

PowerTech™

4045AFM85 Diesel Engine

Propulsion Engine Specifications

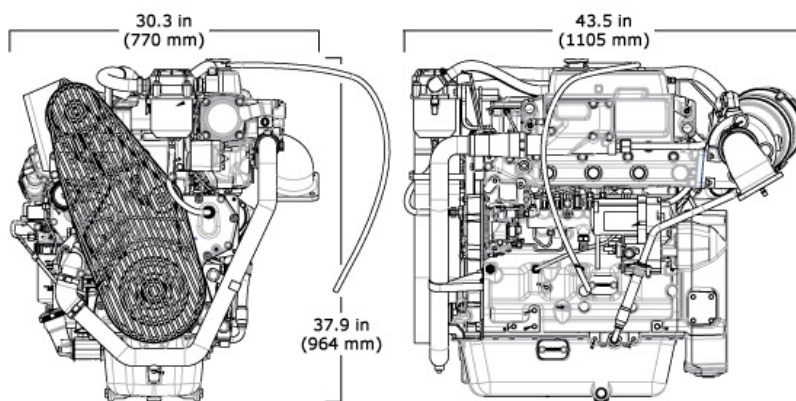


JOHN DEERE



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)	1105 (43.5)
Number of cylinders	4	Width - mm (in)	770 (30.3)
Displacement - L (cu in)	4.5 (275)	Height, Centerline to Top-- mm. (in)	654 (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
Aspiration	Turbocharged and air-to-coolant aftercooled		Front Down – degrees 0

Features and benefits

Watercooled Exhaust Manifold

- Cooler and quieter environment for vessel and crew
- Reduced external connections eliminates hoses and fittings that can leak or break

Replaceable Wet-type Cylinder Liners

- Hardened and precision machined for long life
- Rebuild to original specifications

High Pressure Common Rail Fuel System

- High pressure common rail fuel system provides high performance, excellent fuel economy, and low emissions
- Electronic transfer pump provides self-priming fuel system for ease of maintenance

Heat Exchanger or Keel Cooled

- Integrated expansion tank, heat exchanger and exhaust manifold reduce chances of leaks
- Keel cooler options provide application flexibility

High Torque and Low Rated RPM

- Excellent vessel control and maneuvering
- Lower rated rpm limits vibration and noise for better crew comfort

Corrosion Resistant Components

- Provides engine protection from the effects of seawater

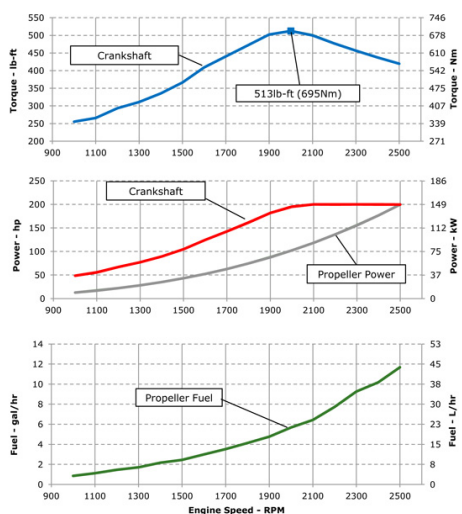
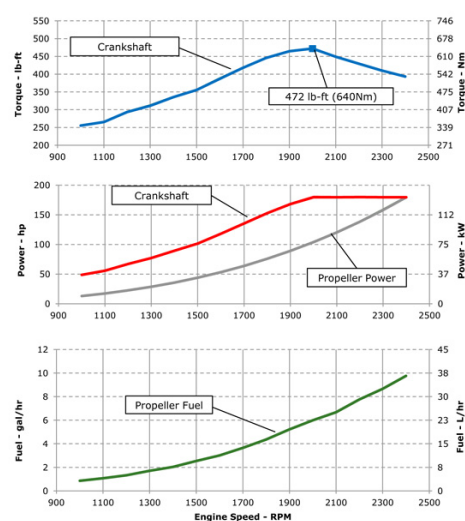
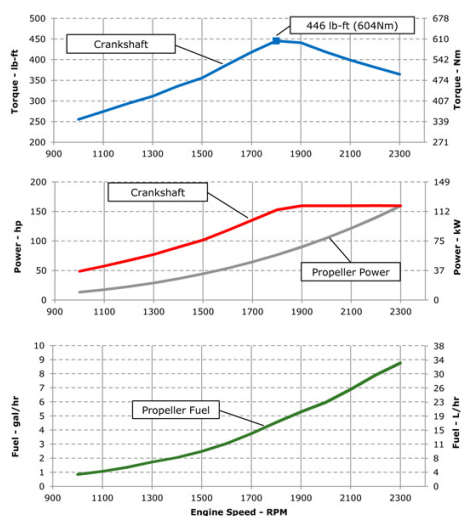
Internal Balancers

- Low noise and vibration for crew comfort

John Deere Electronic Engine Controls

- Advanced fault code diagnostics and customizable engine protections ensure reliability and uptime
- Highly customizable features and trim to integrate your vessel and meet specific application needs

Performance curve



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.*