

VOLVO-PENTA • BB 70

M a r i n e E n g i n e

Main data BB 70

Type of operation	Four-stroke
Valves	Overhead
Number of cylinders	4
Max. output	85 h.p.
Marine output	75 h.p. at 4500 r.p.m.
Capacity, total	97.6 cu.in.
Bore	79.37 mm (3.125")
Stroke	80 mm (3.150")
Propeller	left-hand thread
Compression ratio	8.2:1
Net weight, with reverse — reduction gear type RB, ratio 1.91:1 approx.	430 lb.

BB 70 R

Same as BB 70 but opposite rotation of engine and propeller.

Specifications

Cylinder block of special-alloy cast-iron, cast integral with the crankcase.

Cylinder head of special-alloy cast-iron with high degree of heat resistance.

Oil pan of cast silumin, permits inclination of 18° while engine is running.

Pistons of chill-cast light-alloy each with two compression rings and one oil control ring. Upper compression ring chromed.

Connecting rods, drop-forged, case-hardened. Lead-bronze lined connecting rod bearings, easily replaceable.

Crankshaft, drop-forged, powerfully dimensioned, dynamically balanced and carried in three bearings. Lead-bronze lined main bearing shells, easily replaceable.

Camshaft of special cast-iron with flamehardened cams. Quiet-running fiber timing gears.

Valves of heat-resistant special steel.

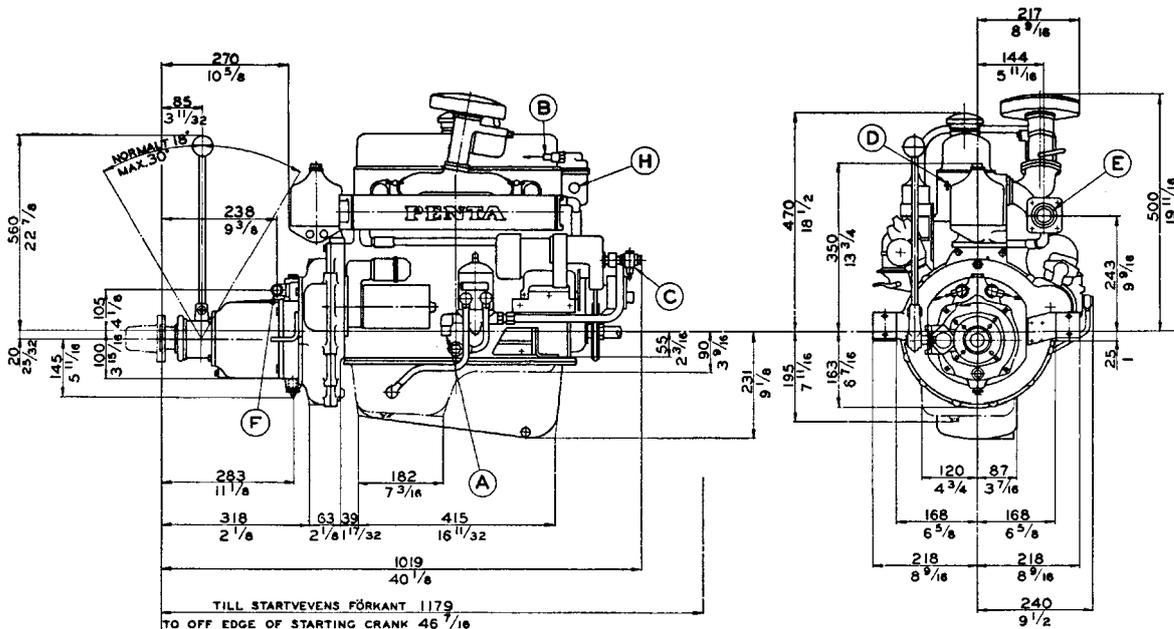
Fuel system. Down-draft carburetor. Fuel pump with filter and water deflector. Pump driven from camshaft. Max. lift 40".

Lubricating system. Pressure lubrication. Oil to all the lubricating points passes through a fullflow oil cleaner with a replaceable element. Tubular type oil cooler.

Cooling system. Sea-water cooled. Engine temperature automatically regulated by means of thermostat.

Electrical system. 6-volt battery ignition. 0.6 h.p. starter motor. Generator with built-in relay, continuous output 75 W.

