

AQ171C SP

AQ171C 4-cylinder, 16-valve, 4-stroke carburettor engine with Singleprop drive.

AQ171C is a technically-advanced engine designed primarily for runabouts where the demands made on performance are high. Together with the SP drive and Power Trim, the AQ171C provides exceptional performance: Speed, acceleration and fuel economy.

The engine has four valves per cylinder, which makes for a higher volumetric efficiency through improved breathing. It also gives better fuel economy and performance.

The twin overhead camshafts combined with hydraulic valve lifters give accurate control of the valve timing. Normally, valve adjustment will not be needed.

The electronic ignition system guarantees very accurate control of the ignition process throughout the entire engine speed range and will normally not require any maintenance or adjustment.

The charging regulator always gives the correct ter-

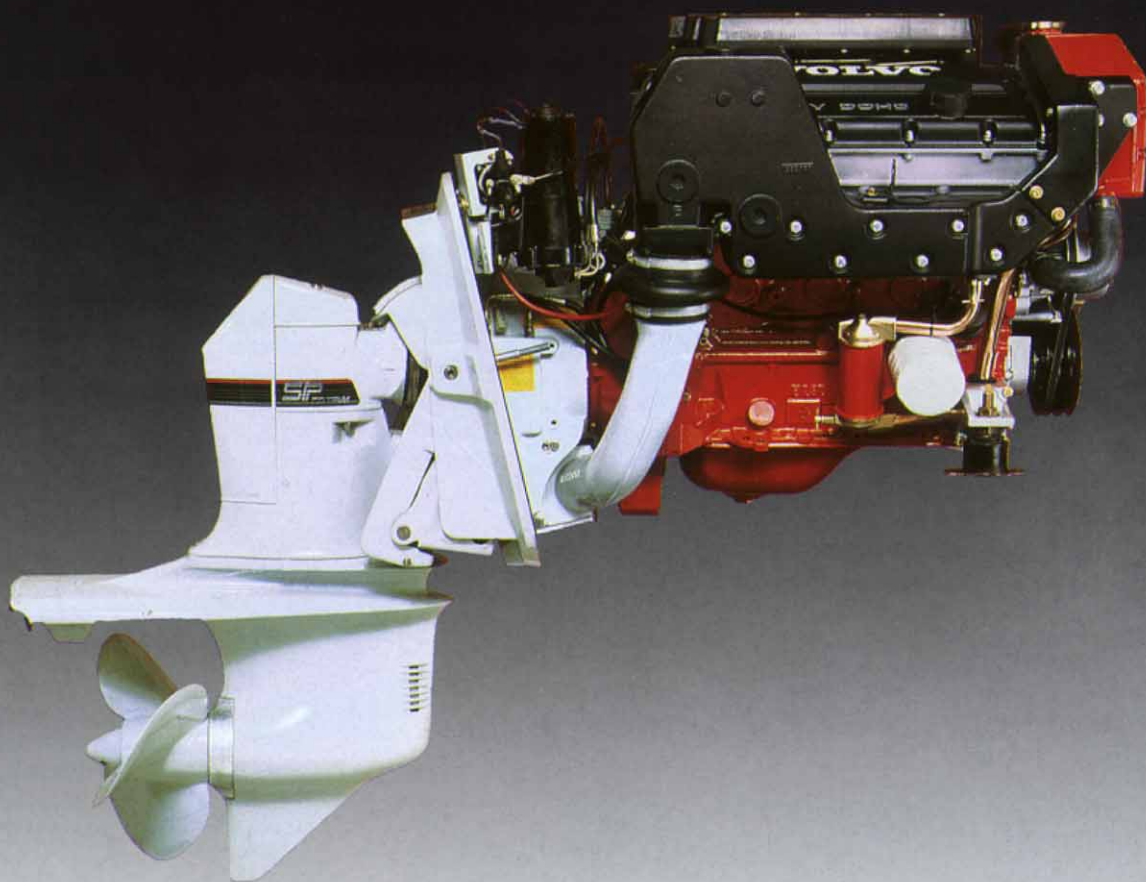
minal voltage at the battery and automatically compensates for voltage drop in the electrical system. This gives very efficient battery charging.

