

V8.510M

MARINE DIESEL



MAFER

MAFER Engine Division
Viale Salaria 500 - 00198 Roma - Italy

Perkins Engines Ltd., 2000, 2001, 2002, 2003, 2004

PERKINS MODEL NO.

1. 4-Stroke	Yes
2. 2-Stroke	No
3. 4-Stroke Turbocharged	No
4. 4-Stroke Intercooled	No
5. 4-Stroke Turbo/Intercooled	No

1. 4-Stroke Turbocharged	No
2. 4-Stroke Intercooled	No
3. 4-Stroke Turbo/Intercooled	No

PERKINS WEIGHTS
 Gross weight: 1450 kg
 Net weight: 1300 kg

PERKINS DIMENSIONS
 Length: 1200 mm
 Width: 750 mm
 Height: 750 mm

Specification

Model: V8.510M
Capacity: 5000 cc
Stroke: 100 mm
Compression ratio: 17.5:1
Working speed: 2000 RPM
Construction: Cast iron cylinder block and crankcase, aluminium alloy head and pistons.
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Power output: 145 kW @ 2000 RPM
Maximum torque: 1000 Nm @ 1800 RPM
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GENERAL INFORMATION

The Perkins V8.510M is a marine diesel engine with a maximum power output of 145 kW at 2000 RPM. It is designed for use in a wide range of marine applications, including powerboats and yachts. The engine features a cast iron cylinder block and crankcase, aluminium alloy head and pistons, and a turbocharged and intercooled engine option. The engine is available in a range of configurations, including 4-cylinder and 6-cylinder options. For more information, please contact Perkins Engines Limited.

Perkins VEHICLE POWER

V8.540



The Perkins V8.540 is a complete 8-cylinder, turbo-charged, liquid-cooled diesel engine. It is available in many configurations, including 4-cylinder, 6-cylinder, 8-cylinder, and 12-cylinder versions. It is a high-performance engine, designed for heavy-duty applications, and is available in a range of power and speed options.

134 kW/180 bhp
129 kW/175 PS

PERKINS

General Data

Max Power: 134 kW/180 bhp @ 2200 rpm
Max Torque: 400 Nm/295 lb ft @ 1500 rpm
Cylinder capacity: 2.0 litre (121.2 cu in)
Cylinder bore: 102 mm (4.016 in)
Cylinder stroke: 110 mm (4.331 in)
Compression ratio: 16.5:1
Fuel system: 12V/230V DC
Maximum coolant capacity: 100 litres (27.1 gal)
Fuel system: 12V/230V DC
Cooling: Water-cooled

Starting Aids

Two 24V/100Ah (1000 CCA) batteries
Electric starter motor
Electric glow plug
Electric glow plug
Electric glow plug
Electric glow plug
Electric glow plug
Electric glow plug
Electric glow plug
Electric glow plug

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V8.540 VEHICLE ENGINE



Rating conditions: 1. ISO 1585 / 1500 / 1500
2. ISO 1585 / 1500 / 1.04



Rating conditions: ISO 1585

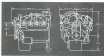
Standard and optional equipment of a vehicle engine (ISO 1585) can vary between different engine configurations. The engine shown in this document is a standard configuration. For more information, please contact your distributor or the nearest Perkins office.

Options

Basic engine options include intake and exhaust manifolds, fuel filter(s), oil filter and water pump. ISO 1585 engine complies IS or CE and meets other regulatory standards. Available and optional accessories include alternator, fan, belt and housing, mounting brackets, maintenance kit, air compressor and/or water pump.

