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> 4045HF285 4.5L Industrial Diesel Engine



## 4045HF285

### 4.5L Industrial Diesel Engine

- PowerTech™ E
- 86 – 104 kW (115 - 139 hp)

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## — 2-valve cylinder head

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

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## — 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

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## — Fixed geometry turbocharger

- Fixed geometry turbochargers are sized for a specific power range and optimized to provide excellent performance across the entire torque curve. They are also designed to maximize fuel economy between the engine's rated speed and peak torque.

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## — 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

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## — 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

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## — Engine performance

- New power bulge feature
- Increased low-speed torque

— Compact size

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

— John Deere electronic engine controls

- PowerTech E engines offer electronically controlled fuel systems with improved cold-start performance, precise engine speed control, torque curve shaping and more. Because these systems have less need for redundant sensors, add-on electronic governors, and shutdown devices - they result in a lower total installed cost.

— Additional features

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

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# Specifications

## Emissions Certifications

CARB

EPA Tier 3

EU Stage III A

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	19.0:1
Engine Type	In-line, 4-cycle
Aspiration	Turbocharged and air-to-air aftercooled
Length - mm (in)	860 (33.9)
Width-- mm (in)	612 (24.1)
Height-- mm (in)	1039 (40.9)
Weight, dry - kg (lb)	491 (1082)

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