PowerTech™ 6090SFM85 Diesel Engine

Marine Propulsion Engine Specifications

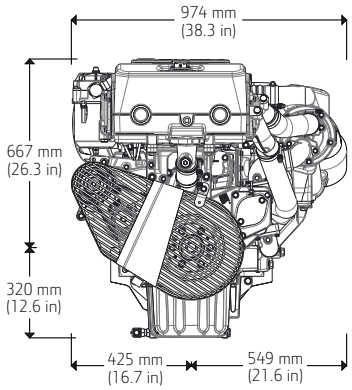
JOHN DEERE

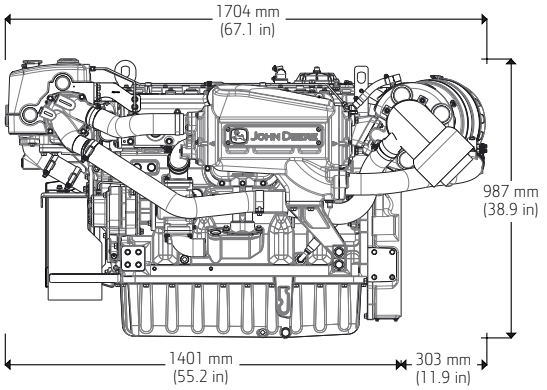
6090SFM shown

Emissions

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

Dimensions





Dimensions shown in mm (in) may vary according to options selected.
Contact your distributor for more information.

General Data (based on standards option configuration)

Model	6090SFM85
Number of cylinders	6
Displacement – L(cu in)	9.0 (549)
Bore and Stroke – mm (in)	118.4 x 136 (4.66 x 5.35)
Engine Type	In-line, 4-cycle
Aspiration	Turbocharged and air-to-seawater aftercooled

Length maximum – mm (in)	1704 (67.1)
Length to rear face of flywheel housing – mm (in)	1401 (55.2)
Flywheel housing SAE	SAE #2
Width maximum – mm (in)	974 (38.3)
Crankshaft centerline left – mm (in)	425 (16.7)
Crankshaft centerline right – mm (in)	549 (21.6)
Height – mm (in)	987 (38.9)
Height, crankshaft centerline to top – mm (in)	667 (26.3)
Height, crankshaft centerline to bottom – mm (in)	320 (12.6)
Weight, dry – kg (lb)	1056 (2327)

Classification Societies

SOLAS – Accessories available*
ABS, DNV, BV, LR Heather?

**Other accessories available. Contact your distributor for details.*

Engine Specifications

Performance ratings	Power kW (bhp)	Rated Speed (rpm)	Rated fuel consumption L/hr (gal/hr)
M1	242 (325)	2100	65.4 (17.3)
M2	280 (375)	2200	77.7 (20.5)
M3	317 (425)	2300	87.4 (23.1)
M4	373 (500)	2400	107 (28.3)
M5	410 (550)	2500	116 (30.5)

Metric hp = Brake hp x 1.01387

M rating	M1	M2	M3	M4	M5
Typical load factor	>65%	<=65%	<=50%	<=40%	<=35%
Typical Annual Usage (hr)	Unrestricted	3,000-5,000	2,000-4,000	1,000-3,000	300-1,000
Typical full-power operation (hr)	Uninterrupted	16 of each 24 hr	4 of each 12 hr	1 of each 12 hr	0.5 of each 8 hr

Ratings are based on ISO 8655 standard power rating and the SAE J1228 crankshaft power rating.
Flexibility of installation due to range of options
See your John Deere Power Systems engine distributor or marine dealer for more detailed performance information.

Photographs may show non-standard equipment.

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

High-pressure common-rail (HPCR)
- The HPCR fuel system provides variable common-rail pressure, multiple injections, and higher injection pressures
- 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

Turbocharged with air-to-seawater aftercooling
- Cooler turbocharger operation enables higher ratings and efficiencies for applications that require high power or speed

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

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

Water-cooled exhaust manifold
- Integrated components eliminate external hoses and fittings
- 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

Heat exchanger
- High-capacity heat exchanger provides reliable operation in adverse conditions

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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.