

# PowerTech™ Plus

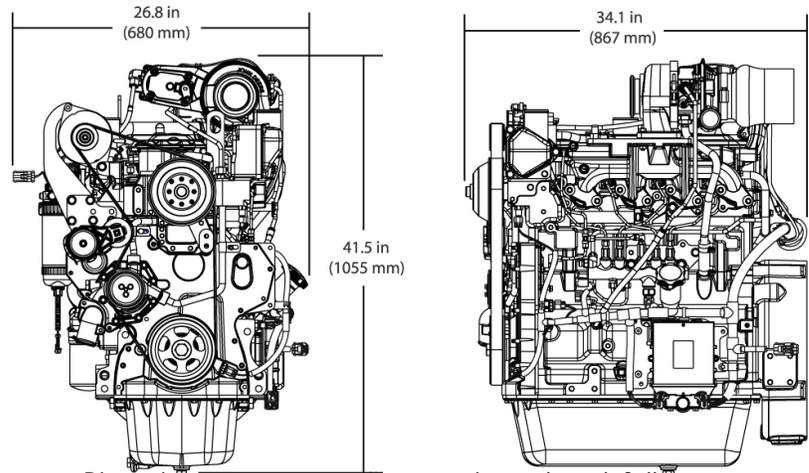
## 4045HF485 Diesel Engine

Industrial Engine Specifications



4045HF485 shown

### Engine dimensions



Dimensions may vary according to options selected. Call your distributor for more information.

### Certifications

- CARB
- EPA Tier 3
- EU Stage III A

### General data

Model	4045HF485	Length - mm (in)	867 (34.1)
Number of cylinders	4	Width - mm (in)	680 (26.8)
Displacement - L (cu in)	4.5 (275)	Height-- mm (in)	1055 (41.5)
Bore and Stroke-- mm (in)	106 x 127 (4.17 x 5.00)	Weight, dry-- kg (lb)	491 (1082)
Compression Ratio	17.0 : 1		
Engine Type	In-line, 4-Cycle		
Aspiration	Turbocharged and air-to-air aftercooled		

### Performance data range

Application ratings	Intermittent	Heavy Duty
Rated power/Rated speed	111-129 kW(149-173 hp) @2000-2400rpm	115 kW(154 hp) @2400rpm
Peak power	116-129 kW (156-173 hp) @1800-2400rpm	115 kW (154 hp) @2400rpm
Power bulge	0-4% @ 1800rpm	0% @ NA rpm
Peak torque	645 N.m (476ft-lb) @1500rpm	575 N.m (424ft-lb) @1500rpm
Torque rise	22-26%	26%

The Industrial Intermittent engine power rating is for applications that operate at varying loads and speeds, and do not fit the Industrial Heavy-Duty rating information.

Some applications require Industrial Heavy-Duty engine power ratings. Please contact your John Deere Power Systems engine distributor for more information.

Power output is within + or - 5% at standard SAE J 1995 and ISO 3046.

## Features and benefits

### 4-Valve Cylinder Head

- The 4-valve cylinder head provides excellent airflow resulting in greater low-speed torque and better transient response. Cross flow design

### High-Pressure Common-Rail (HPCR) and Engine Control Unit (ECU)

- The HPCR fuel system provides variable common-rail pressure, multiple injections, and higher injection pressures, up to 1600 bar (23,000 psi). It also controls fuel injection timing and provides precise control for the start, duration, and end of the injection

### Cooled Exhaust Gas Recirculation (EGR)

- EGR cools and mixes measured amounts of cooled exhaust gas with incoming fresh air to lower peak combustion temperatures, thereby reducing NOx

### Variable Geometry Turbocharger (VGT)

- Varies exhaust pressure based on load and speed to insure proper EGR flow; greater low-speed torque, quicker transient response, higher peak torque, and best-in-class fuel economy.

### Air-to-Air Aftercooled

- This is the most efficient method of cooling intake air to help reduce engine emissions while maintaining low-speed torque, transient response time, and peak torque. It enables an engine to meet emissions regulations with better fuel economy and the lowest installed costs

### Compact Size

- Horsepower/displacement ratio is best-in-class
- Lower installed cost
- Mounting points are the same as Tier 2/Stage II engine models

### John Deere Electronic Engine Controls

- Electronic engine controls monitor critical engine functions, providing warning and/or shutdown to prevent costly engine repairs and eliminate the need for add-on governing components all lowering total installed costs. Snapshot diagnostic data that can be retrieved using commonly available diagnostic service tools
- Controls utilize new common wiring interface connector for vehicles or available OEM instrumentation packages; new solid conduit and "T" connectors to reduce wiring stress and provide greater durability and improved appearance
- Factory-installed, engine mounted ECU or remote-mounted ECU comes with wiring harness and associated components. Industry-standard SAE J1939 interface communicates with other vehicle systems, eliminating redundant sensors and reducing vehicle installed cost

### Additional Features

- Glow plugs; gear-driven auxiliary drive; optional 500-hour oil change; self adjusting ploy-vee fan drive