



The Cat® C9.3B Industrial Diesel Engine is offered in ratings ranging from 250-340 kW (335-456 bhp) @ 1800-2200 rpm. These ratings meet U.S. EPA Tier 4 Final and EU Stage V emission standards.

The C9.3B engines are ideal choices to power applications in agriculture, aircraft ground support, construction, forestry, general industrial, material handling, and mining.

Image shown may not reflect actual configuration

Specifications

| Power Rating | | |
|---------------|---------------|---------|
| Minimum Power | 250 kW | 335 bhp |
| Maximum Power | 340 kW | 456 bhp |
| Rated Speed | 1800-2200 rpm | |

| Emission Standards | |
|--------------------|--|
| Emissions | U.S. EPA Tier 4 Final and EU Stage V Nonroad Emission Standards. |

| Engine Specifications | | |
|----------------------------------|----------------------------------|-----------------------|
| Engine Configuration | In-Line 6, 4-Stroke-Cycle Diesel | |
| Bore | 115 mm | 4.53 in |
| Stroke | 149 mm | 5.87 in |
| Displacement | 9.3 L | 567.5 in ³ |
| Aspiration | Turbocharged-Aftercooled (TA) | |
| Compression Ratio | 17.0:1 | |
| Combustion System | Direct Injection | |
| Rotation (from flywheel end) | Counterclockwise | |
| Cooling System Capacity (engine) | 22 L | 23.6 qts |
| Lube System (refill) | 30 L | 31.7 qts |

| Engine Dimensions (Approximate. Final dimensions dependent on selected options.) | | |
|--|---------|---------|
| Length | 1125 mm | 44.3 in |
| Width | 791 mm | 31.1 in |
| Height | 1068 mm | 42 in |
| Weight – Net Dry (Basic Operating Engine Without Optional Attachments) | 865 kg | 1907 lb |

| Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options.) | | |
|--|--------|---------|
| Length | 925 mm | 36.4 in |
| Width | 694 mm | 27.3 in |
| Height | 432 mm | 17.0 in |
| Weight | 96 kg | 211 lb |

Benefits & Features

High Power Density

High power density. With peak power increased by over 18%, you can look to downsize the displacement of the engine currently powering your application.

Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs 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.
- Auxiliary coolant inlet and outlet options for ease of customer installation and access.
- The C9.3B will be dual certified to Tier 4F and Stage V, simplifying customer design and installation across regions.

Low Cost Maintenance

- Worldwide service delivers ease of maintenance and simplifies the servicing routine. If applicable, minimum 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•SSM 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

Benefits & Features (continued)

Tier 4 Final, Stage V 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
- PETU DEF capacity up to 93.7 liters (24.7 U.S. gallons)
- Minimum 5000 hour service interval for DPF/PETU filters



Enhanced Electronics

- The C9.3B is equipped for the future with the latest technology from a single on-engine ECM.
- 2-wire Ethernet connection allows for simpler, faster installation and for remote service and software flash.
- 12V and 24V available

Standard Equipment

Air Inlet System

- Turbocharged
- Air-to-Air Aftercooled
- Mid-mount turbocharged system with front and rear exhaust configurations

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

- Electronic high pressure common rail
- 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)

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
 and EU Stage V Nonroad
 Emission Standards**

C9.3B

**250-340 kW/ 335-456 bhp
 1800-2200 rpm**

Image shown may not reflect actual configuration

| | Metric | English |
|-----------------------|--------|-----------------------|
| General Engine | | |
| Number of Cylinders | 6 | |
| Bore | 115 mm | 4.5 in |
| Stroke | 149 mm | 5.9 in |
| Displacement | 9.3 L | 568.0 in ³ |
| Compression Ratio | 17.0:1 | |

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%).

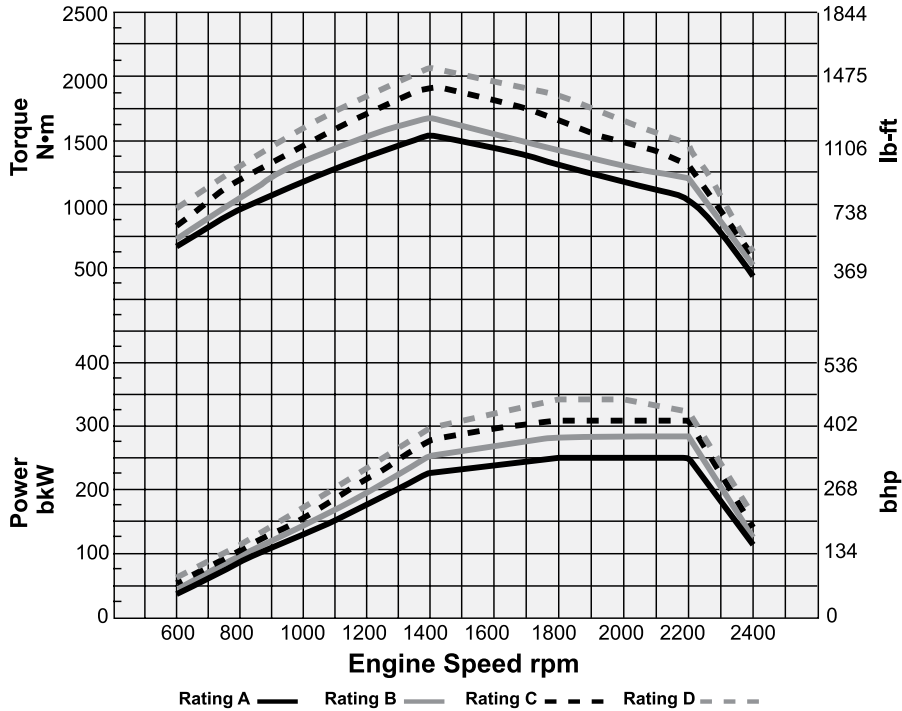
IND-D for service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

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.



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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 | 1800-2200 | 250 | 335 | 1530 | 1129 | 1400 |
| B | TA | 1800-2200 | 280 | 376 | 1714 | 1264 | 1400 |
| C | TA | 1800-2200 | 310 | 416 | 1897 | 1399 | 1400 |
| D | TA | 1800-2000* | 340 | 456 | 2088 | 1540 | 1400 |

*D Rating available up to 2200 rpm with power and torque as reflected by curves shown.

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