

Image shown may not reflect actual configuration

The Cat® C13B Industrial Diesel Engine is offered in ratings ranging from 340-430 kW (456-577 bhp) @ 1800-2100 rpm. These ratings meet U.S. EPA Tier 4 Final, EU Stage V, Japan 2014, and Korea Tier 4 Final\* or China Nonroad Stage IV emission standards.

The C13B engines are ideal choices to power applications in agriculture, aircraft ground support, construction, forestry, general industrial, material handling, and mining.

## Specifications

Power Rating		
Minimum Power	340 kW	456 bhp
Maximum Power	430 kW	577 bhp
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	EU Stage V, U.S. EPA Tier 4 Final, Japan 2014, and Korea Tier 4 Final* or China Nonroad Stage IV
Performance	UN R120 for measurement of net power and specific fuel consumption

Engine Specifications		
Engine Configuration	In-Line 6, 4-Stroke-Cycle Diesel	
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	762.8 in <sup>3</sup>
Aspiration	Turbocharged-Aftercooled (TA)	
Compression Ratio	15.8:1	
Combustion System	Direct Injection	
Rotation (from flywheel end)	Counterclockwise	
Cooling System Capacity (engine)	18.7 L	19.8 qts
Lube System (refill)**	34-41 L	35.9-43.3 qts

\*\*Varies based on sump/oil pan selection

Engine Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	1274 mm	50 in
Width	994 mm	39 in
Height	1134 mm	45 in
Weight – Net Dry (Basic Operating Engine Without Optional Attachments)	1125 kg	2480 lb

Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	896 mm	35.3 in
Width	807 mm	31.8 in
Height	460 mm	18.1 in
Weight	100 kg	220 lb

\*Korea Tier 5 Capable

## Benefits & Features

### High Power Density

High power density. With peak power increased up to 20%, you can look to downsize the displacement of the engine currently powering your application without impacting performance.

### Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs – over 109 million off-highway field hours – assure reliability, quiet operation, and many hours of productive life.

### Fluid Efficiency

Fluid consumption optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs.

### Installation

- Exceptional power density enables you to use a smaller displacement engine than previously, and optimize the installation in your application.
- Fully configurable engine and compact aftertreatment minimize package size. Ideal for equipment with narrow engine compartments.
- Aftertreatment installation flexibility to meet all applications – including remote mount and engine-mounted from the factory.
- Industrial power unit (IPU) available from factory to avoid significant design, validation, and manufacturing costs.
- Low heat rejection levels allow for optimized cooling package at equivalent power.
- The C13B is available as a single label certification for EU Stage V, U.S. EPA Tier 4 Final, Japan 2014, and Korea Tier 4 Final\* or certified to China Nonroad Stage IV. Common installation across regions covered by these emissions regulations simplifies customer design and installation.

### Low Cost Maintenance

- Worldwide service delivers ease of maintenance and simplifies the servicing routine.
- 5000-hour diesel particulate filter (DPF) ash service interval enables low-cost maintenance.
- Standard service intervals of 500 hours under normal operating conditions.
- The S•O•S<sup>SM</sup> program is available from your Cat dealer to optimize oil change intervals.
- Ideal for high-hour applications over 10,000 hours.
- Remote mount options for serviceable items such as oil and fuel filters.

### Quality

Every Cat engine is manufactured to stringent standards in order to assure customer satisfaction.

### World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including S•O•S sample
- Customer support agreements (CSA)
- Extended service coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat industrial service distributor (ISD) program

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## Benefits & Features (continued)

### U.S. EPA Tier 4 Final and EU Stage V or China Nonroad Stage IV Aftertreatment Features

- Clean emissions module (CEM) consisting of diesel oxidation catalyst (DOC) and combined diesel particulate filter (DPF) and high-efficiency selective catalytic reduction (SCR)
- Maximum uptime with transparent aftertreatment regeneration, without operator distraction or impact to machine performance
- Pump Electronic Tank Unit (PETU) Diesel Exhaust Fluid (DEF) capacity up to 93.7 liters (24.7 U.S. gallons)
- Minimum 5000 hour service interval for DPF/PETU filters



### Enhanced Electronics

- The C13B is equipped for the future with the latest technology from a single on-engine ECM.
- 12V and 24V available

## Standard Equipment

### Air Inlet System

- Turbocharged
- Air-to-Air Aftercooled
- Front or rear exhaust configurations available

### Control System

- Electronic control system
- Over-foam wiring harness
- Automatic altitude compensation
- Configurable software features
- Engine monitoring system SAE J1939 broadcast and control
- Integrated Electronic Control Unit (ECU)
- Remote fan control

### Cooling System

- Vertical or RH thermostat outlet
- Centrifugal water pump
- Guidance on cooling system design available through your dealer to ensure equipment reliability

### Flywheels and Flywheel Housing

- Available SAE No. 1 power take-off with optional SAE B or SAE C power take-off drives. Engine power can also be taken from the front of the engine with optional attachments.

