

VOLVO PENTA AQUAMATIC DUOPROP

7.4/DP

8-cylinder, 4-stroke, gasoline marine engine
Up to 283 kW (385 kW)

Engine

Electronic fuel injected 7.4 liter gasoline engine in a V-8 configuration. The engine is ideal for the sport performance segment in single and twin installations.

Seawater-cooled with cast iron cylinder block, cylinder heads and exhaust manifolds, specially developed for marine environment. Easily accessible seawater pump located in the front of the engine. Easily replaceable fuel filter of canister type. The 7.4 is equipped with hydraulic valve lifters, which eliminate the need of valve adjustment. The crankshaft is supported with five four-bolt main bearings for extra strength and smooth running.

The advanced combustion system minimizes noxious exhaust emissions and enhances overall enjoyment of boating.

Fuel injection

Electronic Fuel Injection (EFI) of Multi Port Fuel Injection execution. The MPI system is monitored by an Electronic Control Module (ECM) and gives the following advantages: More responsive and smoother acceleration. Excellent turnkey starts in all weather conditions. Smooth, reliable idling. Reduced fuel consumption. Improved control of emissions.

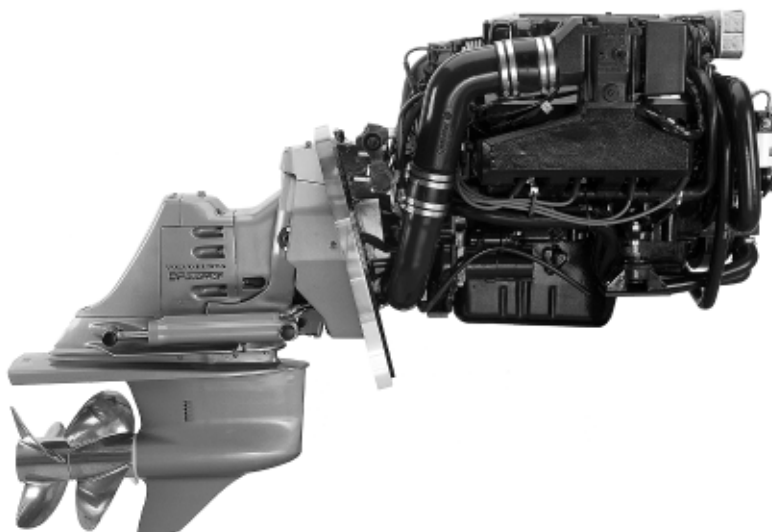
Additional features built into the system are: Engine knock control for compensation of less-than-perfect gasoline, overspeed protection, rpm reduction of the engine for low oil pressure and high engine temperature. Altitude compensation for air density. Self-diagnostic capabilities.

Two fuel pumps for low and high pressure respectively.

Aquamatic sterndrive

The Duoprop drive with its twin counter-rotating propellers and exhaust outlet through propeller hub and cavitation plate produces a harmonious

7.4GSI with DP-S
Duoprop drive



drive unit with unbeatable characteristics in the boat in terms of speed, acceleration, steering, maneuvering, fuel economy and less noise and vibration.

The drive is equipped with cone clutch for easy and smooth shifting. Pattern-matched spiral bevel gears for optimum strength and minimum gear whine. Break-away shaft coupling to prevent costly drive train repairs. Sacrificial zincs located both on drive and transom shield.

The drive is equipped with easily maneuvered hydraulic power trim for obtaining the best running position at different sea and load conditions.

A choice of stainless steel propellers available for different applications.

The 7.4 features standard power steering for maximum driving comfort.

Electrical system

12 V corrosion-protected marine electrical system which meets the U.S. Coast Guard requirements.

The engine is completely wired with easy plug-in connection of wire harness to instrument panel. 65 A alternator with outlet for voltage sensor cable for optimum charging capacity. The electrical system for the engine is protected by a 50 A circuit breaker.

Electric hydraulic power trim motor with easy plug-in connection, protected by a 50 A circuit breaker.

Full instrumentation and wiring harness (option on certain markets).