eg **RAYC 180**

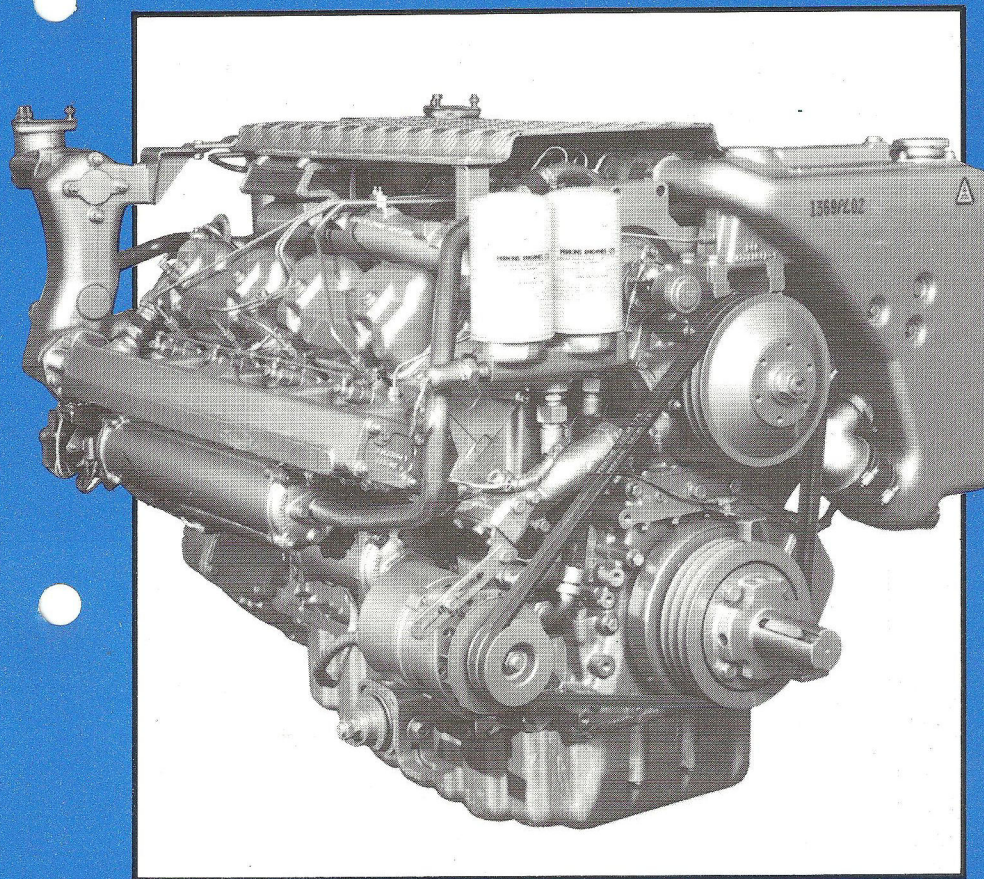
Dimensions



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Perkins MARINE POWER

V8.540(M)



A naturally aspirated eight cylinder diesel in 'V' configuration for smooth operation. Built to a premium specification and ideally suited to commercial use. Its low profile and space saving envelope optimises the power/space ratio.

141,7 kW/190 bhp

General Data

Bore/Stroke: 108,0 mm (4.25 in)/120,7 mm (4.75 in)

No. of cylinders: 8, 90° vee form

Cubic capacity: 8,83 litres (539.1 in³)

Cycle: 4 stroke **Aspiration:** Natural

Combustion System: Direct injection

Rotation: Clockwise viewed from front

Fuel pump: CAV Minimec in-line

Governing: Mechanical

Cooling: Heat exchanger freshwater cooled with Borg Warner reduction gearbox

Weight: 889 kg (1957 lbs)

Electrical: 24 volt system

Power take-off: From front end extension shaft

Installation angle: Max. static angle of 17°, allowing further 3° rise underway, also 5° nose-down for vee-drive application.

V8.540(M) MARINE DIESEL

Typical Applications

The engine is available with power ratings for continuous duty in the following applications.

Pleasure: Sports fishermen, trawler yachts and all types of cruisers.

Light Commercial: Survey vessels, crew and personnel launches. Patrol craft, police and customs launches. Pilot boats. Commercial fishing boats with high speed capability. Harbour masters' launches.

Heavy Duty Commercial: Tugs, barges, fishing boats, ferry boats, coastal workboats etc.

Fuel Consumption

The table gives approximate fuel consumption for an engine operating at rated speed, rated power and typical values for average lower-speed operating conditions.

Engine power		Full power Fuel consumption			Average Operating Fuel consumption		
Speed rev/min	Load bhp	Uk gals. per hr.	US gals. per hr.	litres per hr.	UK gals. per hr.	US gals. per hr.	litres per hr.
2400	177	8.6	10.3	39	4.3	5.2	21
2000	157	7.2	8.6	36	3.9	4.6	19

Alternative Ratings: 177 bhp at 2400 — light duty commercial or pleasure craft
157 bhp at 2000 — heavy duty commercial

