Ref. no 7733525-5 Eng.

TAMD 41 B

6-cylinder, 4-stroke, direct-injected, turbocharged and aftercooled marine diesel engine—crankshaft power* 147 kW (200 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.

In order to achieve this excellent output ratio, the engine is equipped with an aftercooler which considerably reduces the temperature of the inlet air. The oxygen content of the inlet air increases and the result is more effective combustion of fuel, which in turn leads to a reduction in fuel consumption.

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.

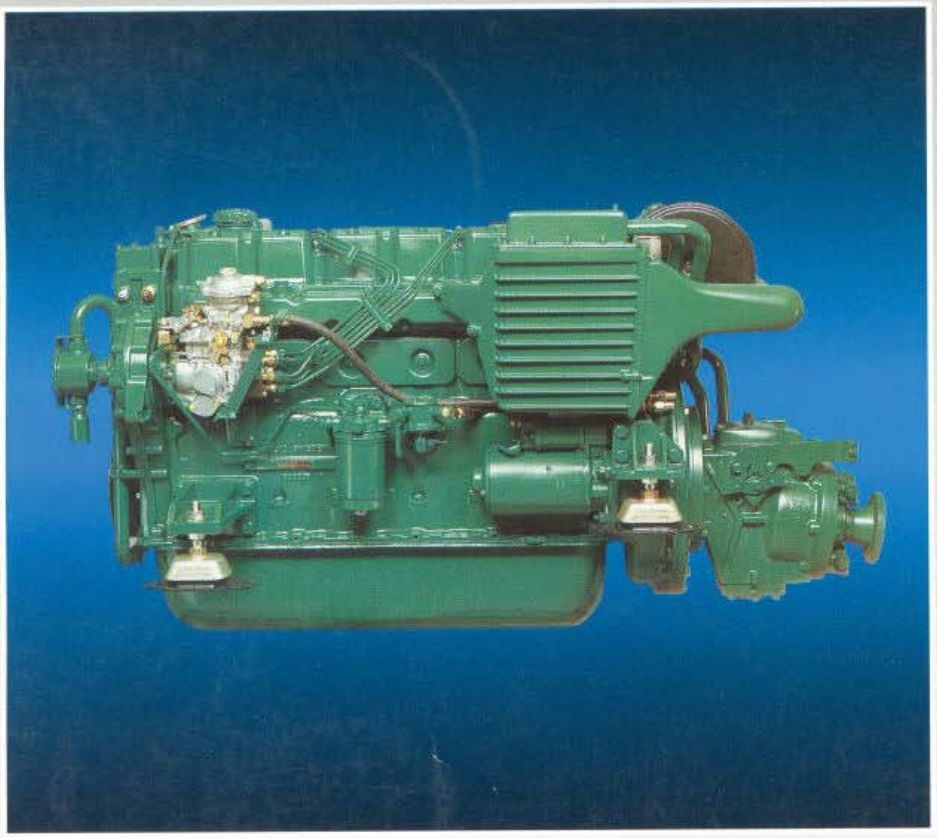
The cast iron engine block and cylinder head, the aluminium pistons and the replaceable, wet cylinder linings all ensure a long service life and simple service. The pistons are oil-cooled so as to minimize the risk of deposits, particularly on the top-most piston ring. This increases the engine's service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

There is a choice between a 12 volt and a 24 volt electric system which features a brushless alternator with an integrated electronic regulator, it offers a high charge capacity (14 V/50 A or 28 V/55 A) and excellent operational reliability.

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.
- Keel cooling: the engine can be supplied in a keel cooling variant.

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.
- Seawater-cooled aftercooler for cooling of compressed air, which results in improved output ratio.

Exhaust system:
- Freshwater-cooled exhaust system.
- Seawater-cooled exhaust pipe 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.
- Reverse gear PRM 402, ratio 1.96:1, 2.90:1 or 3.95:1.
- 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:
- Corrosion-protected electrical system with instruments. 12 V or 24 V.
- Choice of alternator: 14 V/50 A or 28 V/55 A charge capacity.
- Automatic fuse with reset button fitted to the engine.
- Starter motor output 12 V/2.6 kW (3.5 hp) or 24 V/4 kw (5.4 hp).

