

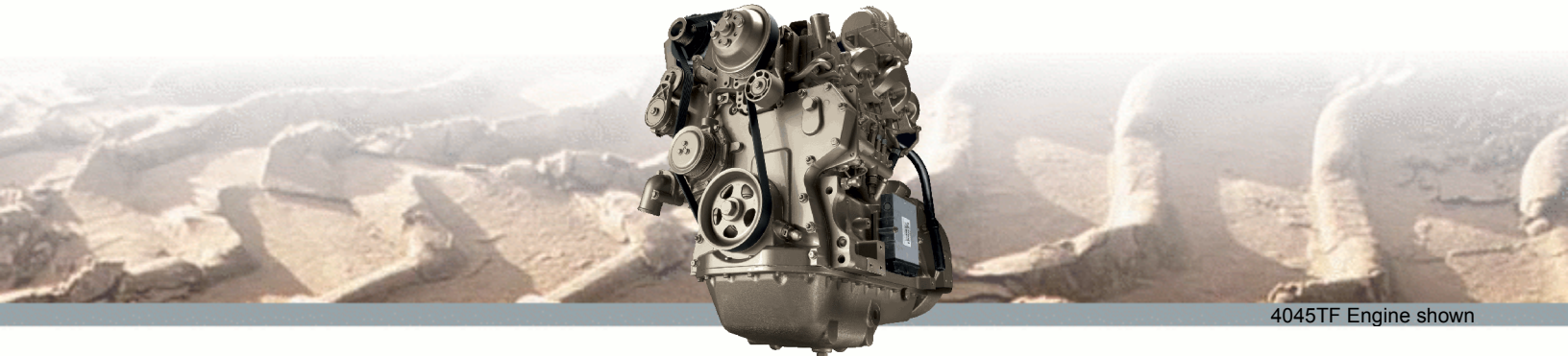


# JOHN DEERE

## PowerTech™ E

# 4045T Diesel Engine

### Specifications



4045TF Engine shown

#### General Data

Model .....	4045TF285	Aspiration .....	Turbocharged
Number of cylinders .....	4	Length-- mm (in) .....	867 (34.1)
Displacement-- L (cu in) .....	4.5 (275)	Width-- mm (in) .....	680 (26.8)
Bore and Stroke-- mm (in) .....	106 x 127 (4.17 x 5.00)	Height-- mm (in) .....	1055 (41.5)
Compression Ratio .....	19.0:1	Weight, dry-- kg (lb) .....	491 (1082)
Engine Type .....	In-line, 4-Cycle		

Rated BHP is the power rating for variable speed and load applications where full power is required intermittently.

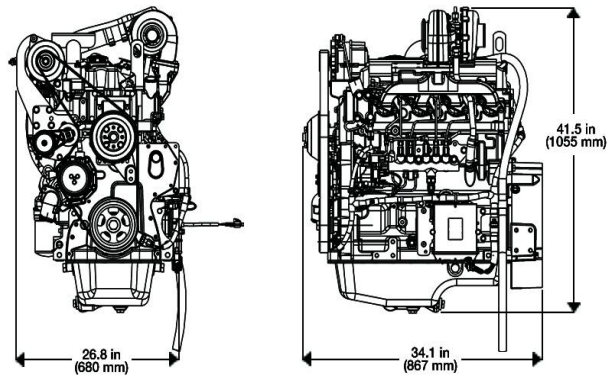
Continuous BHP is the power rating for applications operating under a constant load and speed for long periods of time.

Heavy duty - see application ratings/definitions, engine performance curves. Power output is within + or - 5% at standard SAE J 1995 and ISO 3046.

#### Certifications

- CARB
- EPA Tier 3
- EU Stage III A

#### Dimensions



#### Performance data

##### Rated Speed

Intermittent ..... 63 kW (84 hp) @ 2400 rpm

##### Peak power

Power bulge % ..... 63 kW (84 hp) @ 2400 rpm

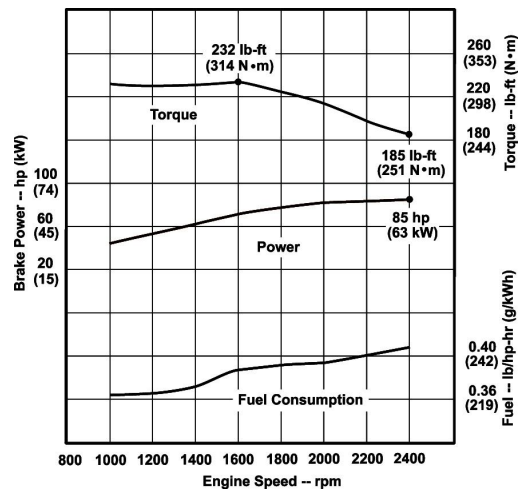
0% @ NA rpm

##### Peak torque

Torque Rise % ..... 314 N-m ( 232 ft-lb) @ 1600 rpm

25% @ 1600 rpm

Performance curve



Features and Benefits

**2-Valve Cylinder Head**

- Cross flow head design that provides excellent breathing from a lower cost two-valve cylinder head

**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

**Fixed Geometry Turbocharger**

- Fixed geometry turbochargers are precisely matched to the power level and application

**Turbocharged**

- In turbocharged engines, the air is pre-compressed. Due to the higher pressure, more air is supplied into the combustion chamber allowing a corresponding increase in fuel injection which results in greater engine output.

**Compact Size**

- Mounting points are the same as Tier 2/Stage II engine models

**Multiple Injection Strategy**

- The new HPCR fuel system and engine control unit (ECU) allow for multiple fuel injections. The number of fuel injections, based on speed and load, help contribute to lower combustion temperatures, which reduce the formation of NOx and particulates. The multiple injection strategy also provides an added benefit of noise reduction

**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

**Engine Performance**

- New power bulge feature
- Increased low-speed torque
- New higher-peak torque speed
- Faster torque rise
- Lower-rated speeds available for reduced noise and improved fuel economy

**Additional Features**

- Self-adjusting poly-vee fan drive
- Forged-steel connecting rods
- Replaceable wet-type cylinder liners
- Either-side service
- 500-hour oil change
- Gear-driven auxiliary drive



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