

The Cat® C13 Industrial Diesel Engine is offered in ratings ranging from 287-388 kW (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 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		
Maximum Power	388 kW	520 HP
Maximum Torque	2215 Nm @ 1400 rpm	1634 lb-ft @ 1400 rpm
Minimum Power	287 kW	385 HP
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	China Nonroad III, 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	5.1 in
Stroke	157 mm	6.2 in
Aspiration	Turbocharged Aftercooled (TA)	
Displacement	12.5 l	762.8 in ³
Compression Ratio	17.3:1	
Combustion System	Direct Injection	
Rotation from Flywheel End	Counterclockwise	

Engine Dimensions - Approximate		
Height	1054 mm	41.5 in
Length	1295 mm	51 in
Width	1186 mm	346.7 in

Weight - Net Dry - Basic Operating Engine Without Optional Attachments	908 kg	2003 lb
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Benefits and Features

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 SOSM 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

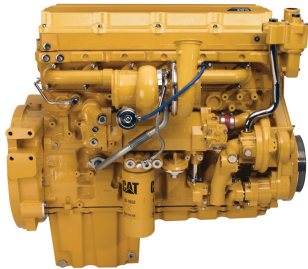
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C13 ACERT

388 kW (520 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: EU Stage IIIA Nonroad Equivalent Emission Standards (Non-Current for EU)



C13 ACERT

DITA

388 kW (520 bhp) @ 2100 rpm

Image shown may not reflect actual configuration

Metric

English

General Engine		
Power Rating	388 kW	520 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	17.3 : 1	

RATING DEFINITIONS AND CONDITIONS

IND-E RATING:For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable (time at full load not to exceed 5% of the duty cycle).

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.

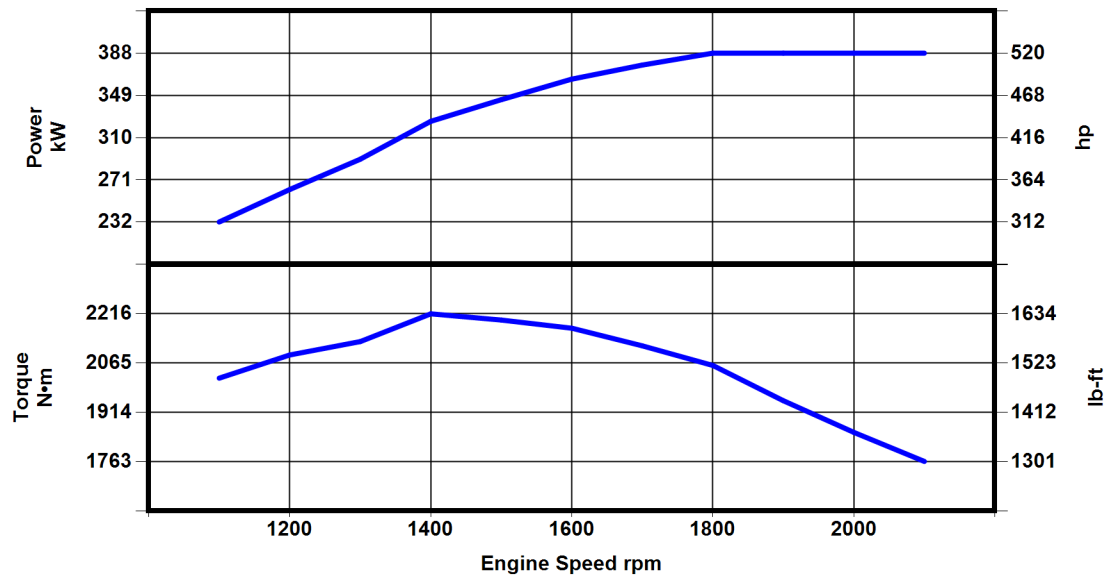


C13 ACERT

388 bkW (520 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: EU Stage IIIA Nonroad Equivalent Emission Standards (Non-Current for EU)



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
2100	388	520	1763	1301
2000	388	520	1852	1366
1900	388	520	1949	1438
1800	388	520	2057	1517
1700	377	505	2117	1561
1600	364	488	2171	1601
1500	345	463	2196	1619
1400	325	436	2215	1634
1300	290	389	2130	1571
1200	263	352	2089	1541
1100	233	312	2018	1489

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