Options

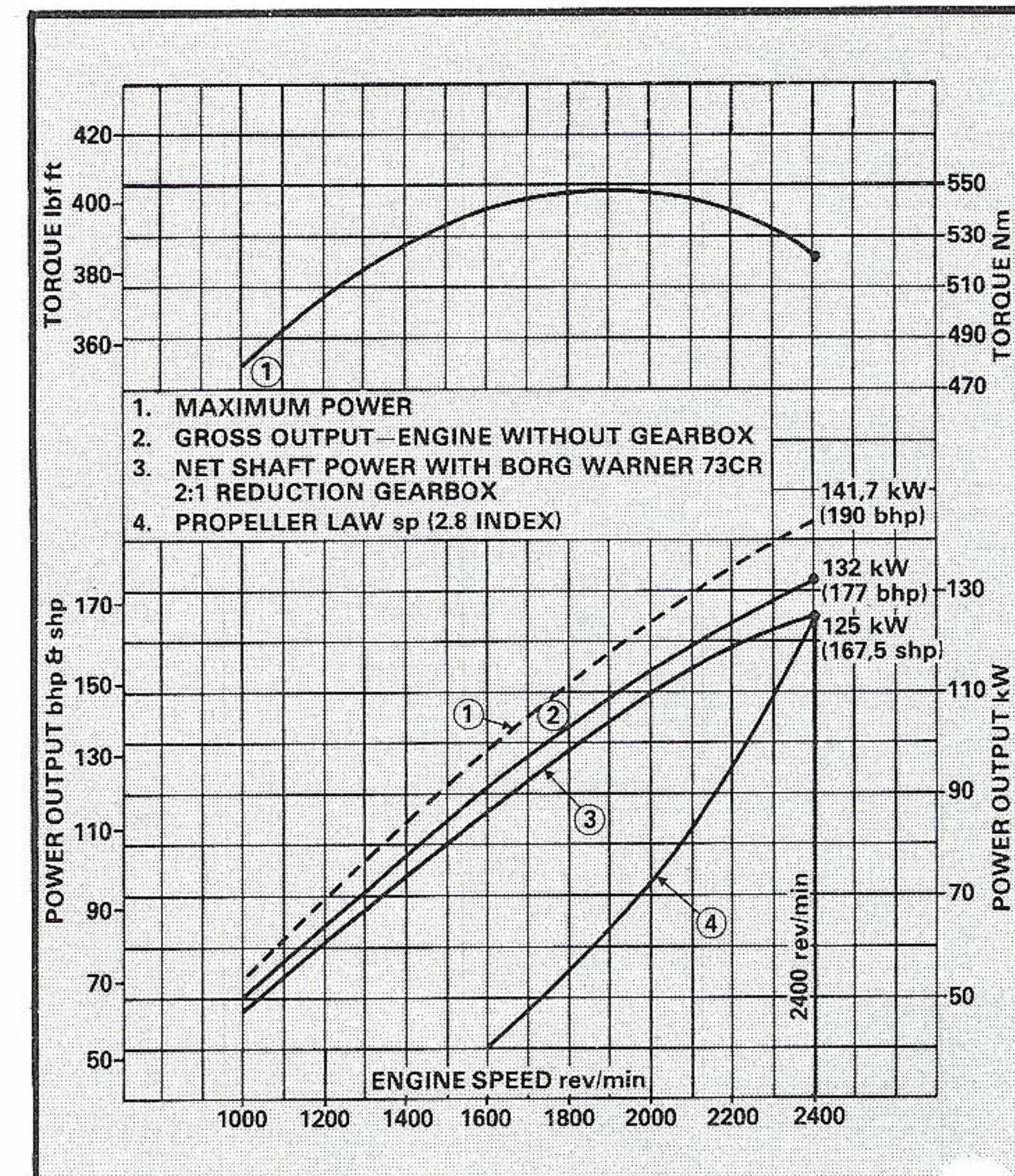
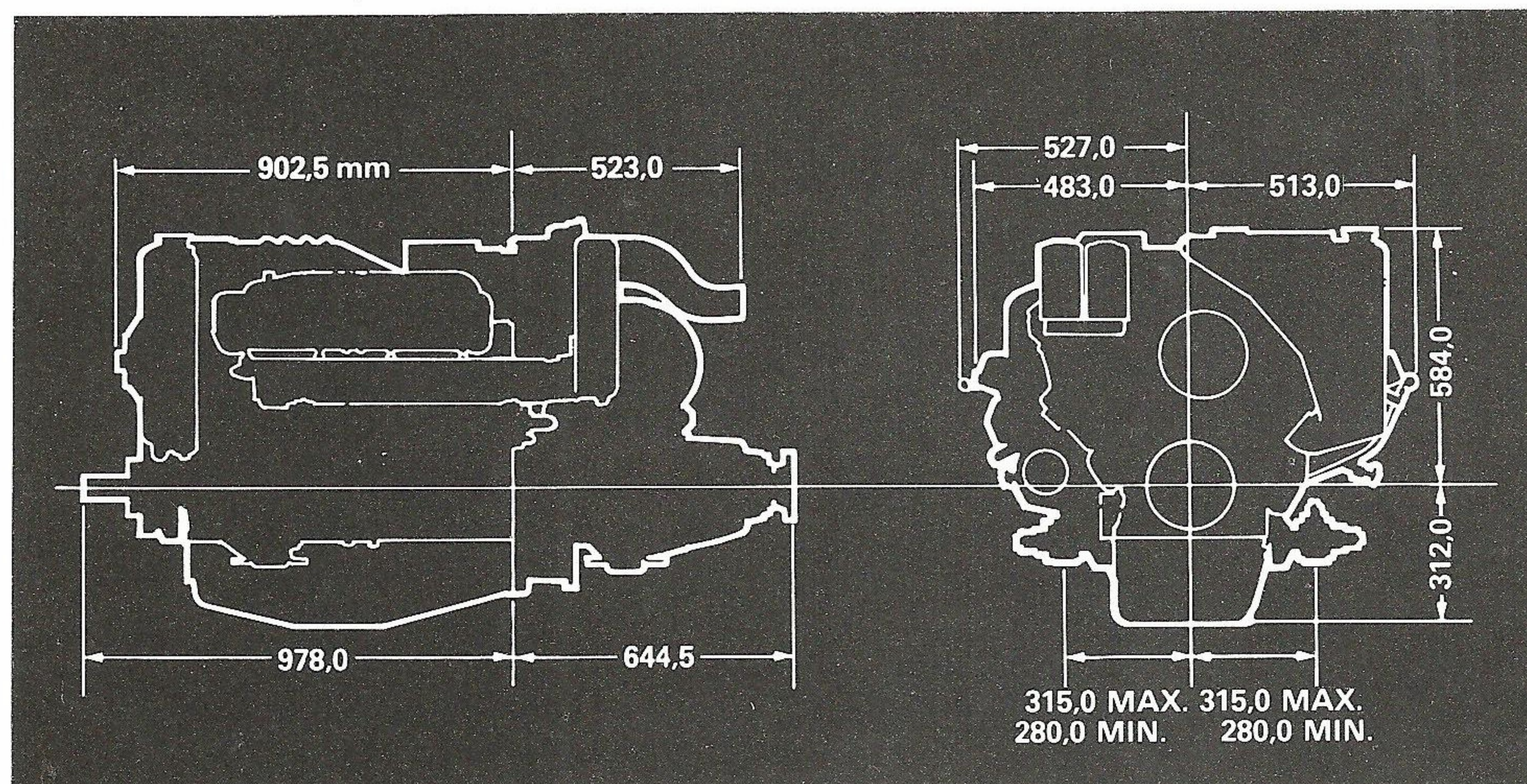
Engine fitted:

Twin Disc, Borg Warner and other transmissions, alternators and starters; flexible or solid engine mountings; power take off extension shaft; wet or dry exhaust outlets; electric remote shutdown; calorifier connections; cold start aid.

