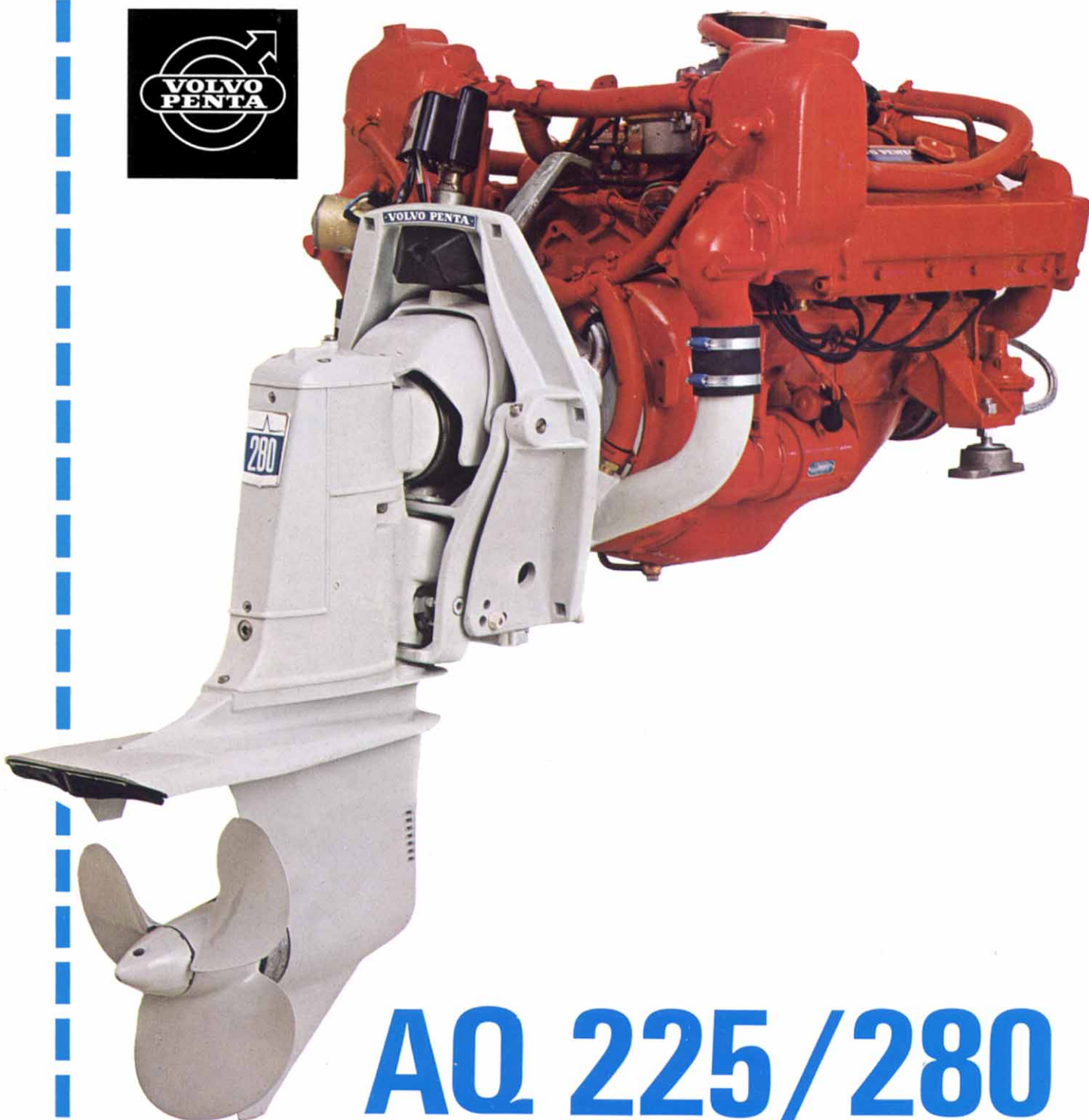


Volvo Penta presents a new V8-Aquamatic



AQ 225/280

A new and competitive V8 power plant

The AQ 225/280 is a new power plant for which there has been – and still is – a great demand. It satisfies the need of a powerful, compact and economical V 8 for large leisure boats of the planing type. In spite of its high output and impressive torque, the engine and drive together only weigh 420 kg (925 lb.). Furthermore it has very compact installation dimensions, both lengthwise and crosswise.