Power Trim enables the drive to be adjusted to the best operating angle for better acceleration, increased top speed or lower fuel consumption.

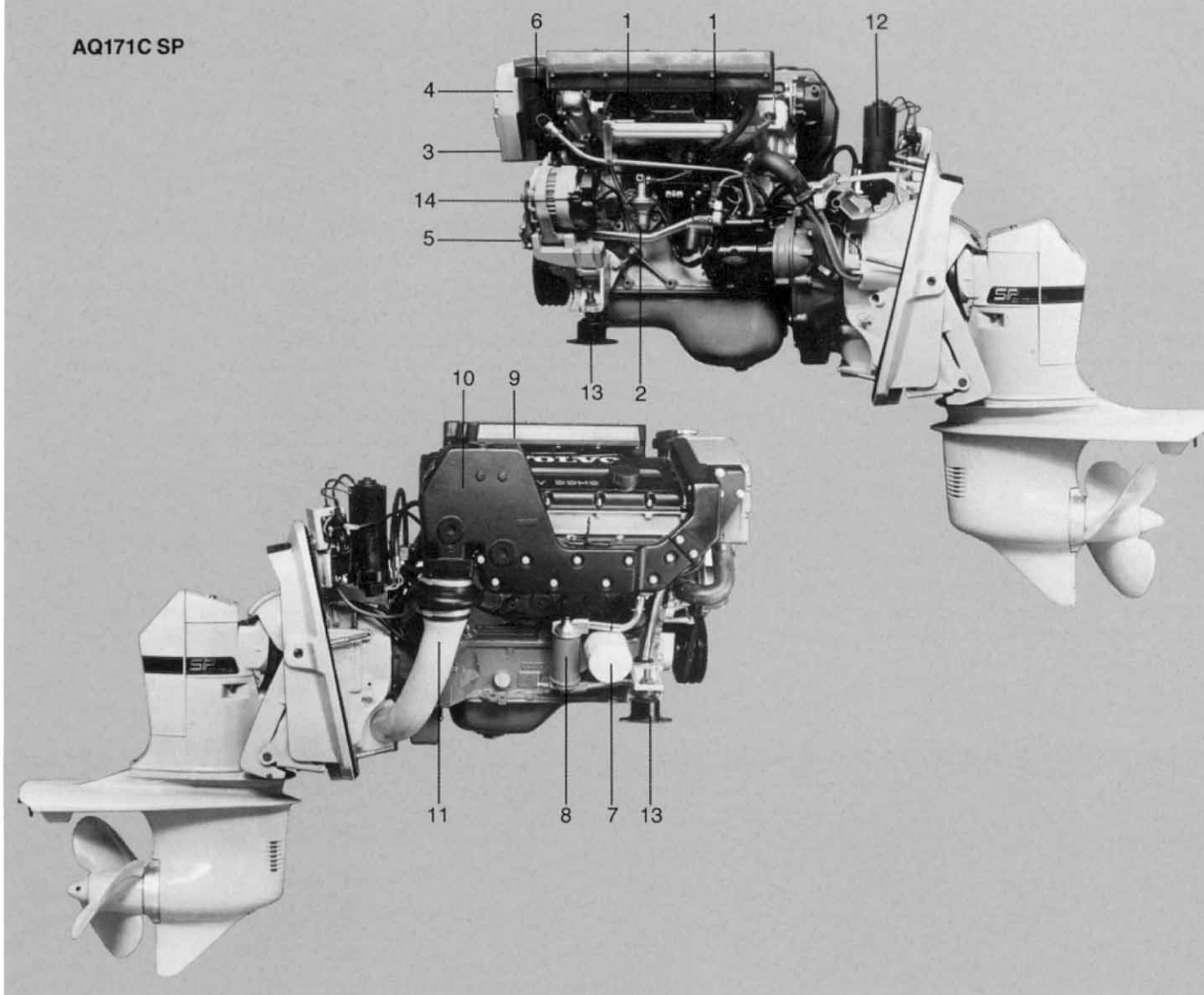
The transom shield kit is designed for simple, reliable and time-saving installation work.