### Fuel System

- Mechanical Electronic Unit Injector fuel system (MEUI-C)
- Primary fuel filter
- Secondary and tertiary fuel filters
- Fuel transfer pump
- Electronic fuel priming

## **Standard Equipment (continued)**

### **Lube System**

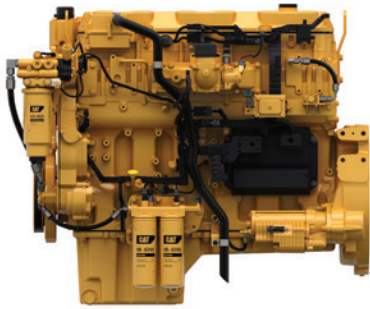
- Oil cooler
- Oil filler
- Lube oil filter
- Oil dipstick
- Gear-driven oil pump
- Choice of front, rear or center sumps
- Open crankcase ventilation system with fumes disposal (OCV filter system required for EU Stage V certification engines)

### **Power Take-off (PTO)**

- SAE B or SAE C power take-off (PTO) drives. Engine power can also be taken from the front of the engine on some applications.

### **General**

- Caterpillar Yellow paint, with optional colors available
- Vibration damper
- Lifting eyes



**Emissions: U.S. EPA Tier 4 Final, EU Stage V,  
 Japan 2014, and Korea Tier 4 Final\* or  
 China Nonroad Stage IV Emission Standards**

**C13B**

**340-430 kW/456-577 bhp  
 1800-2100 rpm**

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	Metric	English
<b>General Engine</b>		
Number of Cylinders	6	
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	762.8 in <sup>3</sup>
Compression Ratio	15.8:1	

**RATING DEFINITIONS AND CONDITIONS**

**IND-A (Continuous)** for heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

**IND-B** for service where power and/or speed are cyclic (time at full load not to exceed 80%).

**IND-C (Intermittent)** is the horsepower and speed capability of the engine where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

**IND-D** for service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

**Diesel Engines** – greater than 7.1 liter. All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

**RATING CONDITIONS FOR DIESEL ENGINES - GREATER THAN 7 LITER**

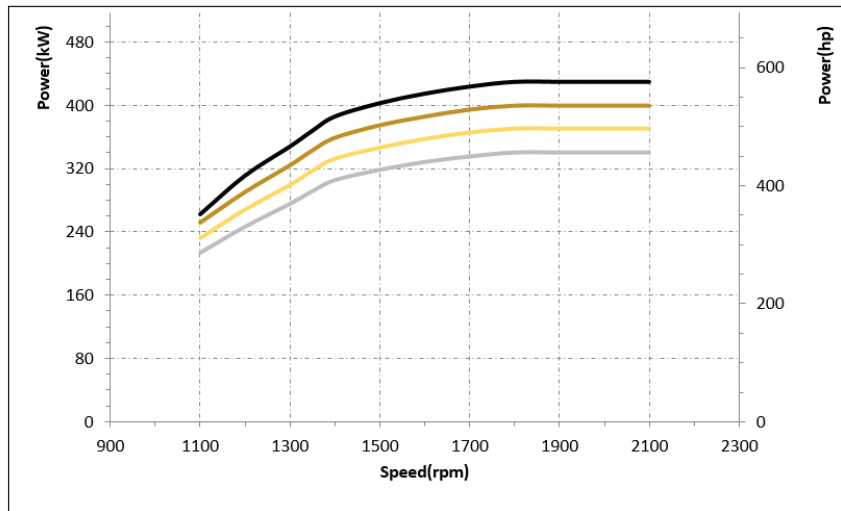
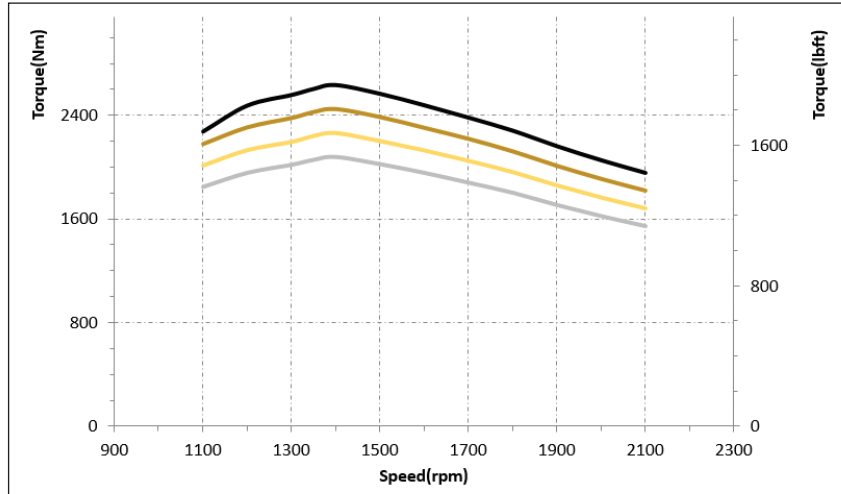
All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42 780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

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 Japan 2014, and Korea Tier 4 Final\* or  
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**Performance Data**



Rating	Aspiration	Rated Speed rpm	Rated Power kW	Rated Power bhp	Peak Torque N•m	Peak Torque lb-ft	Speed rpm
A	TA	1800-2100	340	456	2082	1536	1400
B	TA	1800-2100	370	496	2266	1671	1400
C	TA	1800-2100	400	536	2450	1807	1400
D	TA	1800-2100	430	577	2634	1943	1400

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The International System of Units (SI) is used in this publication.

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