The engine is fitted with efficient exhaust risers – this means that it can be installed low down in the V-bottom of the hull without any risk of water penetrating through the exhaust system.

One typical feature of this power plant is its combination of high speed and good fuel economy. The carburetor – a four-port, down-draught unit with an automatic choke and approved flame trap – has been recently designed specially for marine use.

The economy jets particularly ensure low fuel consumption at cruising speed. The engine runs well on regular fuel with a minimum octane rating of 92. This is possible because of the moderate compression ratio of 8.25:1.

Together with the new Volvo Penta model 280 drive, this V 8 makes up a compact and economical power package for high speed, a long lifetime and very dependable operation.

The AQ 225/280 combination has been subjected to extremely severe laboratory tests and demanding "torture" tests at sea under conditions of loading which were so high that they could virtually never occur in normal use.

Tested in exactly the same way as all the other Volvo Penta engines – 36 of them – with outputs ranging from 10 to 356 horsepower.

A new outboard drive — with an even better performance

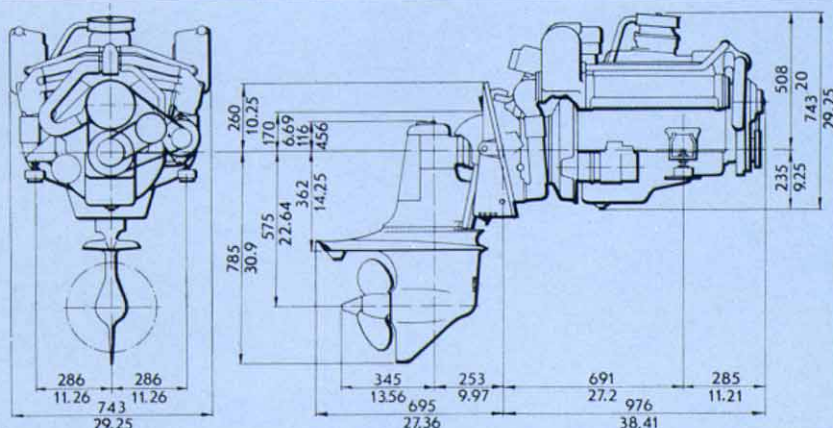
The new Volvo Penta outboard drive – model 280 – has an underwater housing with new styling. This has resulted in even better performance and a lower noise level compared with earlier Aquamatic drive. This new unit has been specially styled to ensure maximum utilization of speed resources. The model 280 drive has

also all the outstanding characteristics of the other Volvo Penta outboard drives – resulting from the most extensive experience in the world of drive manufacture. Quality, dependability, speed and service accessibility are the typical features of the new drive which has been tested under extremely severe conditions.

Technical data

Type designation	AQ225A/280B
Maximum output (SAE)	225 h.p.
Maximum operating speed, r.p.m.	4400
Number of cylinders	V8
Capacity, litres	5.032
Bore/stroke, mm	98.4/82.4
Compression ratio	8.2:1
Carburetor	One four-port unit with automatic choke
Fuel grade	At least 92 octane
Outboard drive, type designation/ratio	280B/1.61:1
Total weight, approx., kg(lb.)	420(925)

Dimensions drawings



1 High exhaust risers prevent sea-water from forcing its way into the engine from astern in spite of low engine location.