Supplied loose:

Electrical instruments (single or dual station). Audible/visual alarm system for high water temperature/low oil pressure/low coolant level; treadplate; on-board spares kit; tool kit; fuel pre-filter; gearbox output couplings, bilge pump, high quality propellers, sterngear and installation fittings.

Dimensions

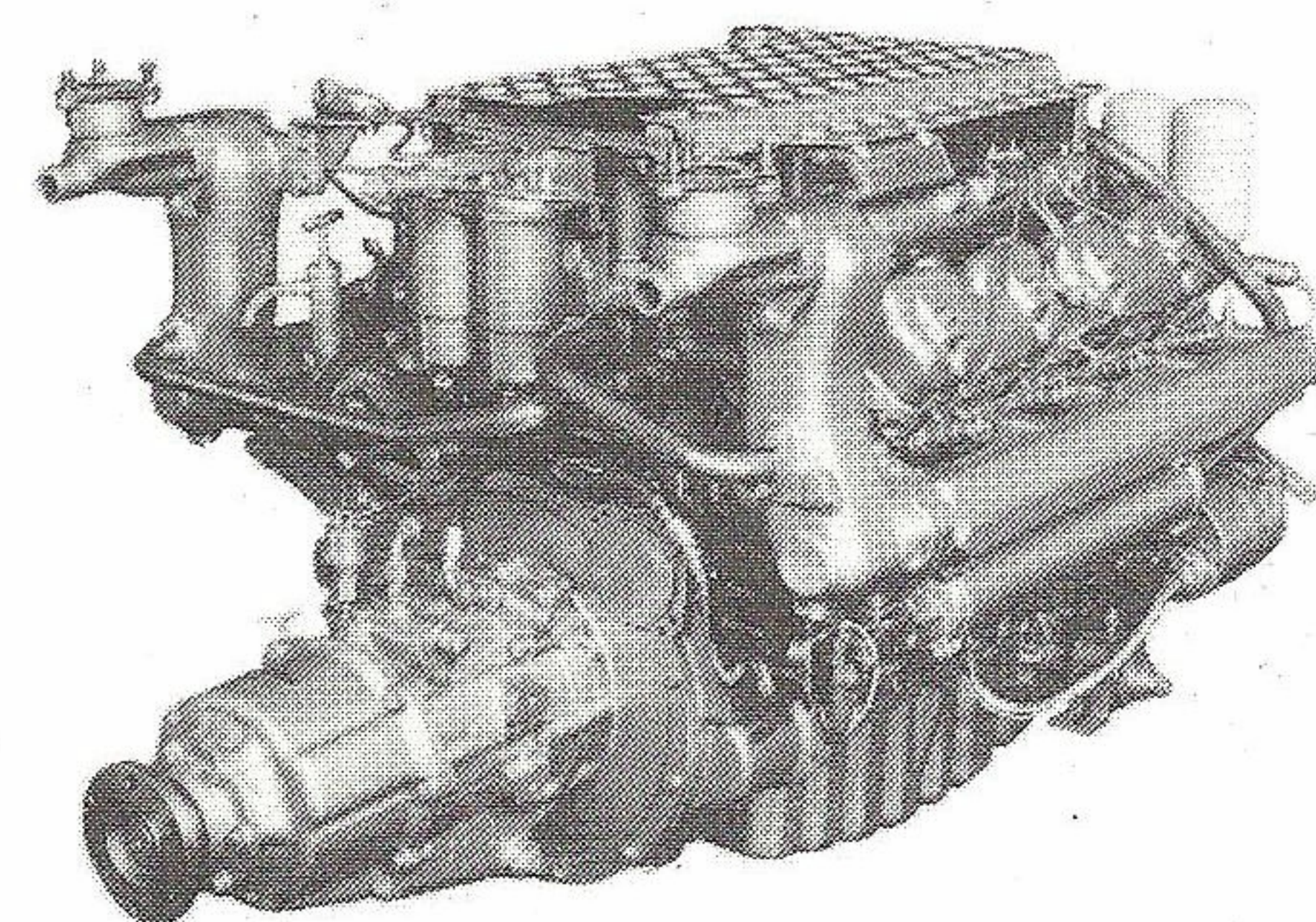


Rating standard BS AU 141a : 1971

Pleasure craft propellers should be matched to achieve maximum rated engine speed under fully loaded boat conditions.

Engine as delivered from factory will be set to produce gross power output within manufacturing tolerance and run-in allowance.

Demirhan Sadıkoğlu
2015



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Printed in England by Warners (Midlands) Ltd., Bourne, Lincs.

