VOLVO PENTA INBOARD DIESEL

TAMD103A

6-cylinder, 4-stroke, direct-injected, turbocharged marine diesel engine with aftercooler – crankshaft power* 199–287 kW (271–390 hp)

* Power rating – see Technical Data

Reliable and powerful

The TAMD103A is a powerful, reliable and economical marine diesel built on the dependable in-line six design.

Developed for Medium and Heavy duty operation for displacement, semi-planing and planing craft.

Durability and low noise levels

The Volvo Penta in-line six cylinder engine is a traditional well-balanced unit with powerfully dimensioned crankshaft bearings. This ensures smooth, vibration-free operation and low noise levels, which, together, provide the highest level of onboard comfort.

The torsionally rigid cylinder block and crank mechanism are designed to withstand many hours of demanding operation.

To maintain a stable working temperature in cylinders and combustion chambers, the engine is equipped with piston cooling and seawater-cooled oil cooler. The engine is also fitted with replaceable cylinder liners and valve seats/guides to ensure maximum durability and service life of the engine.

Low exhaust emission and fuel consumption

High-pressure injection through six-hole injection nozzles optimizes fuel-air mixture.

The improved combustion results in a very low fuel consumption, higher power and reduced noxious exhaust emissions. The engine is certified according to IMO and IMO US/EPA.

Marine electrics

The two-pole electrical system is specifically adapted to demanding marine environments. Flex-mounted electrical box, with semi-automatic fuses and plug-in electrical connections.

Ease of service and maintenance

Easily accessible service and maintenance points contribute to the ease of service of the engine.

Comprehensive service network

Volvo Penta has a well-established network of authorized service dealers in more than 100 countries throughout the world. These service centers offer Genuine Volvo Penta Parts as well as skilled personnel to ensure the best possible service.

Technical description:

Engine and block

- Cylinder block and separate cylinder heads made of cast iron alloy
- Flywheel housing (aluminum) with connection acc. to SAE 1
- Replaceable cylinder liners and valve seats/guides
- Nitrocarburized crankshaft with seven main bearings
- Oil-cooled forged aluminum pistons
- Rigid camshaft with well designed cams. Large overlap between inlet and exhaust valves ensures excellent air flow, good cooling and low exhaust gas temperature.

Lubrication system

- Seawater-cooled oil cooler
- Gear pump pressurized lubricating system
- Twin full flow oil filters of spin-on type
- Oil sump with inspections covers
- Oil filler in valve cover
- Oil separating filter incl. overpressure valve for crankcase ventilation

Fuel system

- Fuel injection pump with centrifugal governor, smoke limiter and fuel feed pump
- Fuel shut-off valve 24V, electrically operated
- Six-hole injectors
- Twin fine fuel filters of spin-on type

Turbocharger

- Freshwater-cooled turbocharger

Cooling system

- Engine-mounted tubular heat exchanger with integrated expansion tank or bulkhead-mounted heat exchanger for reduced installation dimensions. Alternatively adapted for 2-circuit keel cooling.
- Seawater-cooled aftercooler
- Belt-driven freshwater pump and front-mounted seawater pump with neoprene impeller

Electrical system

- 24V electrical system, 24V/60A alternator
- Rubber suspended electrical terminal box with semi-automatic fuses and plug-in electrical connections

VOLVO PENTA

TAMD103A

Technical Data

Engine designation	**TAMD103A**
No. of cylinders and configuration	in-line 6
Method of operation	4-stroke, direct-injected, turbocharged diesel engine with aftercooler
Bore, mm (in.)	120.65 (4.75)
Stroke, mm (in.)	140 (5.5)
Displacement, l (in^3)	9.6 (585.8)
Compression ratio	17:1
Dry weight, kg (lb)	1190 (2623)
Dry weight with reverse gear MG5114SC, kg (lb)	1396 (3078)
Crankshaft power,	
Rating 2, kW (hp) 1800 rpm	287 (390)
Rating 1, kW (hp) 1800 rpm	255 (347)
Rating 1, kW (hp) 1800 rpm (repowering)	199 (271)
Torque,	
Rating 2, Nm (lbf.ft) 1800 rpm	1523 (1123)
Rating 1, Nm (lbf.ft) 1800 rpm	1353 (998)
Rating 1, Nm (lbf.ft) 1800 rpm (repowering)	1056 (779)
Recommended fuel to conform to	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204
Specific fuel consumption,	
Rating 2, g/kWh (lb/hph) 1800 rpm	212 (0.343)
Rating 1, g/kWh (lb/hph) 1800 rpm	212 (0.343)
Rating 1, g/kWh (lb/hph) 1800 rpm (repowering)	215 (0.348)

Fuel temperature 40°C (104°F)

Technical data according to ISO 3046 Fuel Stop Power and ISO 8665. Fuel with a lower calorific value of 42700 kJ/kg and density of 840 g/liter at 15°C (60°F). Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

N.B. The product can also be used in an application with a higher rating than stated, e.g. R1 can be used for R2.

The engine is certified according to IMO and IMO US/EPA.