2 Dependable electro-mechanical lift system for drive. Efficiently protected from water penetration.

3 Oil dipstick, easy accessible from above.

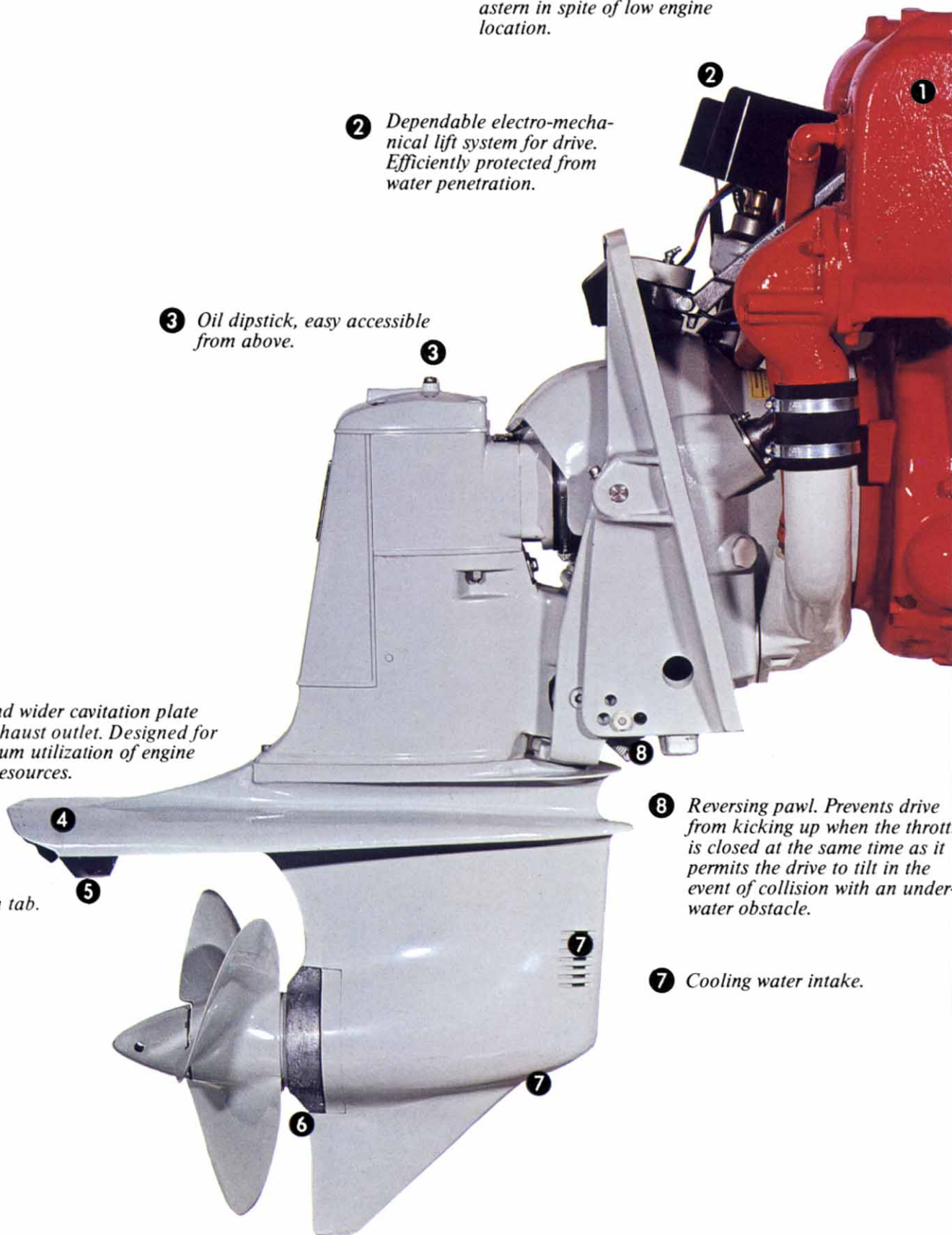
4 New and wider cavitation plate with exhaust outlet. Designed for maximum utilization of engine speed resources.

