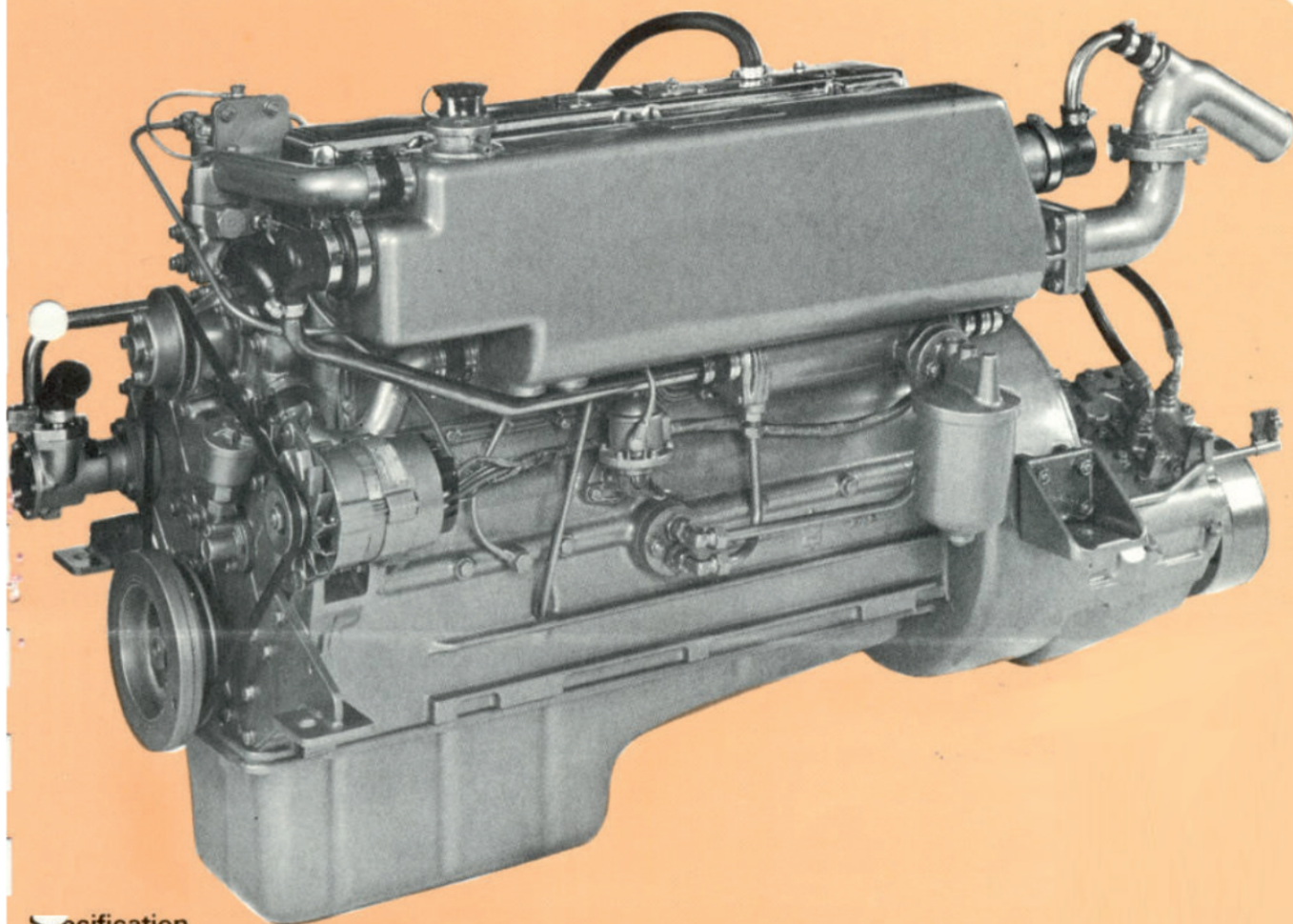


THORNYCROFT

MARINE ENGINES

TYPE
345R



Specification

Type: 345R Vertical 4-Stroke Marine Diesel Engine

No. of cylinders: Six
Cylinder bore: 98 mm (3.858 in)
Piston Stroke: 125 mm (4.921 in)
Swept volume: 5.655 litres (345.3 in³)
Compression ratio: 16.8:1
Firing order: 1,5,3,6,2,4.
Minimum full load speed: 1250 R.P.M.

Engine installation angle:

Maximum installed angle (allowing for a further 3° rise when under way): 12°.

Combustion system:

Direct injection with excess fuel device for cold starting.

Crankshaft:

Forged steel dynamically balanced crankshaft carried in seven bearings.

Lubrication system:

a full pressure wet sump system is employed. Oil is drawn through a gauze strainer in the sump and before entering the system passes through an external full flow detachable element type oil filter and an oil cooler.

Cooling system:

Standard. Closed circuit heat exchanger cooled fresh water system with sea water pump and fresh water circulator. Alternative. Closed circuit fresh water system with external keel cooler and fresh water circulator.

