



The Cat® C11 ACERT™ Industrial Diesel Engine is offered in ratings ranging from 242-336 bkW (325-450 bhp) @ 1800 -2100 rpm. These ratings meet China Stage II, EPA Tier 3 equivalent, and EU Stage IIIA equivalent emission standards. Industries and applications powered by C11 ACERT engines include Agriculture, Ag Tractors, Aircraft Ground Support, Bore/Drill Rigs, Chippers/Grinders, Combines/Harvesters, Compactors/Rollers, Compressors, Construction, Cranes, Crushers, Dredgers, Forestry, Forklifts, General Industrial, Hydraulic Power Units, Irrigation Equipment, Loaders/Forwarders, Material Handling, Mining, Mobile Earthmoving Equipment, Paving Equipment, Pumps, Shovels/Draglines, Specialty Ag Equipment, Sprayers, Surface Hauling Equipment, Trenchers and Underground Mining Equipment.

Specifications

Power Rating		
Minimum Power	242 bkW	325 BHP
Maximum Power	336 bkW	450 BHP
Rated Speed	1800-2100 rpm	

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

General	
Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel
Bore	130 mm (5.12 in)
Stroke	140 mm (5.51 in)
Aspiration	Turbocharged Aftercooled (TA)
Displacement	11.1 L (677.36 in³)
Compression Ratio	17.2:1
Combustion System	Direct Injection
Rotation from Flywheel End	Counterclockwise

Engine Dimensions - Approximate	
Height	1186 mm (46.7 in)
Length	1203 mm (47.4 in)
Weight - Net Dry - Basic Operating Engine Without Optional Attachments	930 kg (2050 lb)
Width	1054.4 mm (41.5 in)

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.

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)
- 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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336 bkW (450 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: U.S. EPA Tier 3 Nonroad Equivalent Emission
Standards (Not Currently EPA Certified)

C11 ACERT

DITA

336 bkW (450 bhp) @ 2100 rpm

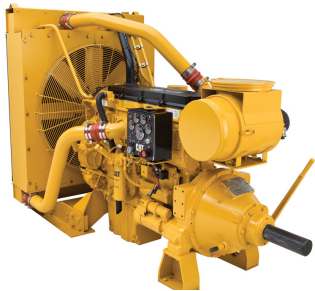


Image shown may not reflect actual configuration

Metric English

General Engine		
Power Rating	336 kW	450 hp
Number of Cylinders	6	
Bore	130 mm	5.1 in
Stroke	140 mm	5.5 in
Displacement	11.1 L	677.0 cu in.
Compression Ratio	17.8 : 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).

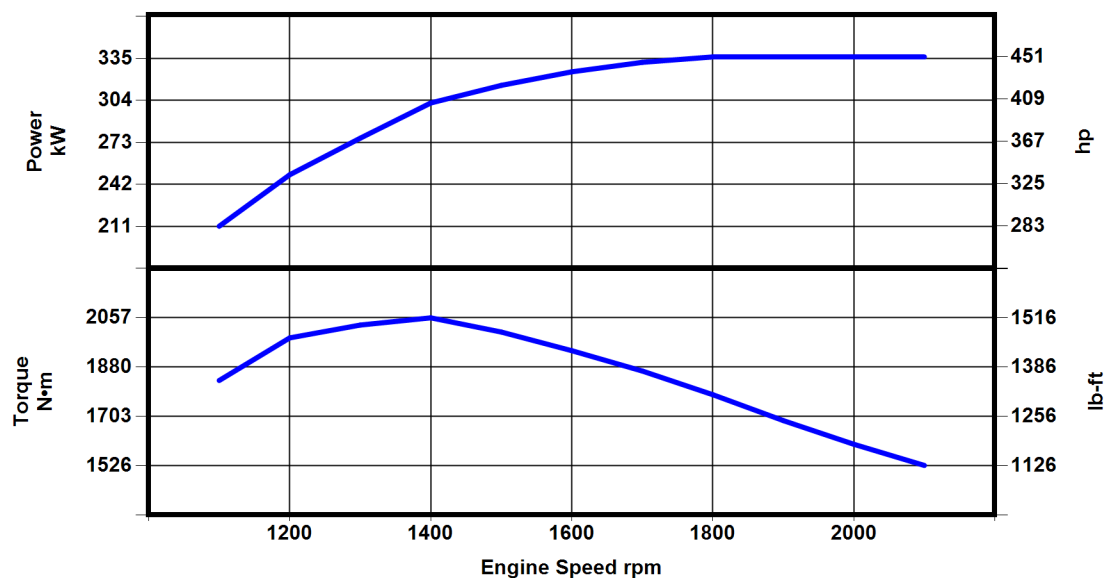
Diesel Engines — up to 7.1 liter All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065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

336 bkW (450 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: U.S. EPA Tier 3 Nonroad Equivalent Emission
Standards (Not Currently EPA Certified)



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
2100	336	450	1526	1126
2000	336	450	1602	1182
1900	336	450	1687	1244
1800	336	450	1780	1313
1700	332	445	1865	1376
1600	325	436	1938	1429
1500	315	422	2005	1479
1400	302	404	2056	1516
1300	276	371	2030	1497
1200	249	334	1984	1463
1100	211	283	1831	1350

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