Technical description:

Engine and block

- Cylinder block and cylinder heads made of cast iron for good corrosion resistance
- Pistons with two compression rings and one oil scraper ring
- Five-bearing crankshaft
- Valve train consisting of single camshaft, hydraulic valve lifters, push rods and two valves per cylinder

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Engine mounting

- Two adjustable rubber mounts, one on each side of the engine, and two between transom shield assembly and engine

Lubrication system

- Pressure lubrication system with full-flow oil filter of spin-on type

Fuel system

- Multi Port Fuel Injection system (MPI)
- Fuel filter with water separator
- Two electric fuel feed pumps
- Stainless steel fuel lines

Inlet and exhaust system

- Marine intake manifold, developed for Multi Port Fuel Injection
- Flame arrestor
- Closed crankcase ventilation
- Seawater-cooled exhaust manifolds and risers made of cast iron
- Complete exhaust line with pipe and belows for exhaust outlet through the drive

Cooling system

- Thermostatically controlled seawater cooling
- Crankmounted seawater pump
- Multi-V belt with spring tensioner
- Electrocoated exhaust risers

Electrical system

- 12 V corrosion-protected electrical system

- ECM unit ensures constant optimum performance with diagnostic capability
- Outlet on alternator for voltage sensor cable for optimized charging
- 65 A alternator with internal transistorized voltage regulator
- Breakerless electronic ignition system
- Resettable 50 A fuses for protection of the engine's electrical system and power trim
- One 20 A resettable fuse for protection of the fuel pumps and one 12.5 A resettable fuse for protection of the fuel injection system
- Starter motor power 1.0 kW
- Audio alarm for temperature and oil pressure

Instruments

(option on certain markets)

- Complete instrument panel including: Rev counter, engine temperature gauge, oil pressure gauge, voltmeter, key switch, two fuses, instrument light switch
- Wiring harness from engine to instrument panel
- Digital trim gauge with active corrosion protection
- Maneuver switch for power trim
- Wiring harness from trim pump to maneuver switch for power trim

Drive

- Duoprop
- Cone clutch

- Coolant water intake for the engine located at the lower part of the drive
- Pattern-matched spiral bevel gears
- Exhaust outlet through propeller hub and cavitation plate
- Overload protection sleeve (break-away coupling)
- The drive can be tilted 55°
- The drive can be turned 28° in each direction with power steering
- Built-in kick-up function to reduce possible damage, in the event the drive strikes an underwater object
- Belt-driven power steering pump
- Oil cooler for power steering
- Active corrosion protection as accessory

Power Trim

- Electrically operated hydraulic system with trim gauge for best driving comfort

Accessories

An extensive range of accessories for:

- Fuel system
- Control system
- Instruments
- Comfort & Safety
- Maintenance
- Cooling system
- Steering system
- Electric system
- Propeller & Drive

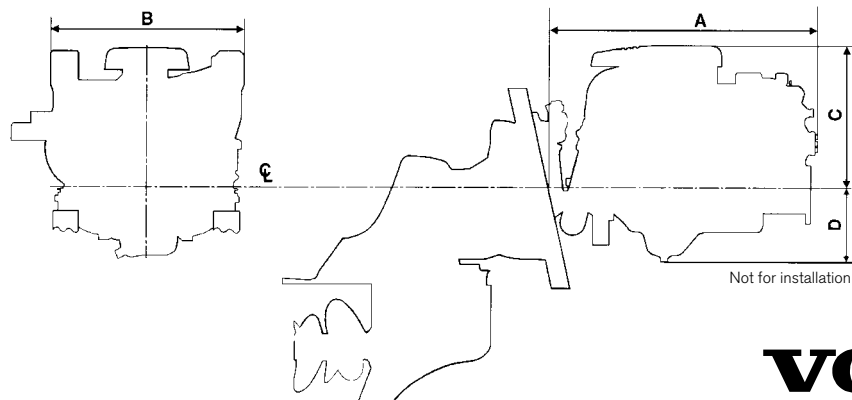
For detailed information, please see Accessory catalogs.

Technical Data

Engine designation	7.4GSi	7.4Gi¹⁾
Propeller shaft power kW (hp*)	283 (385)	228 (310)
Max. engine speed, rpm	5200	4600
Displacement, l (in ³)	7.4 (454)	7.4 (454)
Number of cylinders	V-8	V-8
Bore/stroke, mm	108/101.6	108/101.6
in.	(4.25/4.00)	(4.25/4.00)
Compression ratio	8.6:1	9.1:1
Volvo Penta Duoprop drive	DP-S	DP-S
Ratio	1.68:1 or 1.78:1	1.78:1 or 1.95:1
Dry weight engine, transom shield and drive, kg (lb)	548 (1208)	546 (1204)
A. Engine length along crank center line, mm (in.)	984 (38.75)	984 (38.75)
B. Engine width, mm (in.)	798 (31.4)	798 (31.4)
C. Height above crankshaft, mm (in.)	571 (22.48)	540 (21.26)
D. Height below crankshaft, mm (in.)	264 (10.4)	264 (10.4)

* Propshaft power according to ISO 8665.
Duty rating: R5 (Pleasure Duty)
IMEC Standard.

¹⁾ SAV-1 approved.



VOLVO PENTA

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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. 231 kW enl. Matrix