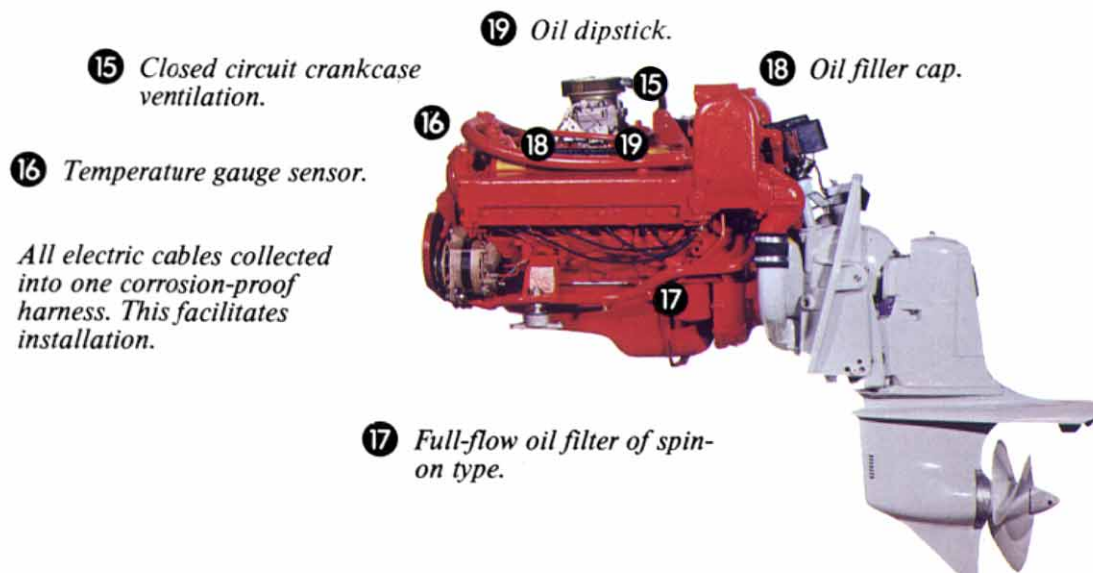