VOLVO PENTA

TAMD41B

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.
- 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.
- Hose for water heater.
- Separately mounted expansion tank.
- 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.

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.
- Hull pass through 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.

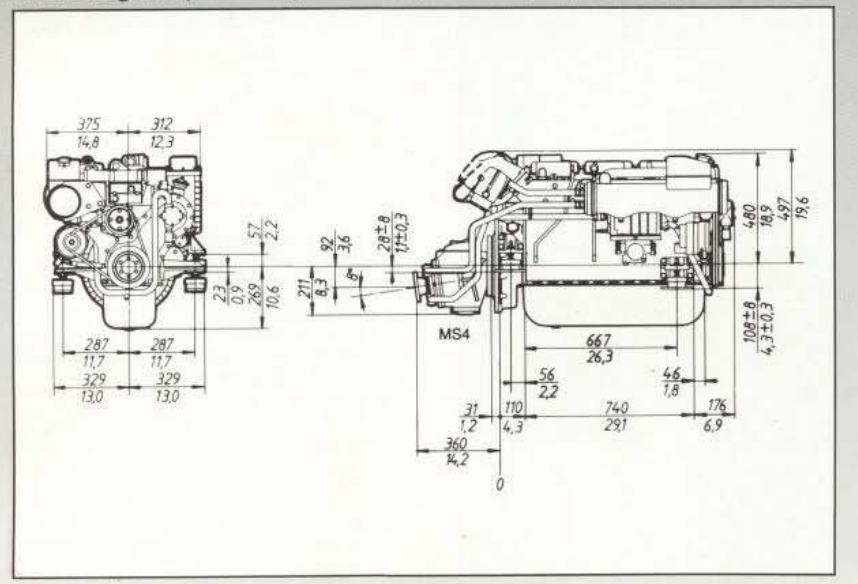
Technical data for TAMD41B

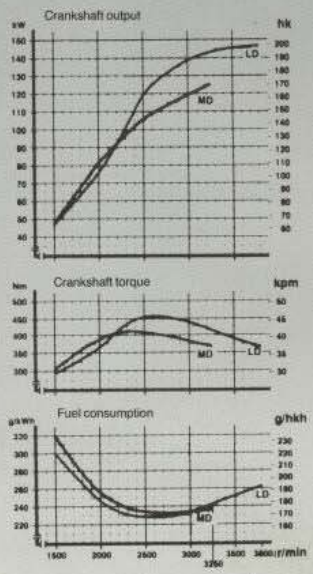
ENGINE:

	Light Duty	Medium Duty
Type designation	TAMD41B	
Configuration:	4-stroke direct-injected diesel engine	
Crankshaft output [1]	147 kW (200 hp)	125 kW (170 hp)
Propeller shaft output [2]	144 kW (195 hp)	120 kW (163 hp)
Engine speed, rpm	3800	3250
No. of cylinders	6	
Bore/stroke	92/90 mm	
Displacement, litres	3.6	
Valve system	Overhead	
Dry engine weight with MS4 reverse gear, approx. kg.	465	
Dry engine weight with PRM 402 reverse gear, ratio 1.96 – 2.90:1, approx. kg.	505	
Dry engine weight with PRM 402 reverse gear, ratio 3.95:1, approx. kg.	513	

[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)





Definition of LD: Light Duty operational conditions
Engines with this power setting are intended for applications in which load and engine speed vary and full power is exploited no more than **1 hour per 12 hours** operational duty.
Applies mainly to planing craft.
E.g. fire-fighting vessels, rescue vessels, certain patrol boats, charter vessels.

Definition of MD: Medium Duty operational conditions
Engines with this power setting are intended for applications in which load and engine speed vary and full power is exploited no more than **4 hour per 12 hours** operational duty.
Applies to planing, semi-planing and displacement vessels.
E.g. Coastal fishing vessels, patrol boats, police boats, passenger ferries etc.

The stated power outputs refer to crankshaft output. Propeller shaft output is generally approximately 5 % lower.

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All specifications subject to change without notice.