



The Cat® C18 Industrial Diesel Engine is offered in ratings ranging from 429-522 kW (575-700 bhp) @ 1800-2100 rpm. These ratings meet China Stage II, U.S. EPA Tier 3 equivalent, and EU Stage IIIA equivalent emission standards. Ratings: 571-597 kW (765-800 bhp) @ 1800-2100 rpm meet U.S. EPA Tier 2 equivalent emission standards. Non-certified ratings are also available at 429-522 kW (575-700 bhp) @ 1800-2100. Industries and applications powered by C18 engines include Agriculture, Ag Tractors, Aircraft Ground Support, Bore/Drill Rigs, Chippers, Grinders, Compactors, Rollers, Compressors, Construction, Cranes, Dredgers, Forestry, General Industrial, Hydraulic Power Units, Irrigation Equipment, Material Handling, Mining, Mobile Earthmoving Equipment, Paving Equipment, Pumps, Shovels/Draglines, Surface Hauling Equipment and Trenchers.

Specifications

| Power Rating | | |
|----------------|--------------------|-----------------------|
| Maximum Power | 597 kW | 800 HP |
| Maximum Torque | 3655 Nm @ 1400 rpm | 2696 lb-ft @ 1400 rpm |
| Minimum Power | 429 kW | 575 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 Non-certified |

| General | | |
|----------------------------|---------------------------------|------------------------|
| Engine Configuration | Inline 6, 4-Stroke-Cycle Diesel | |
| Bore | 145 mm | 5.7 in |
| Stroke | 183 mm | 7.2 in |
| Aspiration | Turbocharged Aftercooled (TA) | |
| Displacement | 18.1 l | 1104.5 in ³ |
| Compression Ratio | 16.3:1 | |
| Combustion System | Direct Injection | |
| Rotation from Flywheel End | Counterclockwise | |

| Engine Dimensions - Approximate | | |
|---------------------------------|---------|---------|
| Height | 1257 mm | 49.5 in |
| Length | 1414 mm | 55.7 in |
| Width | 974 mm | 38.3 in |

| | | |
|--|---------|---------|
| Weight - Net Dry - Basic Operating Engine Without Optional Attachments | 1673 kg | 3688 lb |
|--|---------|---------|

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 Aftercooled (429-470 kW, 575-630 bhp)
- Twin Turbocharged Aftercooled (522-597 kW, 700-800 bhp)
- Air-to-Air Aftercooled

Charging System

- Charging alternator 24 volt, 50 amp

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 or SAE No. 0 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

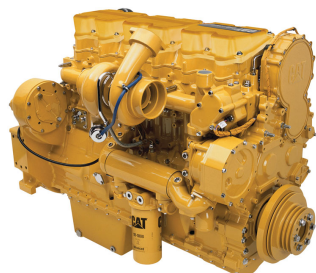
The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S-O-S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

C18 ACERT

597 kW (800 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: U.S. EPA Tier 2 Nonroad Equivalent Emission Standards (Not Currently EPA Certified)



C18 ACERT

DITA

597 kW (800 bhp) @ 2100 rpm

Image shown may not reflect actual configuration

| | Metric | English |
|-----------------------|----------|---------------|
| General Engine | | |
| Power Rating | 597 kW | 800 hp |
| Number of Cylinders | 6 | |
| Bore | 145 mm | 5.7 in |
| Stroke | 183 mm | 7.2 in |
| Displacement | 18.1 L | 1106.4 cu in. |
| Compression Ratio | 16.3 : 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.

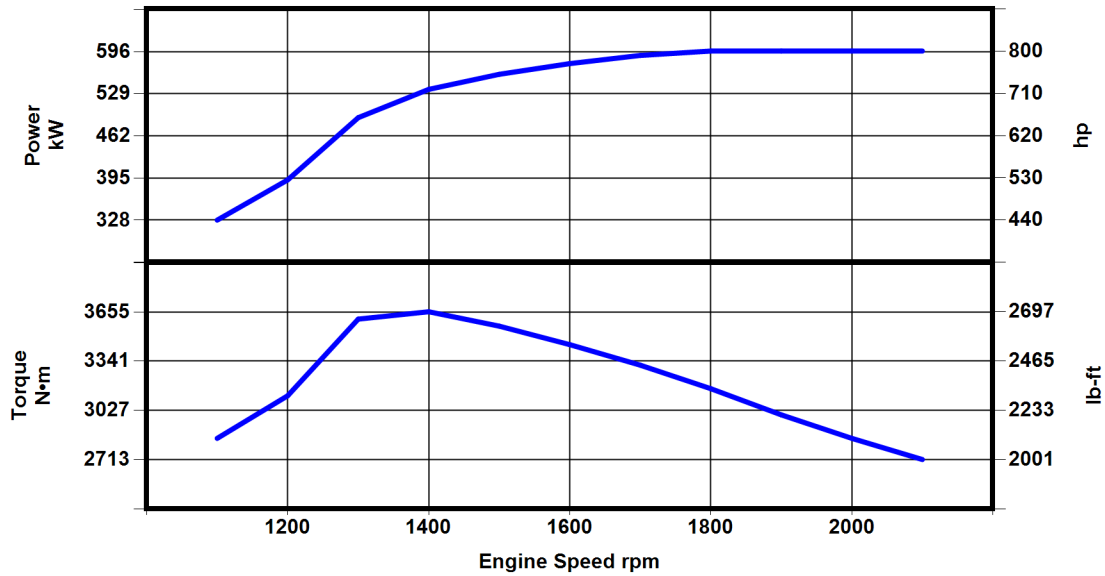


C18 ACERT

597 kW (800 bhp) @ 2100 rpm

Rating Type: IND-E RATING

Emissions: U.S. EPA Tier 2 Nonroad Equivalent Emission Standards (Not Currently EPA Certified)



| Engine Speed rpm | Engine Power kW | Engine Power bhp | Torque N*m | Torque lb-ft |
|------------------|-----------------|------------------|------------|--------------|
| 2100 | 597 | 800 | 2713 | 2001 |
| 2000 | 597 | 800 | 2848 | 2101 |
| 1900 | 597 | 800 | 2998 | 2211 |
| 1800 | 597 | 800 | 3165 | 2334 |
| 1700 | 590 | 791 | 3315 | 2445 |
| 1600 | 577 | 774 | 3446 | 2542 |
| 1500 | 560 | 751 | 3564 | 2629 |
| 1400 | 536 | 719 | 3656 | 2696 |
| 1300 | 491 | 659 | 3609 | 2662 |
| 1200 | 392 | 526 | 3120 | 2301 |
| 1100 | 328 | 440 | 2848 | 2101 |

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.