The Aquamatic drive is famous for its long service life and superior corrosion resistance in sea conditions. Together with the engine, it forms a compact and very reliable unit.

Volvo Penta has a well-established service network in more than 100 countries. Authorized workshops, with Genuine Parts and staffed by qualified personnel, make sure you get the best service.



VOLVO PENTA



Standard equipment

ENGINE

Engine block manufactured of special-alloy cast iron for good resistance to corrosion and long service life. Cylinder head of aluminium-alloy with replaceable valve seats of special steel. The engine is mounted onto the flywheel casing at an angle of 20° to reduce the installation dimensions. Pistons are made of aluminium alloy with two compression rings and one oil scraper ring. Two inlet valves and two exhaust valves per cylinder. Twin overhead camshafts, five bearings, with cogged drive belt of reinforced neoprene rubber. Overhead valves and hydraulic valve lifters. Crankshaft with 5 main bearings.

FUEL SYSTEM

Twin down-draught carburettors with acceleration pump (1). Fuel pump (2).

COOLING SYSTEM

Thermostatically-controlled freshwater cooling with heat ex-

changer (3), expansion tank (4) and circulation pump. Cooling system prepared for hot water supply. Raw water pump with neoprene impeller (5). The system has a raw water strainer which can be removed for cleaning (6).

LUBRICATING SYSTEM

Pressurized lubricating system with full-flow oil filter of spin-on type (7). Oil cooler of tubular type that can be opened for cleaning (8).

INTAKE SYSTEM

Intake silencer with flame damper (9).

EXHAUST SYSTEM

Raw water cooled exhaust riser of cast iron (10) with stainless steel insert. Complete exhaust system (11) for connection to drive unit.

DRIVE

Complete with transom shield, flywheel casing and installation parts.

All gearwheels are helically cut and manufactured for continuous operation in both directions.

Cone clutch (patented) for reliable, smooth and light engagement. The drive tilt angle is 48°.

The shift mechanism has an easily reversible link rod for switching from counter-clockwise to clockwise propeller rotation.

Attachment for steering cable mounted on shield.

Sacrificial zinc ring to counteract corrosion.

Coolant inlet in leading edge and at bottom of drive for reliable supply of cooling water to the engine.

Reverse latch of patented design for reliable reversing action in all angles of trim permits the drive to kick up if run aground or in collision with objects in the water.

Power Trim version with electric motor powered hydraulic system (12) for trimming of drive angle while running. (The motor-powered hydraulic pump is mounted either on a bulkhead or on the transom.)

ENGINE MOUNTS

Flexible mounting for insulation from noise and vibration. The engine has two adjustable rubber mounting points at the front and a rubber mounting between the fly-wheel casing and the rear of the shield.

STEERING SYSTEM

Power steering is also available as an optional extra. (Only one kit supplied as standard for a twin installation.)

ELECTRICAL SYSTEM

Corrosion-protected 12V electrical system. Alternator (14) with 14V/50A charging capacity. Designed for marine operation. The alternator is prepared for the fitting of a twin diode unit which will automatically distribute charging current to two or more batteries. Automatic fuse 40A with resetting button mounted on engine. Starter motor

output 1.25 kW (1.7 hp). Inductive, electronic ignition system, micro-processor controlled and with high tension distributor mounted on camshaft.

The control panel has two switches with easy-to-read symbols; one for up/down drive control and one override switch to come from "tilt" sector into "beach" sector.

TRIM INDICATOR (DCD)



The trim angle is indicated by five green diode lamps plus a digital display. A continuous red light indicates when the drive is in the "beach" sector. The red light flashes when the drive is in the "tilt" position.

INSTRUMENT PANEL



(Extra equipment on selected markets.)