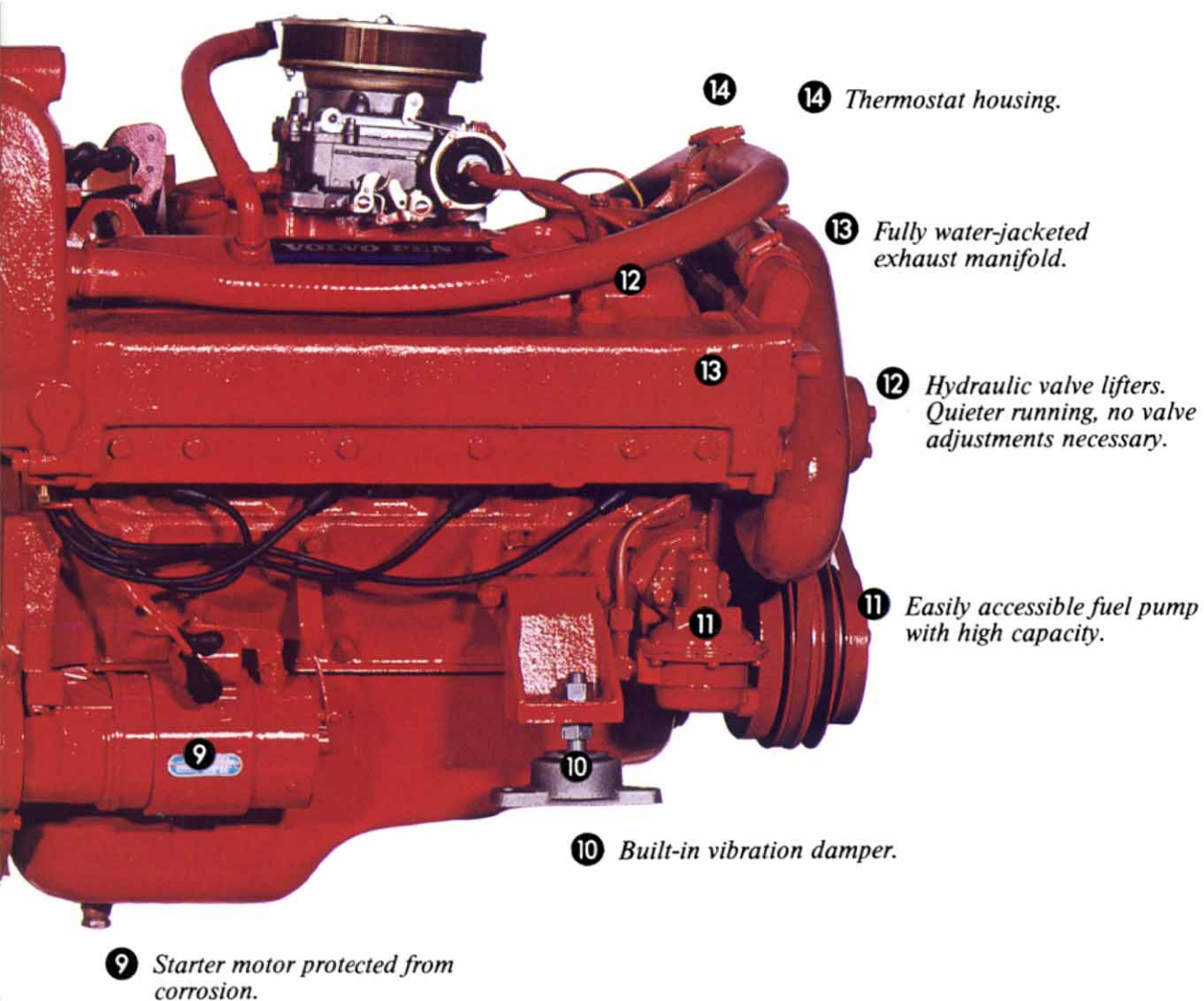
5 Trim tab.

