

PowerTech™

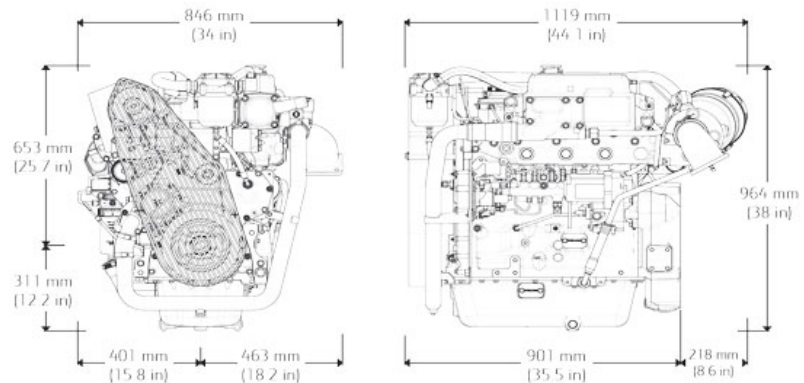
4045AFM85 Diesel Engine

Propulsion Engine Specifications



4045AFM85 shown

Dimensions



Certifications

EPA Commercial Marine Tier 3
IMO MARPOL Annex VI Compliant
NRMM (97/68/EC) as amended

General data

Model	4045AFM85	Length - mm (in)	1119 (44.1)
Number of cylinders	4	Width - mm (in)	864 (34.0)
Displacement - L (cu in)	273 (16659)	Height, Centerline to Top-- mm. (in)	653 (25.7)
Bore and Stroke-- mm (in)	107 x 127 (4.21 x 5.00)	Height, Centerline to Bottom-- mm. (in)	310 (12.2)
Compression Ratio	16.7:1	Weight, dry-- kg (lb)	578 (1274)
Engine Type	In-line, 4- Cycle	Maximum Installed Angle	Front Up – degrees 12 Front Down – degrees 0
Aspiration	Turbocharged and air-to-coolant aftercooled		

Features and benefits

High Torque and Low Rated RPM

- High torque provides excellent vessel control and maneuverability. Lower rated propulsion RPM reduces vibration and noise for improved crew comfort.

4-Valve Cylinder Head

- Excellent airflow through 4-valve cylinder head delivers greater low-speed torque and better transient response time.

High-pressure Common-rail (HPCR)

- The HPCR fuel system provides variable common-rail pressure, multiple injections, and higher injection pressures. It also controls fuel injection timing and provides precise control for the start, duration, and end of injection. Electronic transfer pump is self-priming for ease of maintenance. Provides high performance, excellent fuel economy, and low emissions.

Water-cooled Exhaust Manifold

- Integrated components eliminate external hoses and fittings that can leak or break. Wet exhaust manifold creates a cooler and quieter environment for passengers and crew.

Replaceable Cylinder Liners

- Replaceable wet-type cylinder liners are precision-machined and hardened for long life. Allows engine to be rebuilt to original specifications.

Electronic Engine Control Unit (ECU)

- Advanced fault code diagnostics and customizable engine protections ensure reliability and uptime. Provides highly customizable features and trim to integrate your vessel.

Integrated Heat Exchanger

- Integrated expansion tank, heat exchanger, and exhaust manifold reduce the chance of leaks. High-capacity heat exchanger provides reliable operation in adverse conditions.

Keel-cooled or Heat Exchanger

- Closed cooling system in keel-cooled engine option eliminates the need for a sea strainer, seawater pump, or anodes. Heat exchanger option offers a lighter, more compact, and simpler engine installation.

Internal Balancers

- Internal balancers reduce engine noise and vibration for crew comfort. NOTE: John Deere 4045 engines only.

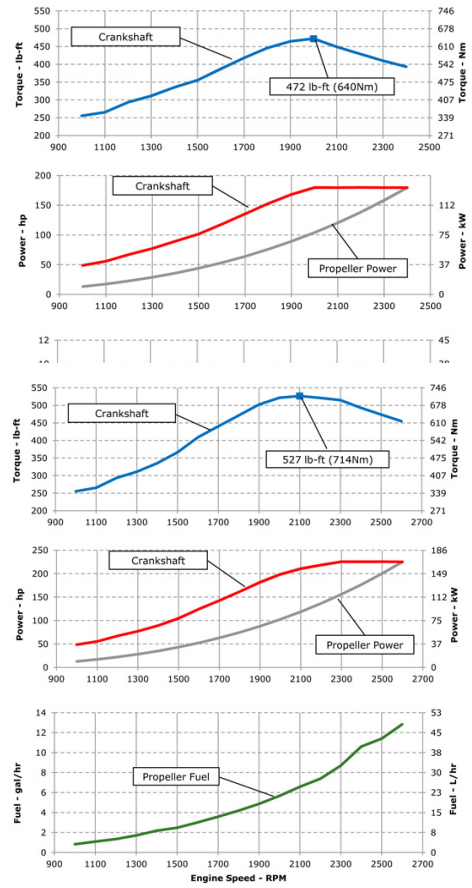
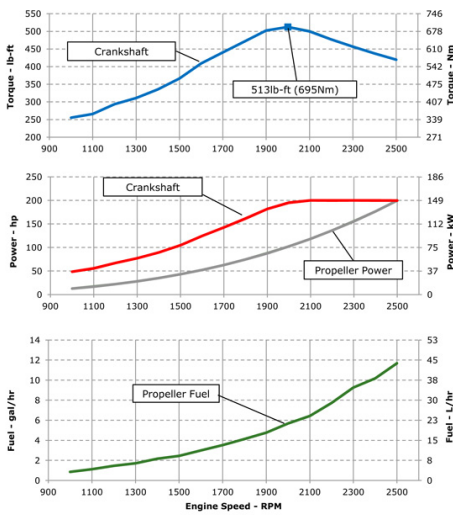
Multiple Service Options

- Either-side oil fill/dipstick combinations and remote oil and fuel filter options are available for easier service access.

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Performance data	M4	M3	M2	M1
Rated Power - kW (hp)	168 (225)	149 (200)	134 (180)	119 (160)
Rated Speed - rpm	2600	2500	2400	2300
Low Idle Speed - rpm	600	600	600	600
Peak Torque - Nm (ft-lb)	681 (502)	681 (502)	604 (445)	567 (418)
Peak Torque Speed - rpm	2100	2000	2000	1800
Fuel Consumption - L/h (gal/hr)	48.6 (12.8)	44.2 (11.7)	36.9 (9.7)	33.2 (8.8)

M rating	M4	M3	M2	M1
Typical load factor	< =40%	< =50%	< =65%	> 65%
Typical annual usage (hr)	1,000-3,000 hr	2,000-4,000 hr	3,000-5,000 hr	Unrestricted
Typical full-power operation (hr)	1 of each 12 hr	4 of each 12 hr	16 of each 24 hr	Uninterrupted

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All values at rated speed and power with standard options unless otherwise noted.
Specifications and design subject to change without notice.