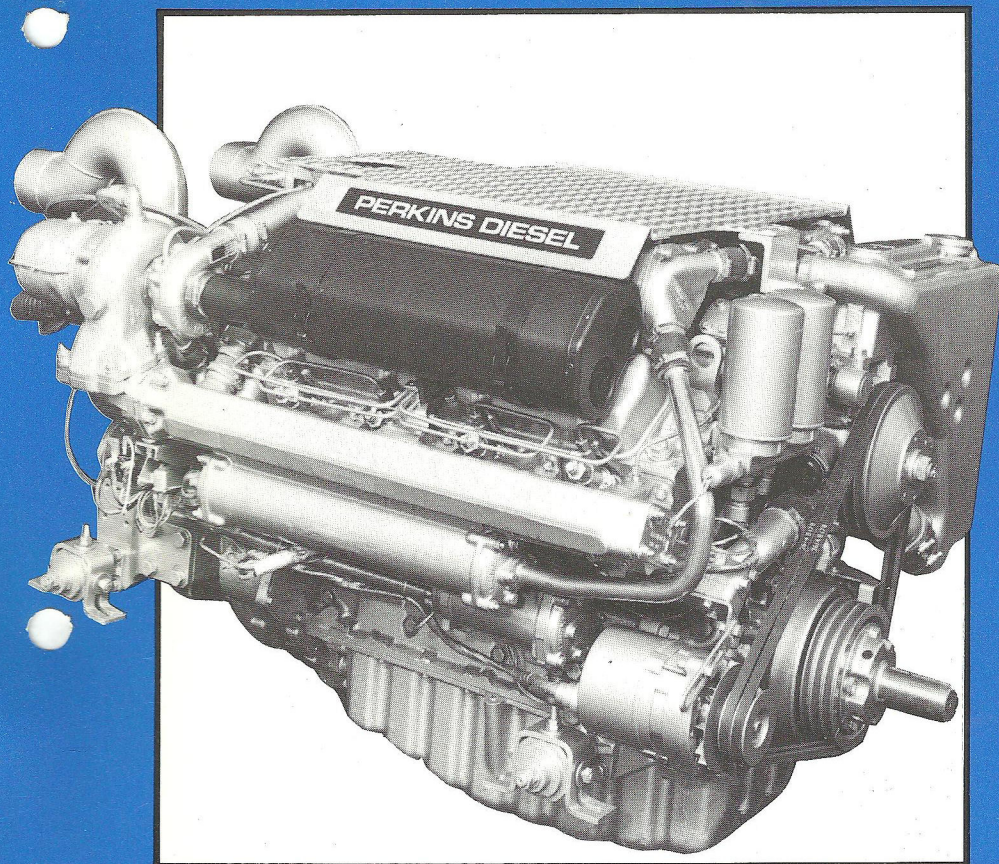
Publication No. 253/9/83

All information given in this leaflet is substantially correct at the time of printing but may be altered subsequently by the Company. Intending purchasers should therefore check for current data at time of purchase.

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TV8.540

MARINE POWER



The TV8.540 diesel is a turbocharged, inter cooled high performance marine engine available in four ratings. It is of eight cylinder V configuration for smooth power, and is built to a premium specification.

242 kW/325 bhp

General Data

Bore/Stroke: 4.25 in (108 mm) x 4.75 in (120,7 mm)

No. of cylinders: 8, 90° vee form

Cubic capacity: 539,1 in³ (8,83 litres)

Cycle: 4 **Aspiration:** pressure charged

Combustion system: Direct injection

Rotation: LH*

Fuel pump: DP15 rotary injection

Governing: Mechanical

Cooling: Heat exchanger fresh water cooled

Weight: 915 kg (2013 lbs) with D.D. Borg Warner Gearbox

Electrical: 24v

Power take off: Full engine torque from front end extension shaft

Installation angle: Max. static angle of 17° allowing further 3° rise underway also 5° nose-down for vee-drive application.



View on rear of engine looking forward

TV8.540 MARINE DIESEL

Typical applications

The engine is available with power ratings for continuous duty in the following applications.

Pleasure: Sports fishermen, trawler yachts and all types of cruisers.

Light Commercial: Survey vessels, crew and personnel launches. Patrol craft, police and customs launches. Pilot boats. Commercial fishing boats with high speed capability. Harbour masters' launches.

Heavy Duty Commercial: Tugs, barges, fishing boats, ferry boats, coastal workboats etc.

Fuel consumption

The table gives approximate fuel consumption for an engine operating at rated speed, rated power and typical values for average lower-speed operating conditions.

Engine power		Full power Fuel consumption			Average Operating Fuel consumption		
Speed rev/min	Load bhp	UK gals. per hr.	US gals. per hr.	litres per hr.	UK gals. per hr.	US gals. per hr.	litres per hr.
2600	325	14.1	16.9	64	7.6	9.1	35
2600	270	11.9	14.3	54	7.0	8.4	32
2400	252	11.0	13.2	50	6.0	7.2	27
2000	220	9.1	10.9	42	5.0	6.0	23

Alternative Ratings: 270 bhp (201 kW) at 2600—Pleasure Craft
 252 bhp (188 kW) at 2400—Light Duty Commercial
 220 bhp (164 kW) at 2000—Heavy Duty Commercial

