.
- Genuine factory-specification paint.
- Lubricating oils.

Please refer to the "Accessories Catalogue" for details of other accessories.



Technical data for TMD41B

ENGINE:

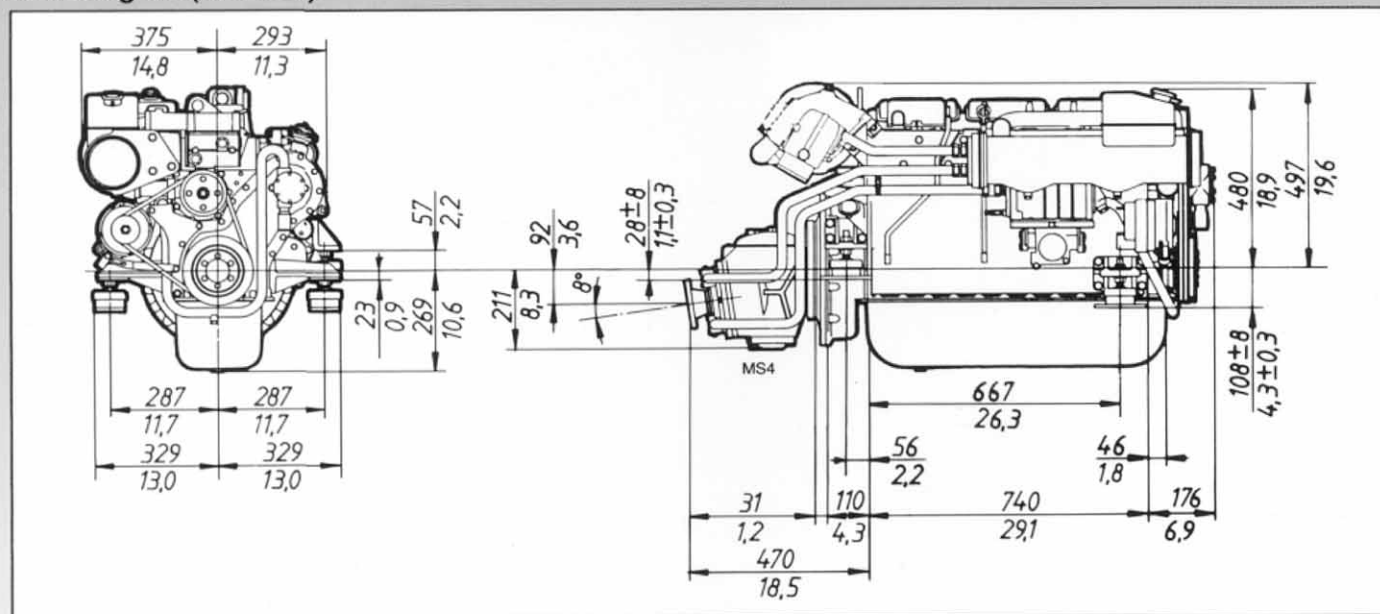
Type designation	TMD41B
Configuration	4-stroke direct-injected diesel engine
	Light Duty
Crankshaft output ¹⁾	10 kW (150 hp)
Propeller shaft output ²⁾	107 kW (145 hp)
Engine speed, rpm	3800
No. of cylinders	6
Bore/stroke	92/90 mm
Displacement, litres	3.59
Valve system	Topp
Dry weight with MS4 reverse gear, approx. kg	455

¹⁾ Crankshaft output according to ISO 8665.

The output will be reduced by transmission or reverse gear losses.

²⁾ Propeller shaft output according to ISO 8665 or the technically identical SAE J1228 and ICOMIA 28-83 standards.

Scale diagram (mm/inch)



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All specifications subject to change without notice.