



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.

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.

General	
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 in³)
Aspiration	Turbocharged-Aftercooled (TA)
Compression Ratio	17.0:1
Combustion System	Direct Injection
Rotation from Flywheel End	Counterclockwise
Cooling System - Capacity	22 L (23.6 qts)
Lube System - Refill	30 L (31.7 qts)

Engine Dimensions - Approximate	
Length	1125 mm (44.3 in)
Width	791 mm (31.1 in)
Weight - Net Dry - Basic Operating Engine Without Optional Attachments	865 kg (1907 lb)
Height	1068 mm (42 in)

Aftertreatment Dimensions - Approximate	
Length	925 mm (36.4 in)
Width	694 mm (27.3 in)
Height	432 mm (17.0 in)
Weight	96 kg (211 lb)

Benefits and Features

Fuel 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 engine and remote mount options. Industrial Power Unit (IPU) available from factory to avoid significant design, validation and manufacturing costs.

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.
- Capable of optimal oil change intervals of up to 500-hours, depending on rating, application, operating conditions, and maintenance practices.
- Engine B10 life up to 10000 hours for Tier 4 Final, Stage V. The S·O·SSM program is available from your Cat dealer to determine oil change intervals and provide optimal performance.

Quality

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

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.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including SOSSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Tier 4 Final, Stage V Aftertreatment Features

Regeneration. Maximum uptime with transparent aftertreatment regeneration, eliminating the need for operator interaction. **Service.** Service: Minimum 5000 hour service interval for DPF / PETU filters. **PETU DEF capacity up to 93.7 liters (24.7 U.S. gallons)**

Enhanced Electronics

- The C13B 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 allows for remote service and software flash.
- 12 V and 24 V 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
- Power compensated for fuel temperature
- 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 1 power take-off with optional SAE A, SAE B, SAE C power take-off drives. Engine power can also be taken from the front of the engine with optional attachments. (Tier 4 Final, Proposed Stage V)

Fuel System

- Electronic high pressure common rail
- Primary fuel filter
- Secondary and tertiary fuel filters
- Fuel transfer pump
- Electronic fuel priming

Lube System

- Open crankcase ventilation 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 (optional OCV filter system)

Power Take Off (PTO)

- SAE A, 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

- Paint: Caterpillar yellow, with optional colors available at request
- Vibration damper
- Lifting eyes

Tier 4 Final, Proposed Stage V Aftertreatment

- Clean Emissions Module (CEM) consisting of Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC) and high-efficiency Selective Catalytic Reduction (SCR)
- Pump Electronic Control Unit (PETU)
- Available in 12V or 24V systems

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

280 kW (375 bhp) @ 2200 rpm

Rating Type: IND-B RATING

Emissions: U.S. EPA Tier 4 Final Nonroad Emission Standards



C9.3B

DITA

280 kW (375 bhp) @ 2200 rpm

Image shown may not reflect actual configuration

	Metric	English
General Engine		
Power Rating	280 kW	375 hp
Number of Cylinders	6	
Bore	115 mm	4.5 in
Stroke	149 mm	5.9 in
Displacement	9.3 L	566.7 cu in.
Compression Ratio	17.0 : 1	

RATING DEFINITIONS AND CONDITIONS

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

Diesel Engines — up to 7.1 liter All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

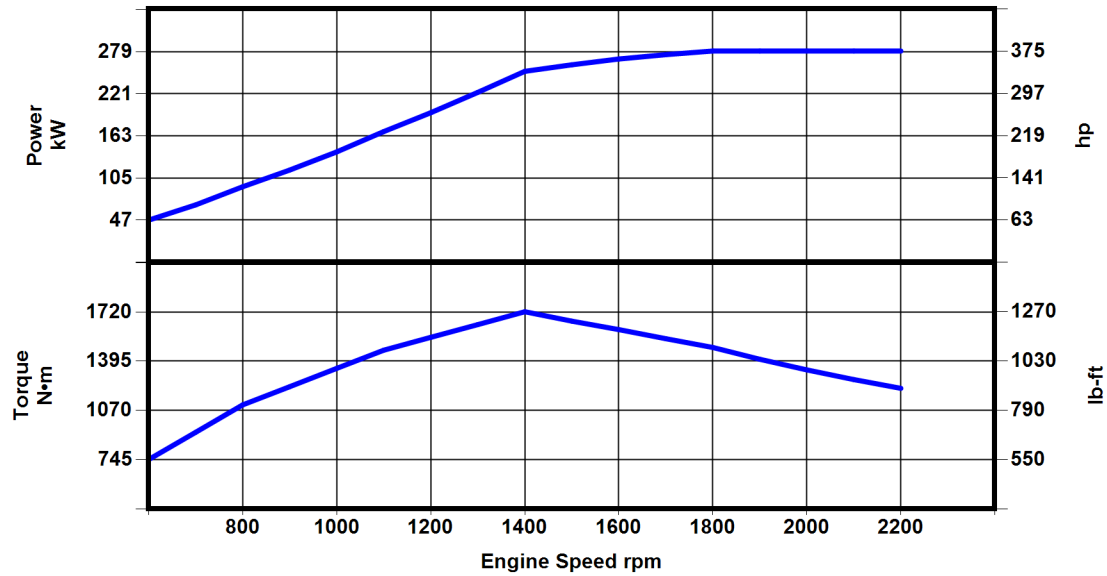
Diesel Engines — greater than 7.1 liter All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390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



280 bkW (375 bhp) @ 2200 rpm

Rating Type: IND-B RATING

Emissions: U.S. EPA Tier 4 Final Nonroad Emission Standards



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
2200	280	375	1215	896
2100	280	375	1273	939
2000	280	375	1337	986
1900	280	375	1407	1038
1800	280	375	1485	1096
1700	275	368	1543	1138
1600	269	360	1603	1182
1500	261	350	1659	1224
1400	252	338	1721	1269
1300	223	299	1636	1207
1200	195	261	1552	1144
1100	169	227	1467	1082
1000	141	189	1347	993
900	116	155	1226	904
800	93	124	1106	816
700	68	91	925	682
600	47	63	745	550

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