Options

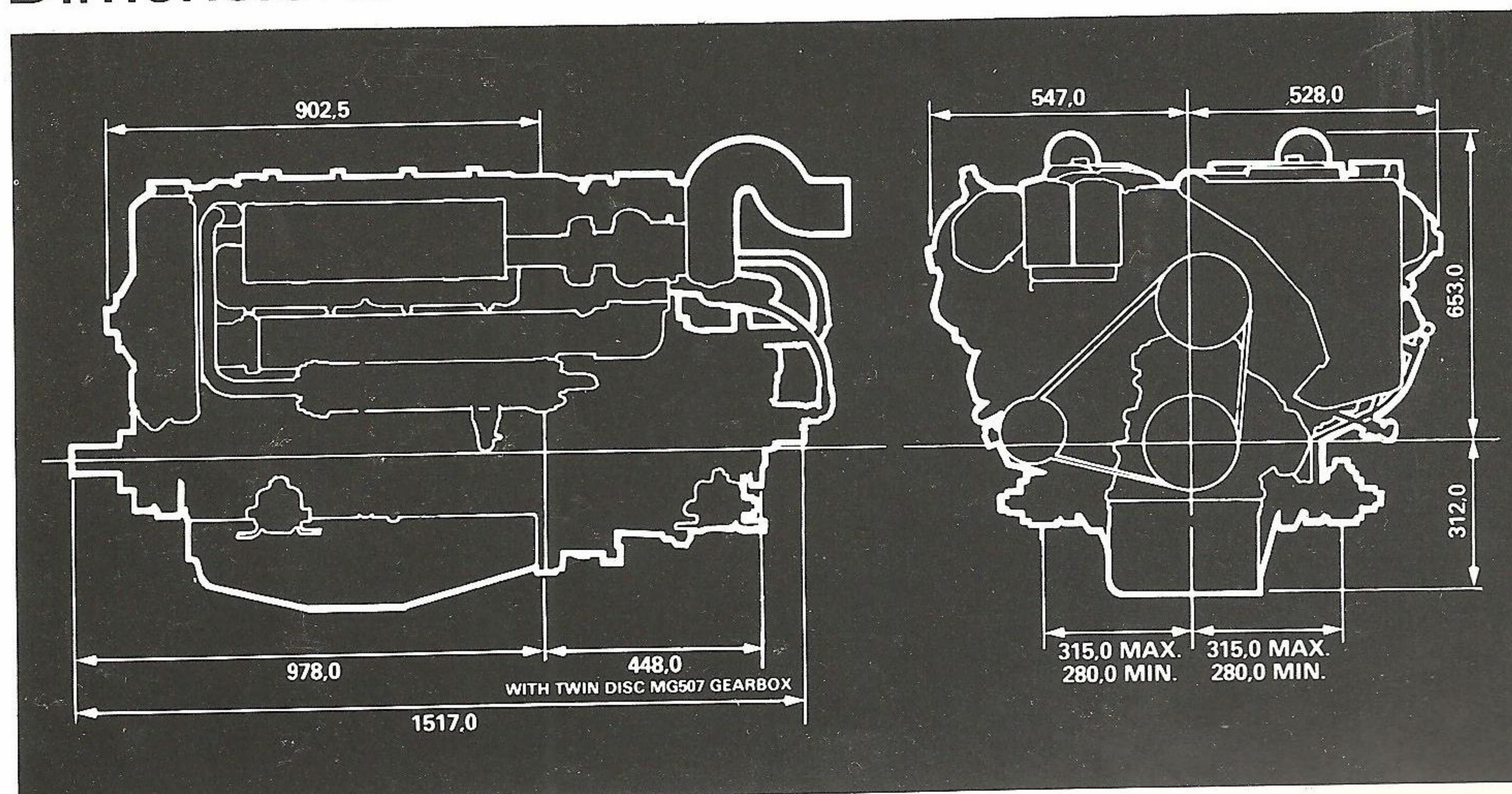
Engine fitted.

Borg Warner and other transmissions. High or standard output alternators; solid/flexible engine mountings, aluminium or cast iron sumps; power take off shaft with or without clutch; wet or dry exhaust outlets; electric remote shut-down; calorifier connections; engine treadplate.