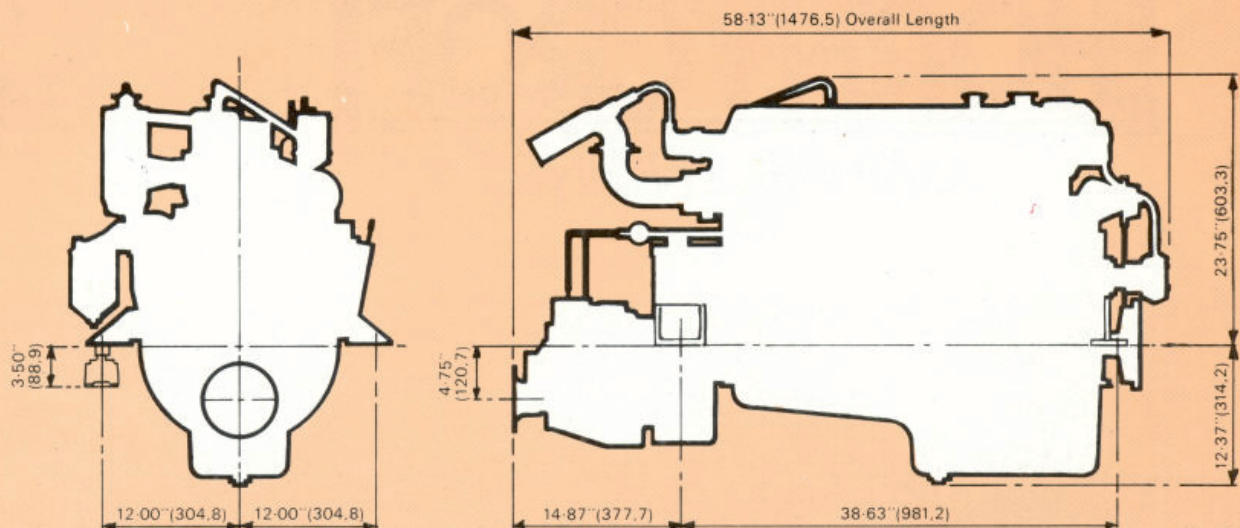
Electrical equipment:

A 12 volt Lucas solenoid operated starter is fitted as standard together with a 12 volt Lucas alternator and regulator unit. Alternative 24 volt electrical equipment is available.

For further details see current price list.

**Power Ratings: 84.3 kW (113bhp) Intermittent.
72.3 kW (97bhp) Continuous.**

Type 345R Engine with PRM 310 Gearbox: Weight 617 kg. (1360lbs.)



Engine ratings

The type 345R Marine Diesel Engine may be set to develop continuous outputs from 54 to 97 B.H.P. according to requirements.

For special applications where full power will not be required for periods in excess of 1 hour in any 12 hours consecutive running, the engine can be supplied at an intermittent rating of 113 B.H.P. at 2500 R.P.M.

NOTE: All horse power ratings quoted are at the engine flywheel. Due allowance must be made for transmission losses which will depend on the type of gearbox fitted. For tropical use it is necessary to derate the engine by 2% for each 5½°C (10°F) above 30°C (85°F) air temperature at sea level. In some parts of the world further derating for humidity is necessary in accordance with BS649:1958

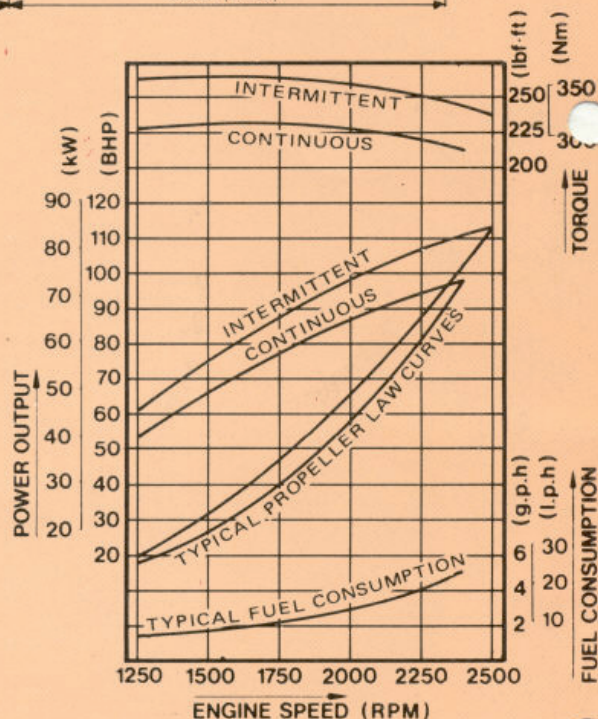
Continuous full power ratings and corresponding fuel consumption					
B.H.P.		54	65	86	97
R.P.M.		1250	1500	2000	2400
Approx. fuel cons.	g.p.h.	2.59	3.04	4.23	5.00
	l.p.h.	11.77	13.82	19.23	22.74

Stern gear

Complete stern gear can be supplied in materials to suit individual requirements. Standard stern gear is of the water lubricated type incorporating a high tensile brass sterntube with cutless rubber bearings, a stainless steel tailshaft and a manganese bronze propeller.

Where existing shafting is to be retained the propeller and half coupling can be bored to suit.

The following table gives tailshaft and approximate propeller diameters for various reduction ratios. The propeller details are for general guidance only since each installation must be considered on its own merits, with particular attention to hull form, required performance and propeller aperture.



Drive Ratio	Propeller Diameter (Depending on application)	Tailshaft Diameter
Direct Drive	406-483mm 16-19"	38mm 1½"
1.5:1	483-508mm 19-20"	44mm 1¾"
2:1	610-660mm 24-26"	44mm 1¾"
2.5:1	711mm 28"	51mm 2"
3:1	787mm 31"	57mm 2¼"
4:1	864mm 34"	64mm 2½"

NOTE: Shaft sizes for Lloyd's & Department of Trade applications on request.

All drawings, dimensions, weights, fuel consumptions and other data contained in this leaflet are approximate only and, whilst they are substantially correct, are subject to alteration without notice. The outline arrangement drawings are not to scale. We reserve the right to make any variations in the above specification that we may consider

desirable to effect improvements, or which may be necessary through circumstances beyond our control. No such improvements, however, will be considered retrospective for engines already delivered. All orders placed with us or any of our Authorised Dealers or Distributors will be deemed to have been given on this understanding.

We are your nearest Thornycroft Distributor. Phone us and we'll tell you more.

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