Optional equipment:

Engine
- Flexible suspension for engine and reverse gear
- Cast iron flywheel housing

Lubrication system
- Deep oil sump with inspection covers
- Oil filling on starboard side
- Engine-mounted manual oil drain pump for shallow oil sump

Fuel system
- Single or twin fuel filter/water separator with shift valve

Exhaust system
- Exhaust elbow, dry or wet
- Silencer, dry
- Flexible compensator

Cooling system
- Seawater strainer
- Freshwater filter

Electrical system
- 24V/100A extra alternator
- Various instrument panels
- Cable harness in different lengths

Power transmission
- Auxiliary drive
- Extra pulley for crankshaft
- Hydraulic pump for steering and other duties

Reverse gear
- MG5114SC, MG5091DC (only R1 199 kW), ZF 311A

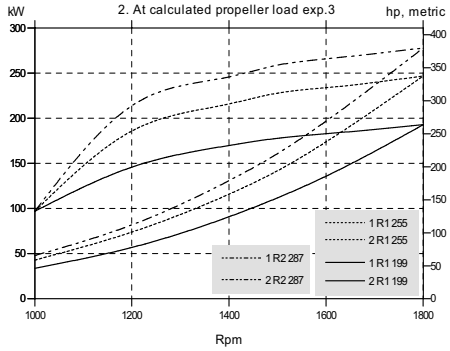
Other equipment
- 2" bilge/flush pump
- Belt guard
- White-painted engine and reverse gear

Contact your local Volvo Penta dealer for further information.

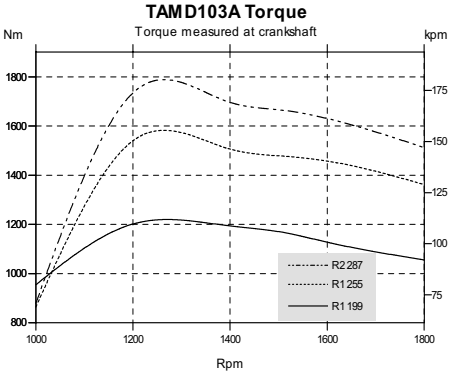
Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice.

The engine illustrated may not be entirely identical to production standard engines.

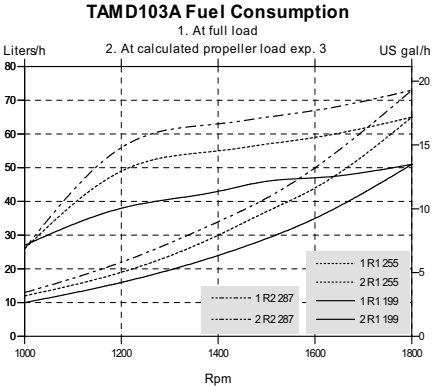
TAMD103A Propeller Shaft Power



TAMD103A Torque

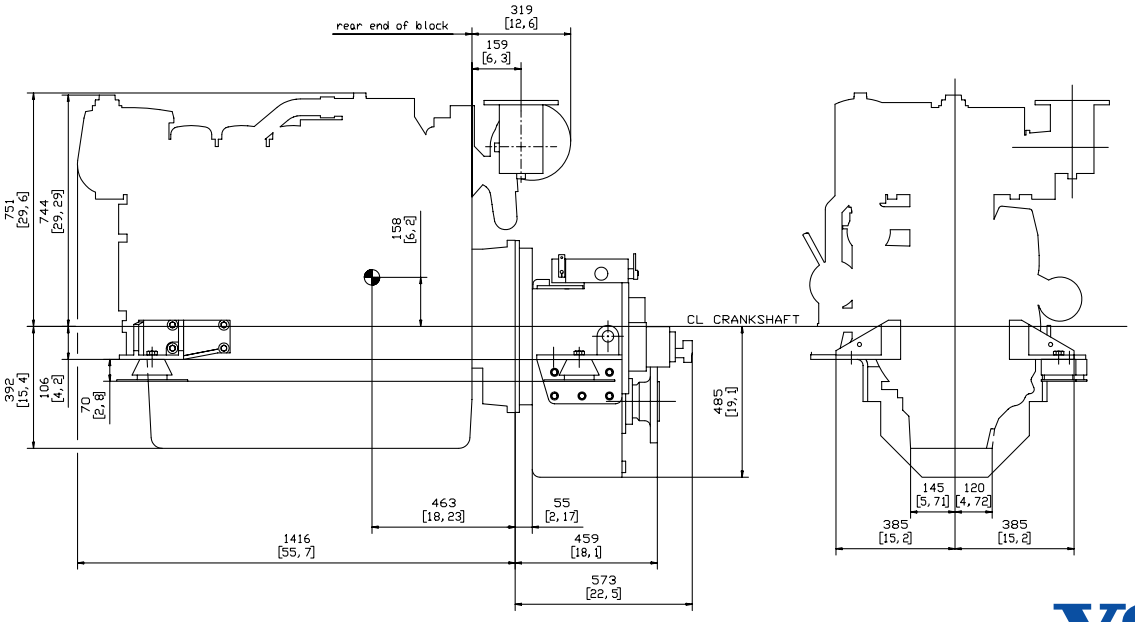


TAMD103A Fuel Consumption



Dimensions TAMD103A with MG5091DC

Not for installation



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