

# PowerTech™

# 4045AFM85 Diesel Engine

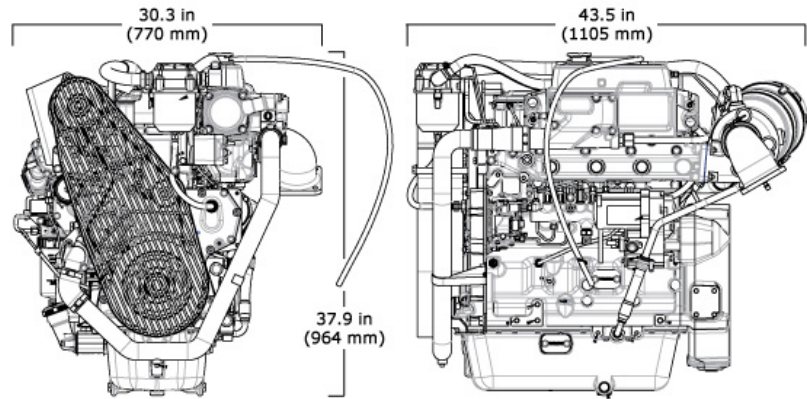
Propulsion Engine Specifications

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4045AFM85 shown

## Dimensions



## Certifications

EPA Commercial Marine Tier 3  
IMO MARPOL Annex VI Compliant

## 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)	1308 (2884)
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

### 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

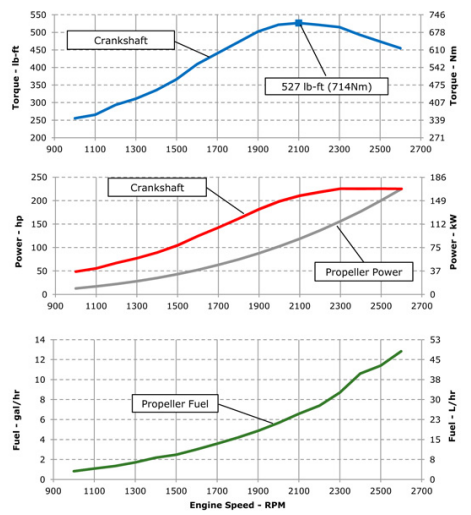
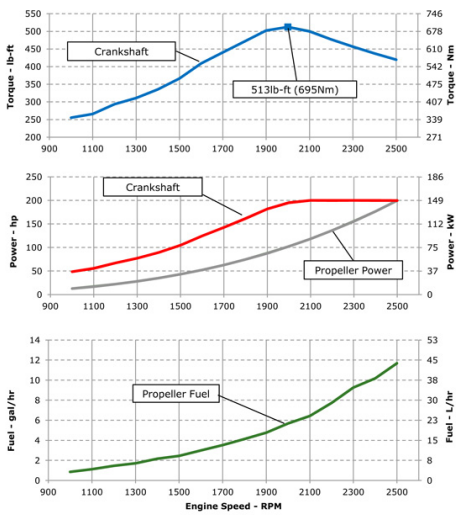
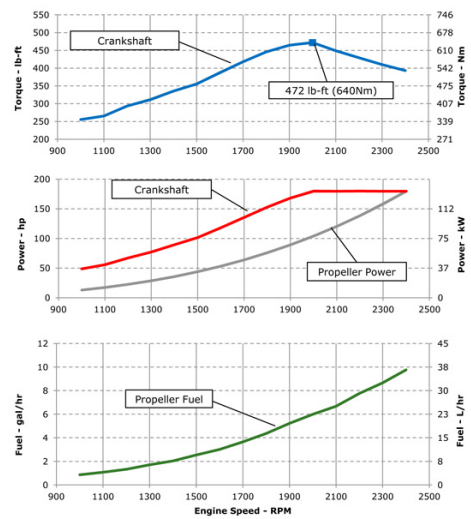
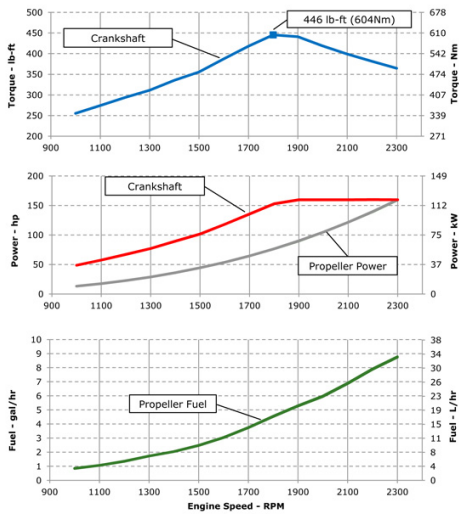
### Internal Balancers

- 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)	800	2000	3000	> 3000
Typical full-power operation (hr)	1 of each 12	4 of each 12	16 of each 24	24 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.*