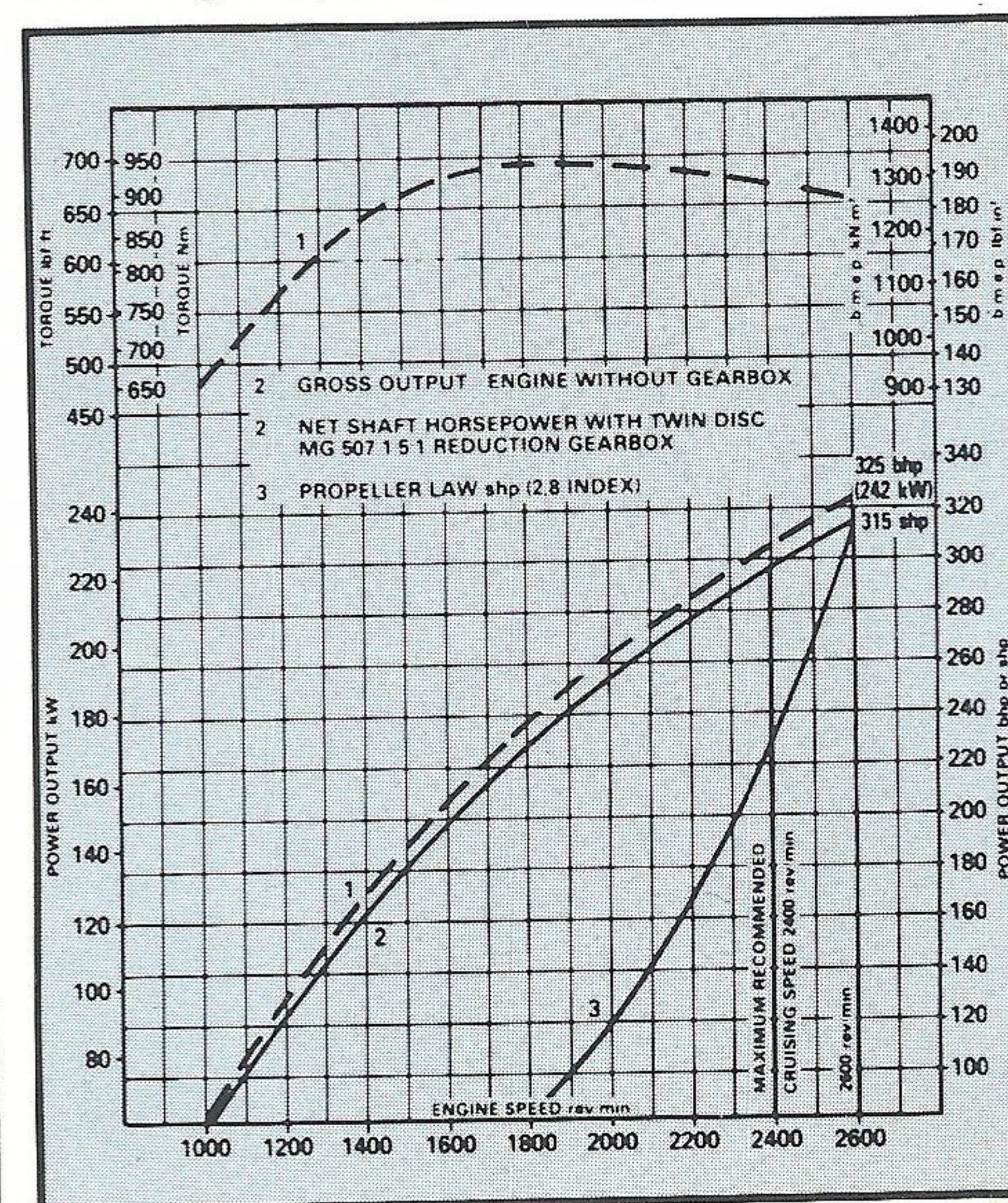
Supplied loose

Electrical instruments (single or dual station). Audible/visual alarm system for high water temperature/low oil pressure/low coolant level; on-board spares kit; tool kit; fuel pre-filter; gearbox output couplings; bilge pump.

Dimensions

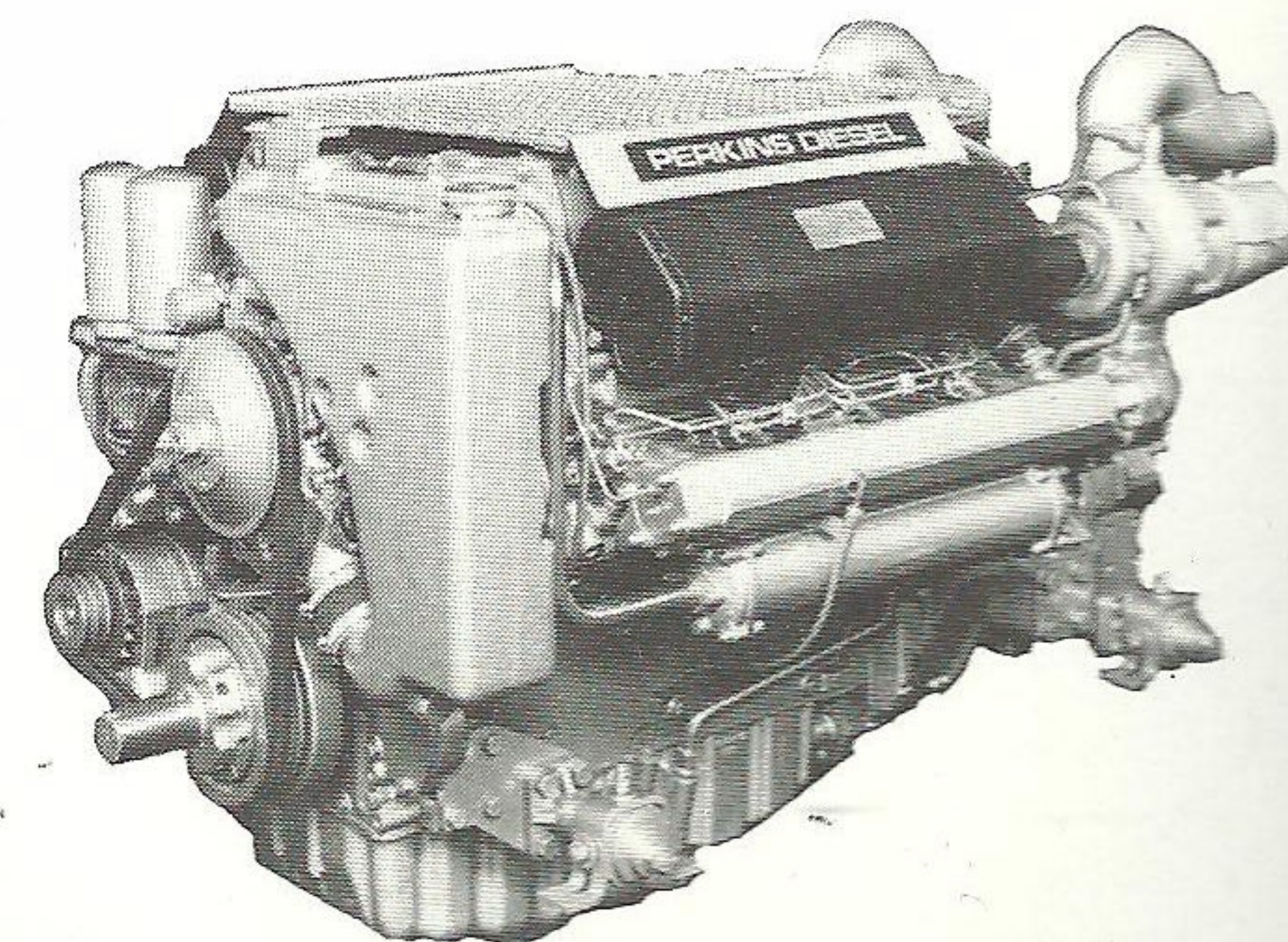


325 bhp (242 kW)
For High Speed Planing Craft



RATING STANDARD
 BS AU 141a: 1971

Demirhan Sadıkoğlu
 2015



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Perkins Engines Limited
 Peterborough PE1 5NA England

