



JOHN DEERE

PowerTech™ Plus

4045H Diesel Engine

for Generator Set Applications



4045HF Engine shown

General Data

Model 4045HF485
Number of cylinders 4
Displacement-- L (cu in) 4.5 (275)
Bore and Stroke-- mm (in) 106 x 127 (4.17 x 5.00)
Compression Ratio 17.0 : 1
Engine Type In-line, 4-Cycle

Aspiration Air-to-Air
Length-- mm (in) 860 (33.9)
Width-- mm (in) 612 (24.1)
Height-- mm (in) 1039 (40.9)
Weight, dry-- kg (lb) 491 (1082)

Ratings

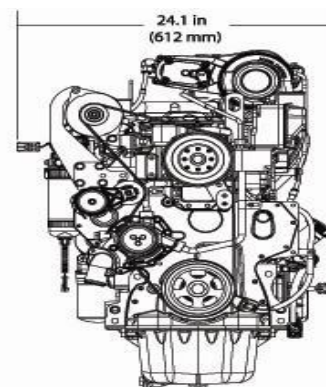
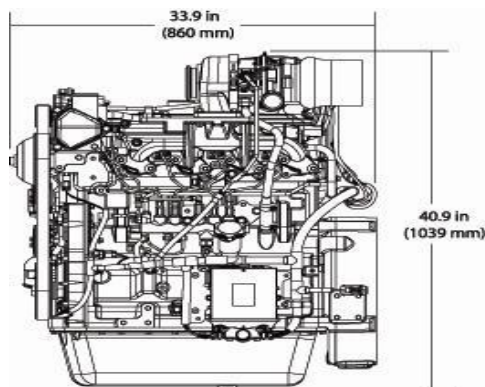
Prime power at 60 Hz (1800)	134 kW (180 hp)
Standby power at 60 Hz (1800)	147 kW (197 hp)

Prime power is the nominal power an engine is capable of delivering with a variable load for an unlimited number of hours per year. This rating conforms to ISO 3046 and SAI J1995.

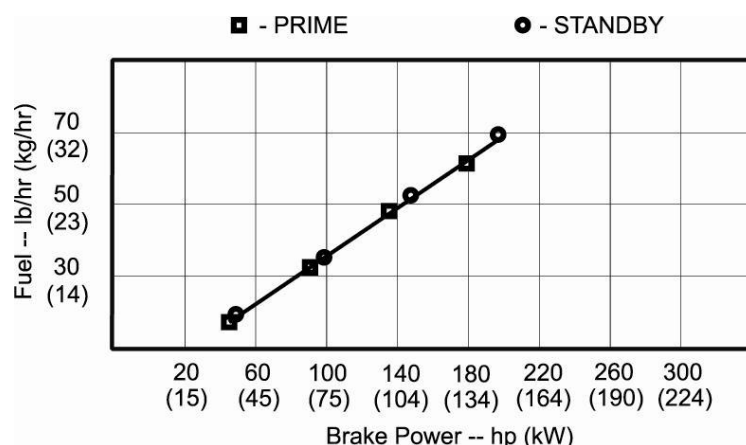
Standby power is the nominal engine power available at varying load factors for up to 500 hours per year. This rating conforms to ISO 3046 and SAE J1995. The calculated generator set rating range for standby applications is based on minimum engine power (nominal -5%) to provide 100% meet-or-exceed performance for assembled standby generator sets.

Certifications

Dimensions



Performance curve



Performance data

Hz (rpm)	Generator efficiency %	Fan power		Power factor	Calculated generator set output			
		kW	hp		Prime		Standby	
					kWe	kVa	kWe	kVa
60 (1800)	88-92	6.5	8.7	0.8	112-117	140-146	124-129	155-161

Features and Benefits

4-Valve Cylinder Head

- The 4-valve cylinder head provides excellent airflow. Cross flow design

High Pressure Common Rail Fuel System (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 ensure proper EGR flow; greater low-speed 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

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; eliminates need for add-on governing components; all lowering total installed costs. Snapshot diagnostic data that can be retrieved using commonly available diagnostic service tools
- New common wiring interface connector for vehicles or available OEM instrumentation packages; new solid conduit and "T" connectors to reduce wiring stress, greater durability and improved appearance
- Factory installed engine mounted ECU or remote mounted ECU, wiring harness and associated components
- Industry standard SAE J1939 interface which communicates with other vehicle systems, eliminating redundant sensors and reducing vehicle installed cost

Additional Features

- Self-adjusting poly-vee fan drive



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