



The Cat® C13 ACERT™ Industrial Diesel Engine is offered in ratings ranging from 287-388 bkW (385-520 bhp) @ 1800-2100 rpm. These ratings meet China Stage II, U.S. EPA Tier 3 equivalent or U.S. EPA Tier 2 equivalent, EU Stage IIIA equivalent or EU Stage II equivalent emission standards. Industries and applications powered by C13 ACERT engines include Agriculture, Ag Tractors, Aircraft Ground Support, Bore/Drill Rigs, Chippers/Grinders, Combines/Harvesters, Compactors/Rollers, Compressors, Construction, Cranes, Crushers, Dredgers, Forestry, General Industrial, Hydraulic Power Units, Irrigation Equipment, Loaders/Forwarders, Material Handling, Mining, Mobile Earthmoving Equipment, Paving Equipment, Pumps, Shovels/Draglines, Specialty Ag Equipment, Surface Hauling Equipment, Trenchers and Underground Mining Equipment.

Specifications

Power Rating		
Minimum Power	287 bkW	385 bhp
Maximum Power	388 bkW	520 bhp
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	China Stage II, U.S. EPA Tier 3 Equivalent or U.S. EPA Tier 2 Equivalent, EU Stage IIIA Equivalent or EU Stage II Equivalent

General	
Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel
Bore	130 mm (5.12 in)
Stroke	157 mm (6.18 in)
Displacement	12.5 L (762.8 in³)
Aspiration	Turbocharged Aftercooled (TA)
Compression Ratio	17.3:1
Combustion System	Direct Injection
Rotation (from flywheel end)	Counterclockwise

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	1295 mm (50.98 in)



Width	1186 mm (346.69 in)
Height	1053.8 mm (41.49 in)
Weight, Net Dry (Basic Operating Engine Without Optional Attachments)	908.4 kg (2002.7 lb)

Benefits And Features

Emissions

Meets China Stage II, U.S. EPA Tier 3 equivalent or U.S. EPA Tier 2 equivalent, EU Stage IIIA equivalent or EU Stage II equivalent emission standards. U.S. EPA Tier 3 equivalent EU Stage IIIA equivalent available using EPA (U.S.) Flexibility and EU Flexibility. Also available for other regulated and non-regulated areas.

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.

Broad Application Range

Industry leading range of factory configurable ratings and options for agricultural, material handling, construction, mining, aircraft ground support, and other industrial applications.

Package Size

Exceptional power density enables standardization across numerous applications. Multiple installation options minimize total package size. Ideal for equipment with narrow engine compartments.

Quality

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

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

Standard Equipment

Air Inlet System

- Turbocharged
- Air-to-Air Aftercooled

Control System

- Electronic governing, PTO speed control
- Programmable ratings
- Automatic altitude compensation
- Power compensation for fuel temperature
- Programmable low and high idle and total engine limit
- Electronic diagnostics and fault logging
- Engine monitoring system SAE J1939 broadcast and control
- ADEM™ A4 Electronic Control Unit (ECU)

Cooling System

- Thermostats and housing, vertical outlet
- Jacket water pump, centrifugal
- Water pump, inlet

Exhaust System

- Exhaust manifold, dry
- Optional exhaust outlet

Flywheels and Flywheel Housing

- SAE No. 1 flywheel housing

Fuel System

- MEUI injection
- Fuel filter, secondary (2 micron)
- Fuel filter, tertiary (2 micron)
- ACERT™ Technology
- Fuel transfer pump
- Fuel priming pump

Lube System

- Crankcase breather
- Oil cooler
- Oil filler
- Lube oil filter
- Front sump oil pan
- Oil dipstick
- Gear driven oil pump

General

- Vibration damper
- Lifting eyes
- Cold start capability to -20° C (-4° F)
- Paint: Caterpillar yellow, with optional colors available at request



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.

Rating Type: IND-B RATING

Emissions: China Stage II



C13 ACERT
DITA
310 bkW (415 bhp) @ 2100 rpm

Image shown may not reflect actual configuration

Metric **English**

General Engine		
Power Rating	310 kW	415 hp
Number of Cylinders	6	
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	763.0 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%).

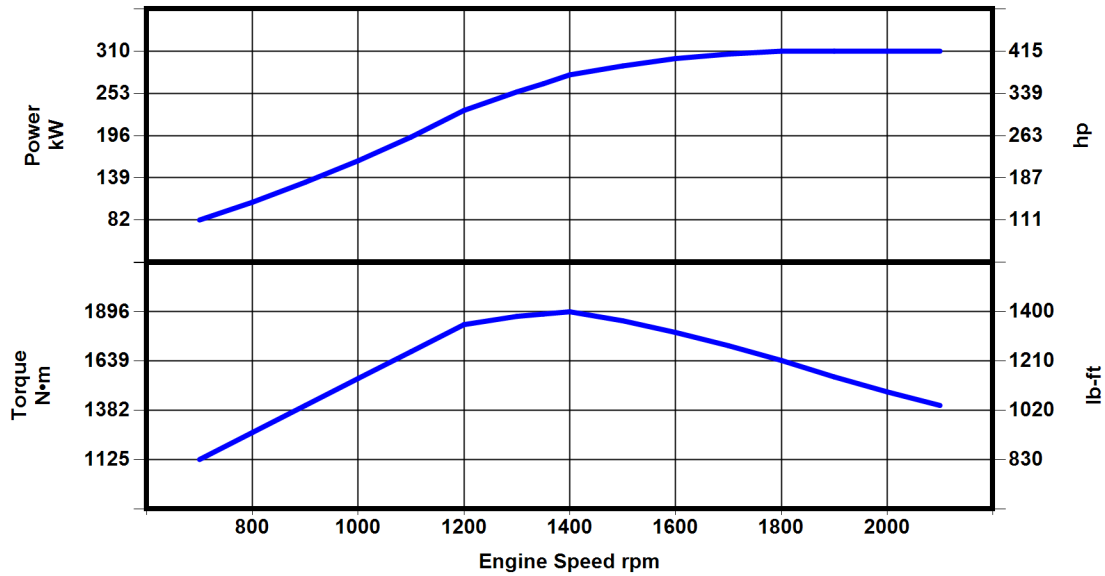
Diesel Engines — up to 7.1 liter All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 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.



Rating Type: IND-B RATING

Emissions: China Stage II



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
2100	310	415	1407	1038
2000	310	415	1478	1090
1900	310	415	1556	1147
1800	310	415	1642	1211
1700	306	410	1719	1268
1600	300	402	1788	1318
1500	290	389	1849	1364
1400	278	373	1896	1399
1350	266	357	1884	1390
1300	255	342	1872	1380
1200	230	308	1829	1349
1100	195	261	1688	1245
1000	162	217	1548	1142
900	133	178	1407	1038
800	106	142	1266	934
700	83	111	1125	830

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