Instrument panel. It has mechanical revolution counter, remote reading temperature gauge, ignition key, starter button, choke control, charging control lamp and switch for indirect instrument lighting, 10-foot cables and other components for connection to engine also included.



- A. Cooling water inlet for rubber hose $\frac{5}{8}$ "
- B. Cooling water outlet for rubber hose $\frac{5}{8}$ "
- C. Tachometer connection
- D. Oil pressure gauge connection
- E. Exhaust outlet R $1\frac{1}{2}$ " pipe tap
- F. Cooling water connection reduction gear, rubber hose $\frac{5}{8}$ "
- G. Fuel inlet copper pipe outer diam. $\frac{5}{16}$ "
- H. Remote mounted cooling water thermometer connection

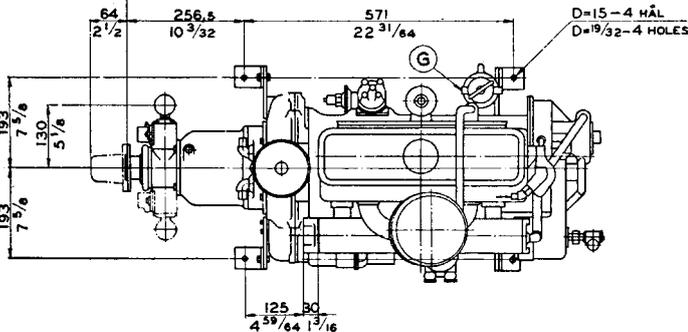
A A FLÄNSRÖRELSE VID INKOPPLING.
AV FRAM. RESP. BAK.
A NORMALT = 3 MM. MAXIMALT = 6 MM.
B B FLANGE MOVEMENT WHEN "AHEAD" AND "ASTERN"
RESPECTIVELY ARE ENGAGED.
A NORMAL = 3 MM. MAXIMUM = 6 MM. 1/8 RESP. 15/64

Gears. Standard equipment is either BS reverse gear or RB combined reduction and reverse gear.

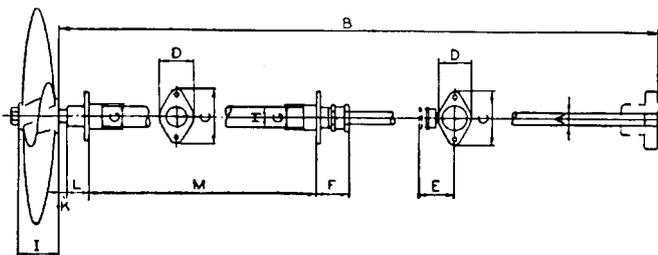
The BS reverse gear is of the multi-disk type with a marked neutral position, ratio 1:1. Separate splash lubrication.

The RB combined reduction and reverse gear — a revolutionary new PENTA patent — has cone clutches to take care of operation ahead and astern. The design of this unit is so ingenious that a ratio of 1.91:1 is automatically provided without any increase in size or weight. The gear lever has three alternative installation positions in the boat. Separate splash lubrication.

Direction of rotation. The reverse gear and the reverse-reduction gear give both left-hand rotation to the propeller. As an optional feature, on special order, the BB 70 is available with opposite rotation for right-hand propellers and is then designated as BB 70 R.



The dimension drawing shows an engine with the combined reduction and reverse gear.



Propeller equipment for left-hand thread propeller (BB 70 R right-hand thread propeller)

Dimensions

Reduction	A	B	C	D	E	F	G	H	I	K	L	M
1:1	mm 25 inch $\frac{63}{64}$	2000 79	90 $3\frac{1}{2}$	58 $2\frac{1}{4}$	70 $2\frac{3}{4}$	75 3	42 $1\frac{5}{8}$	34 $1\frac{3}{8}$	64 $2\frac{1}{2}$	approx. 15 $\frac{5}{8}$	37 $1\frac{1}{2}$	1000 $39\frac{1}{2}$
2:1	mm 30 inch $1\frac{3}{16}$	2000 79	120 $4\frac{3}{4}$	62 $2\frac{1}{2}$	76 3	80 $3\frac{1}{8}$	50 2	40 $1\frac{5}{8}$	78 $3\frac{1}{8}$	approx. 15 $\frac{5}{8}$	50 2	1500 $59\frac{1}{4}$

Without engagement

AKTIEBOLAGET



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Cables: Penta

— a Volvo company