8 Reversing pawl. Prevents drive from kicking up when the throttle is closed at the same time as it permits the drive to tilt in the event of collision with an underwater obstacle.

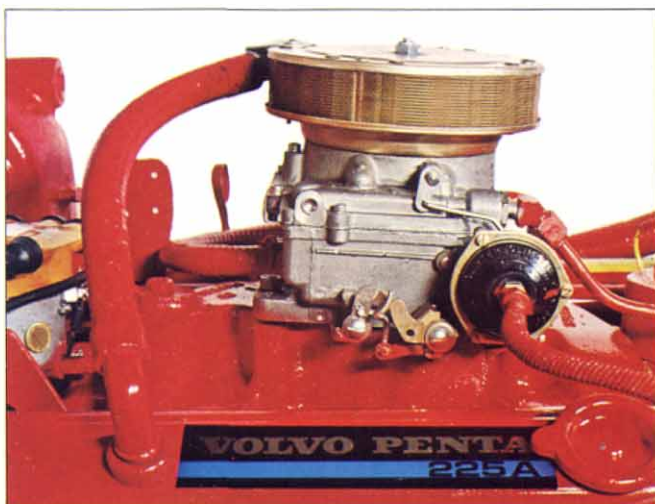
7 Cooling water intake.

6 Protective zinc ring to prevent corrosion.

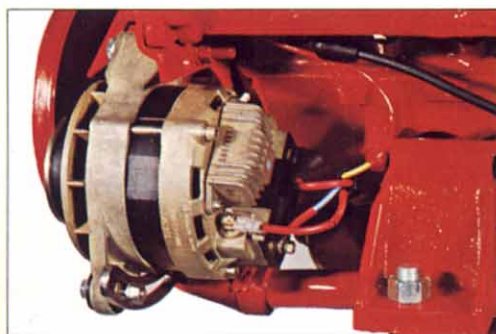




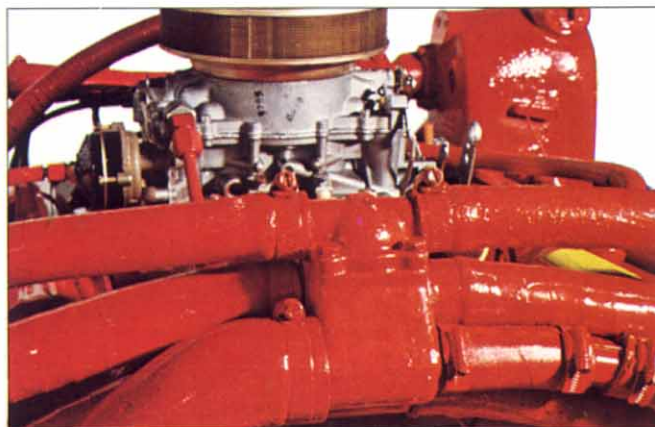
Points worth studying



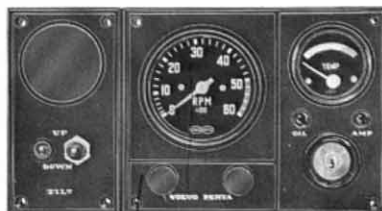
Four-port down-draught carburetor with automatic choke. Recent design, specially for marine use. Extra low fuel consumption at cruising speed. Flame trap approved by United States Coast Guard.



A marine alternator of new design with a built-in charging regulator. Non-spark design without brushes. 12 V, 35 A.



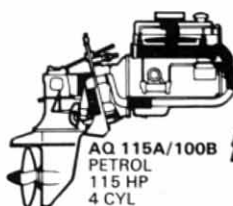
Easily accessible distributor



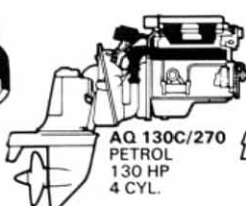
The AQ 225/280 has an instrument panel as standard equipment: Electric revolution counter and temperature gauge, indicator lamps for battery charging and oil pressure.

Cooling system with two pumps, one of which is a circulation unit. Thermostat control for rapid warming-up and constant running temperature. Maintenance-free circulation pump. Sea-water pump with neoprene impeller.

Volvo Penta Aquamatic programme



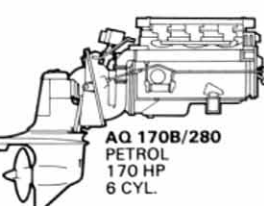
AQ 115A/100B
PETROL
115 HP
4 CYL



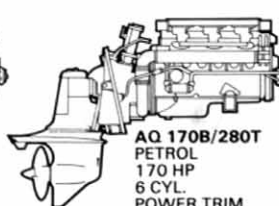
AQ 130C/270
PETROL
130 HP
4 CYL.



AQ 130C/270T
PETROL
130 HP
4 CYL.
POWER TRIM



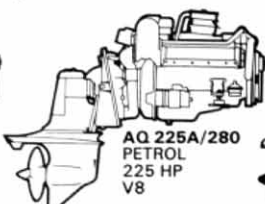
AQ 170B/280
PETROL
170 HP
6 CYL.