Instrument panel equipped with key-operated switch, tachometer, oil pressure gauge, voltmeter, temperature gauge, fuses and switch for instrument lighting. Cable harness length 0.91 m. Extension cable length 6 m (19.7 ft), complete with plug-in contact.

DATA

Configuration 4-stroke, 16-valve carburettor engine with overhead valves.

Type designation AQ171C

Output* at 5700 r/min 123 kW (167 hp)

Recommended max full load speed 5000-5700 r/min

Number of cylinders 4

Displacement, litres (in³) 2.49 (152)

Bore/stroke, mm (in) 96/86 (3.78/3.39)

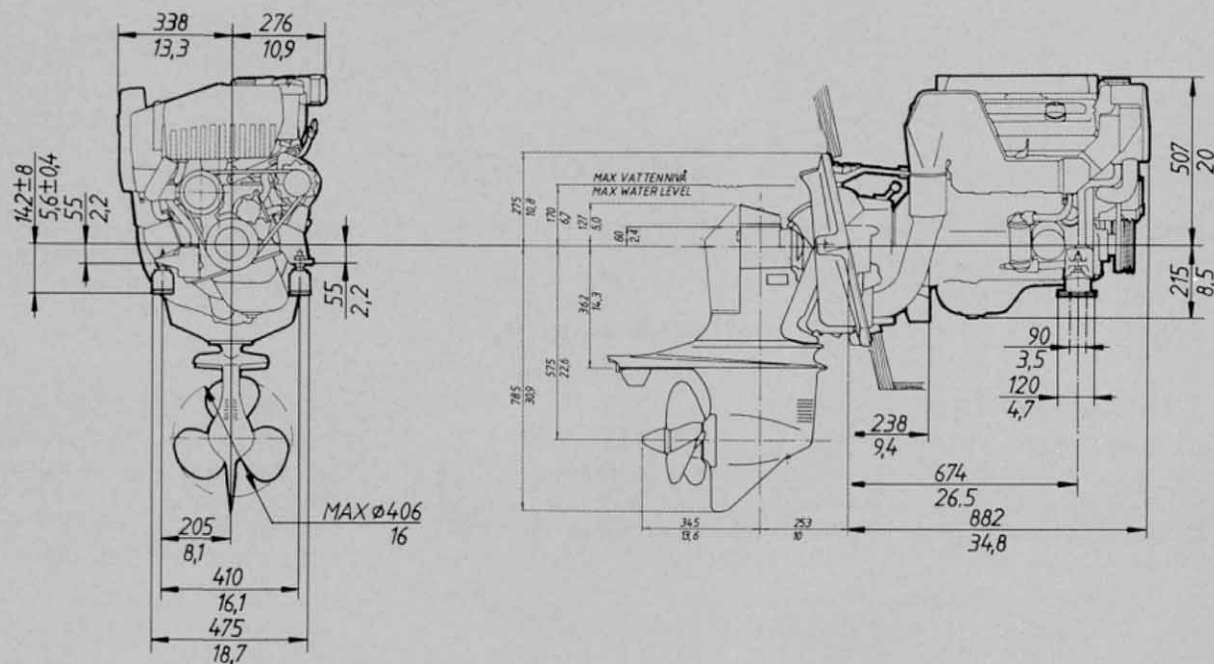
Compression ratio 9.7:1

Fuel grade, octane RON 91

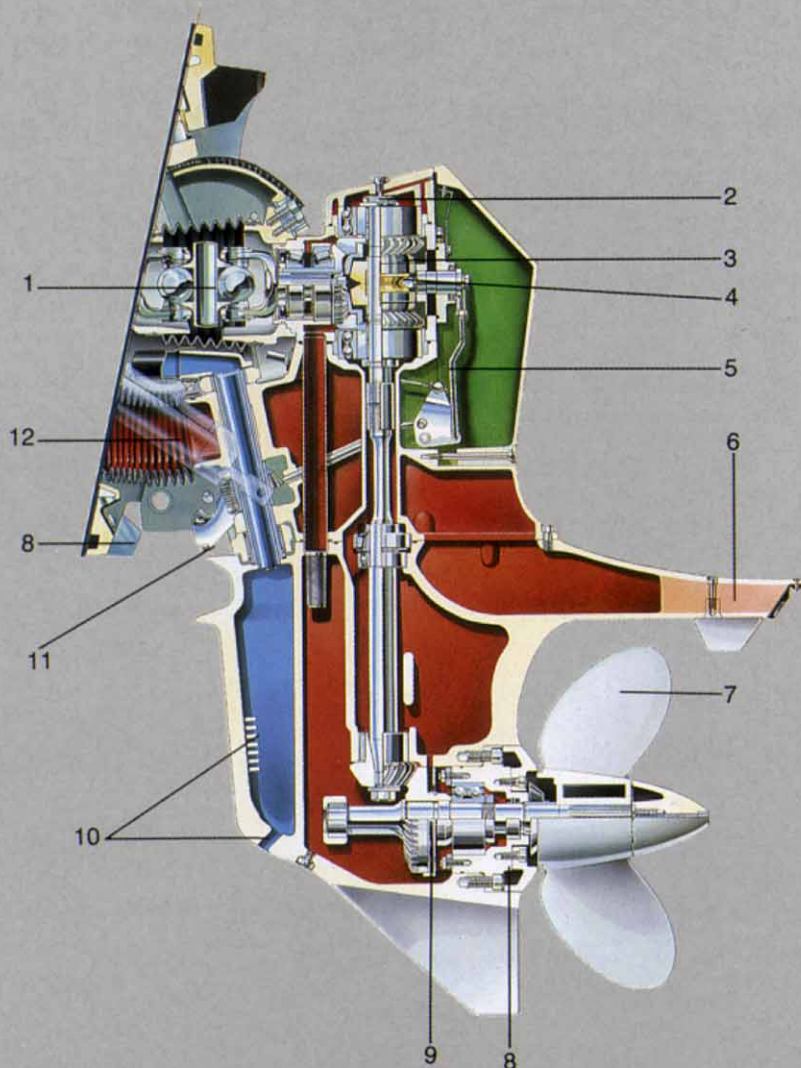
Drive, type design./ratio SP/2,15:1

Dry weight, engine with drive approx kg (lb) 289 (637)

*Crankshaft output according to SAE J607



Drive SP



1. Double universal. Of heavy-duty design and practically maintenance-free.
2. Easily accessible oil dipstick.
3. Helically-cut gearwheels for quiet operation.
4. Patented cone clutch. For quiet, smooth and light operation.
5. The propeller's direction of rotation can be easily altered by shifting the link rod in the drive unit.
6. Cavitation plate with exhaust gas outlet.
7. Can accommodate propellers of up to 407 mm (16") diameter.
8. Sacrificial zinc ring in front of propeller and extra zinc anode on the shield – for efficient corrosion protection.
9. Oil pump of impeller type.
10. Cooling water intake.
11. Reverse latch of patented design provides good reversing capabilities while preventing the drive from floating up due to sudden reverse acceleration. Also permits the drive to kick up if run aground or obstructed.
12. Trim cylinders connected by stainless steel pipes to the hydraulic system.

Accessories

FUEL SYSTEM

Suction pipe of copper. Water separator. Fuel valve. Separate connecting cover for fuel tank.

ELECTRICAL SYSTEM

Instrument panel for upper station "Flying Bridge". T-connector "Flying Bridge". Extension cable, instrument panel. Extension cable, trim equipment. Double diode

charging distributor. Main switch. Battery.

TRANSMISSION

Extension for drive. Propellers.

CONTROLS

Single-lever control for single installations. Single-lever control for twin installations. Control cables. DS-units (mechanical units which com-

bine control cables from two control stations to a joint outgoing control cable). Wheel steering incl. cables. Power steering. Tie rod.

MISCELLANEOUS

Tool kit. On-board kit. Oil scavenging pump. Bilge pump. Genuine paints. Lubricants. For other accessories, see Accessories Catalogue.

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