Printed in England by Peterborough Central Printers Ltd. 11/80 Publication No. 250

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Perkins MARINE POWER

TV8.540(M)



The TV8.540(M) delivers straightforward, ultra-reliable high performance marine engine available in four (4) ratings. It is 4-cylinder in-line "I" configuration and is built to a premium specification, thus providing a wide range of advanced designed performance features for endurance and reliability. Providing an excellent power-to-weight ratio, the power-takes engine offers reduced maintenance and excellent fuel economy. Applications for this engine include high-speed pleasure craft, motor yachts, all-glass/GO-cruisers, ferries, fishing vessels, and tugs, etc.

350 bhp

General Data

Bore/Stroke: 4.25 x 4.687 in (108 x 119.2 mm)
No. of cylinders: 4 (I) in-line
Displacement: 109.1 cu in (1.78 l) (4 cyl)
Cycle: 4-Stroke (pressure injected)
Intermittent shaft horsepower: 2.6 kw
Cooling System: Direct Injection
Compression ratio: 16.1
Rotation: CR
Fuel/Inj: Bosch "MVA" direct injection

Operating Mechanical

Cooling: Water-cooled fresh water cooled
Weight: 300 lbs (136 kg)
Electrical: 12 VDC, 64 amp alternator
Power take off: Full engine torque from front and extension shaft
Installation angle: Max. shaft angle of 15° above
and below 30° max underway and 45° max from the
vertical position.

*Engines as delivered from factory will be set to produce the intermittent horsepower rating.

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TV8.540(M) MARINE DIESEL

Design Features and Standard Equipment

Engine Block—The aluminum high strength cast iron cylinder block for dry sump oil transfer takes cast straight oil delivery and allows lower crankshaft speeds for better torque, better efficiency and a longer life. Features include:

Wide Valve—Highly efficient cast iron cast iron intake and exhaust valves are 21°.

Wide Deck—The piston has high strength cast iron deck with wide skirt. The piston, skirt and wrist pin are strengthened to provide excellent life and excellent performance. Skirt pin guides feature roller skirt guide for smooth run.

Crankshaft—The aluminum alloy crankshaft uses "forced" and "free" ends for extra torque output. The crankshaft is strengthened to provide excellent life and excellent performance. Features include:

Big Bearings—The main bearings are heavy duty, reinforced aluminum alloy bearings with high strength cast iron shells.

Wide Web Rings—The aluminum alloy rings for the rings are made of aluminum alloy with wide web design. The rings are strengthened to provide excellent life and excellent performance. Features include:

Coasting Ribs—The ribs on the cylinder block are strengthened to provide excellent life and excellent performance. Features include:

Wide Valve—The intake and exhaust valves are 21°.

Wide Deck—The piston has high strength cast iron deck with wide skirt. The piston, skirt and wrist pin are strengthened to provide excellent life and excellent performance. Features include:

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The operation. Features include:

Standard Oil System—The oil system is designed to provide excellent life and excellent performance. Features include:

Standard Water—The water system is designed to provide excellent life and excellent performance. Features include:

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Coasting Ribs—The ribs on the cylinder block are strengthened to provide excellent life and excellent performance. Features include:

Wide Valve—The intake and exhaust valves are 21°.

Wide Deck—The piston has high strength cast iron deck with wide skirt. The piston, skirt and wrist pin are strengthened to provide excellent life and excellent performance. Features include:

Optional Equipment

- 24VDC/100Ah battery system
- 24VDC/100Ah battery system
- 24VDC/100Ah battery system
- 24VDC/100Ah battery system

Dimensions (typical) in/mm



24VDC/100Ah battery system
High speed/low speed



TV8.540(M) Performance

Maximum and torque output shown at the rated horsepower/revolution minute (RPM) for an ambient sea level density of 1.225 kg/m³.

The graph output curve indicates the performance of the engine. The engine is designed to operate at 2400 RPM. The engine is designed to operate at 2800 RPM. The engine is designed to operate at 2400 RPM. The engine is designed to operate at 2800 RPM.

Fuel Consumption

The table gives approximate fuel consumption for an engine operating at rated speed, load power and typical conditions for average boat hull speed/revolutions.

RPM	Load	Fuel Consumption (gph)	
		2400 RPM	2800 RPM
1000	100%	18.0	18.0
1200	100%	20.0	20.0
1400	100%	22.0	22.0
1600	100%	24.0	24.0
1800	100%	26.0	26.0
2000	100%	28.0	28.0
2200	100%	30.0	30.0
2400	100%	32.0	32.0
2600	100%	34.0	34.0
2800	100%	36.0	36.0

• 24VDC/100Ah battery system
• 24VDC/100Ah battery system for high water temperature operation



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