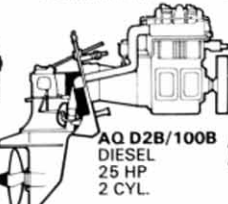
AQ 170B/280T
PETROL
170 HP
6 CYL.
POWER TRIM



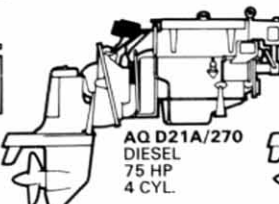
AQ 200A/280*
PETROL
200 HP
V8
ONLY MARKETING
IN NORTH AMERICA



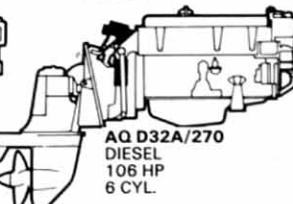
AQ 225A/280
PETROL
225 HP
V8



AQ D2B/100B
DIESEL
25 HP
2 CYL.



AQ D21A/270
DIESEL
75 HP
4 CYL.



AQ D32A/270
DIESEL
106 HP
6 CYL.

Volvo Penta quality — renowned all over the world

Volvo Penta engines and outboard drives are sold to boating folk in more than 100 countries – all over the world. The demand for these products increases from year to year. The background to this consists of the great investments made by Volvo Penta in quality, operational dependability, lifetime and service.

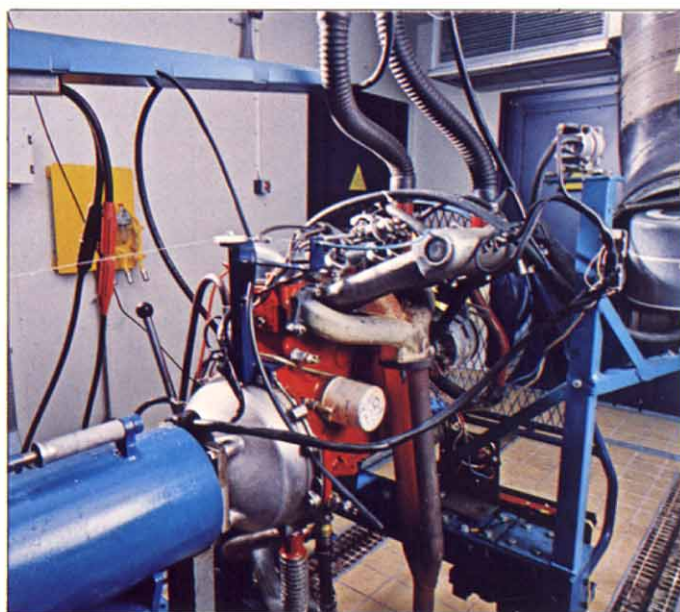
Quality: Volvo Penta designs and manufactures engines and outboard drives right from the start to the finished product. The most extensive experience in the world of drive manufacture and many decades of knowledge and experience from hundreds of thousands of engines are combined with extremely effective and very thorough production control.

Operational dependability: Every new design and also every engine and every outboard drive are tested under extremely severe conditions. Both in laboratories and in test boats.

Lifetime: Through a programme of advanced research, Volvo Penta has developed corrosion protection methods possessed by no other manufacturer of marine engines. All the components are dimensioned and adapted to each other for maximum economy and lifetime.

Before an engine type is approved, several units must have passed through long-term "torture" tests without suffering any damage at all. This engine, for example, has been run for 500 hours under extremely demanding conditions. All functions are checked during the test.

Service: Even when they are in their design stage, engines and outboard drives are planned to facilitate future service work. There are authorized service workshops with specially trained personnel in the countries where Volvo Penta products are sold. Volvo Penta trains hundreds of service mechanics every year.



Some of the Volvo Penta test boats have steel hulls to stand up to the severe stresses in collision testing. The drive is run hundreds of times over underwater obstacles to test the operation of the kick-up system. This is merely one of the tests each new design must pass through.



Here a check is being carried out of the contact surfaces on the lower gear assembly in an outboard drive. The two gears are manufactured together and pass together through machining – they are individually ground to match each other. This is one of the explanations behind top quality and a long life.



The drive housing is cast of light-alloy with a very low gas content. Here a check is being carried out of the gas content in the smelt – one of the many control procedures carried out the whole time during manufacture.



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