

Perkins MARINE POWER

4.236(M)



This 85 horsepower 4-cylinder diesel gives you reliable, durable and safe performance with compact size and low weight.

A rotary distributor-type fuel-injection system provides even fuel feed for smooth performance. An automatic advance and retard mechanism ensures fast starts and quick acceleration throughout the speed range. And the Perkins "H" pre-combustion system means clean burning, top fuel economy. Perkins diesels are designed for smooth, vibration-free running. And are designed for dependability with features like a closed freshwater cooling system to minimize corrosion.

The 4.236(M) is an auxiliary or main propulsion engine that provides plenty of clean, economical power when you need it, and doesn't get in your way when you don't.

85 bhp

General Data

Bore and Stroke: 3.875 in x 5.0 in
No. of cylinders: 4, in-line
Displacement: 235.9 cu in
Cycle: 4
Aspiration: Naturally aspirated
Intermittent shaft horsepower: 77 shp
Combustion system: Direct injection
Compression ratio: 16.0:1
Rotation: LH

Fuel pump: Rotary distributor type
Governing: Mechanical
Cooling: Heat exchanger fresh water cooled
Weight: 840 lb
Electrical: 12 volt, 61 amp alternator
Power take off: Full engine torque from front end extension shaft
Installation angle: 0° to 17°

 **Perkins**
Engines

4.236(M) MARINE DIESEL

Design Features and Standard Equipment

Cylinder Block—High-strength cast iron alloy for long engine life. Cylinder block extends below crankshaft centerline for additional strength.

Cylinder Liners—Press-fit, centrifugally-cast iron dry-type liners. Easily replaceable.

Combustion System—Direct fuel injection into toroidal combustion chamber in the piston crown ensures fast starting, maximum fuel economy, and top performance.

Crankshaft—Forged chrome/molybdenum steel with integral balance weights on the webs. Hardened for extra duty. Statically and dynamically balanced.

Main Bearings—Five pre-fit precision main bearings, replaceable thin-walled, steel-backed and aluminum/tin-lined. Retained by heavy-duty cast iron bearing caps.

Pistons and Rings—Aluminum silicon low-expansion alloy pistons for high strength, light weight, and high thermal conductivity. Five piston rings: three compression, two oil control.

Connecting Rods—Carbon manganese steel alloy with high-strength H-section shank. Fitted with precision-type lead/tin-lined big-end bearings and lead/bronze small-end bushings. Fully floating piston pins.

Valves—Intake valves are chromium medium carbon steel, exhaust valves are silicon chromium valve steel for heat resistance and long in-service life.

Camshaft—High-strength cast iron with three pressure-lubricated supporting bearings. Cams and tappets are splash-lubricated.

Optional Equipment

- Front Power Take-off—2" diameter x 3½" extension shaft bolted to crankshaft pulley allows accessory drives up to 175 lbs. ft. torque axially. Single and dual groove pulleys available.
- Marine Gears—Warner 71 CR type for pleasure boats, 72 CR for work boats. Equivalent Twin Disc or Hurth gears also approved.
- Marine Gear Reductions—Up to 3:1 ratio.
- R.H. Rotation—Warner 1.91:1. Others as available from other manufacturers.

Timing Drive—Positive drive gear train with precision-machined helical gears for trouble-free performance. Provision is made for precise fuel pump timing adjustment.

Intake Manifold—Lightweight aluminum alloy casting. Dry bronze gauze air filter mounted on manifold intake incorporating closed crankcase ventilation system.

Exhaust Manifold—Heavy-duty cast iron alloy, jacketed for water cooling.

Fuel System—Rotary distributor-type fuel injection pump provides even fuel distribution to all cylinders for smooth performance from idle to full power. Automatic advance and retard mechanism ensures fast starts and even acceleration throughout the entire speed range. Injectors are easily accessible on the cylinder head for maintenance purposes.

Lubrication System—Full-pressure feed, rotary pump-driven engine lubrication system. Control valve in pump body maintains constant optimum pressure for efficient lubrication. Full-flow, spin-on filter.

Cooling System—Thermostatically controlled, heat exchanger, engine-mounted fresh and raw water pumps. Full-depth, full-circumference cylinder circulation for efficient cooling.

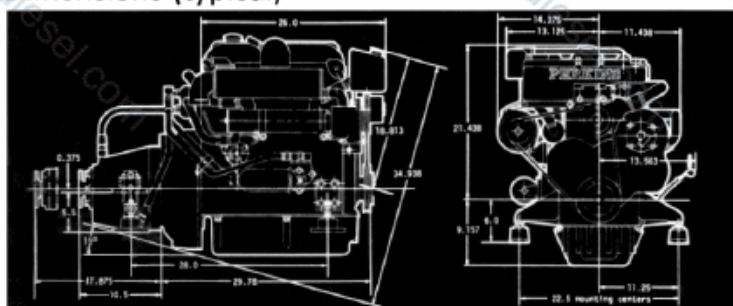
Electrical Equipment—12-volt, 61-amp alternator and 12-volt Delco starter standard. Plug-in wiring harness.

Power Take-Off Provision—Front end of crankshaft accepts stub shaft for axial power take-off.

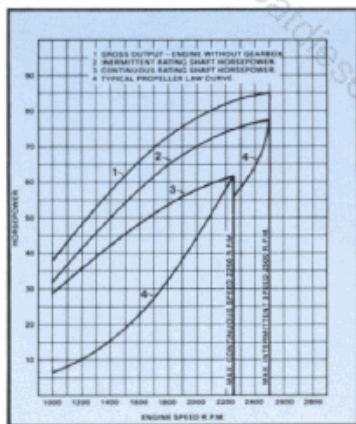
Engine Mounts—Rubber with standard 22½" centers.

- Exhaust Manifold—Water injection exhaust elbow (dry flange 2½" NPT available.)
- Electric Tach.—Alt.-powered, 3000 rpm.
- Deluxe Instrument Panel—Includes oil pressure and water temperature gauges.
- Wiring Extension Harnesses—Available in 10', 20', 30', lengths, panel to engine.
- Safety Features—Electrically-operated stop solenoid complete with all brackets.
- Crankcase Oil Drain—Sump pump kit.
- Tachometer drive—Tach. angle drive.

Dimensions (typical)



85 bhp at 2500 rpm



4.236(M) Performance

Horsepower and torque ratings shown on this graph represent engine performance at standard conditions of 29.92" Hg air pressure (sea level) and 68°F intake-air temperature.

The power output of Perkins diesel engines will show a nominal reduction of approximately 3% per 1000 ft increase in altitude and approximately 1% per 10°F rise in intake-air temperature. The fuel-feed rate of Perkins diesel engines which are permanently operated in areas where they encounter above-standard conditions should be adjusted to maintain approximately the same fuel/air ratio as is used for standard test conditions. Engines operated above altitudes of 4000 ft may have to be de-fueled and Perkins should be consulted for this adjustment.

These graphs indicate the performance of the Perkins 4.236(M) diesel engine with fuel system, water pumps, lubricating oil pump, and air cleaner in place. Optional equipment power losses are not included in these ratings.

Perkins
Engines

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