



# C18 ACERT™ Locomotive Engine

EU Stage IIIB  
563 kW/755 bhp @ 1900 rpm



Image shown may not reflect actual engine configuration

## CAT® ENGINE SPECIFICATIONS

### I-6, 4-Stroke-Cycle Diesel

Bore	145 mm (5.71 in)
Stroke	183 mm (7.20 in)
Displacement	18.1 L (1104.5 in <sup>3</sup> )
Aspiration	Turbocharged Aftercooled
Compression Ratio	16.0:1
Combustion System	Direct Injection
Rotation (from flywheel end)	Counterclockwise
Capacity for Liquids	
Cooling System	26.9 L (28.4 U.S. qts)
Lube Oil System (refill)	74 L (78.1 U.S. qts)
Engine Weight, Net Dry (approximate)	1717 kg (3785 lbs)

## FEATURES

### Emissions

Designed to meet EU Stage IIIB emissions requirements

### High Performance

Equipped with series turbocharger for high power applications.

### Fuel & Oil

This engine requires Ultra Low Sulfur Diesel (ULSD) fuel containing a maximum of 15 ppm sulfur, and new oil formulations to support the new technology. Cat® engines are designed to accommodate B20 biofuel. Your Cat dealer can provide more information regarding fuel and oil.

### Engine Design

- Proven reliability and durability of engine and aftertreatment
- Broad operating speed range
- High power density
- PTO drive options provide flexible access to auxiliary power for pumps and other needs

### Low Total Cost of Ownership

- Optimized fuel consumption
- Maintenance-free aftertreatment

### Advanced Digital Engine Management

ADEM™ A4 control system provides integrated ignition, speed governing, protection, and controls, including detonation-sensitive variable ignition timing. ADEM A4 has improved user interface, display system, shutdown controls, and system diagnostics.

### Testing

Every Cat engine is full-load tested to ensure proper engine performance.

### Product Support Offered Through Global Cat Dealer Network

- More than 2,200 dealer outlets
- Caterpillar factory-trained dealer technicians service every aspect of your locomotive engine
- Caterpillar parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•S<sup>SM</sup> program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

### Over 80 Years of Engine Manufacturing Experience

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

### Web Site

For all your locomotive power requirements, visit [www.cat-RailPower.com](http://www.cat-RailPower.com)



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## STANDARD ENGINE EQUIPMENT

### Air Inlet System

Turbocharged Aftercooled

### Control System

Electronic control system, 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 outlet thermostat housing, centrifugal water pump, guidance on cooling system design available to ensure machine reliability

### Exhaust System

Dry exhaust manifold, emission solution that includes a passive Diesel Particulate Filter (DPF) with a Diesel Oxidation Catalyst (DOC)

### Flywheels and Flywheel Housing

SAE 1 flywheel housing

### Fuel System

MEUI injection; primary fuel filter, secondary fuel filters, fuel transfer pump, electronic fuel priming

### Lube System

Oil cooler, oil filler (LH and RH provided), oil filter, oil dipstick (LH and RH provided), oil pump (gear driven)

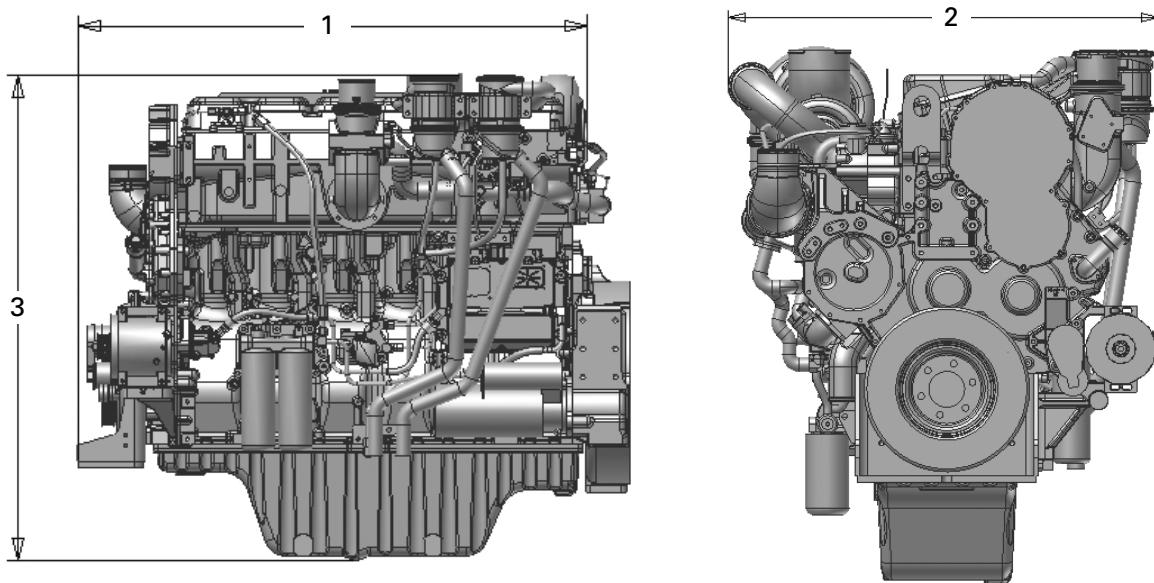
### Power Take Off

SAE A, SAE B, SAE C drives available, front housing PTO available for hydraulic pump

### General

Paint: Cat yellow; vibration damper; lifting eyes

## DIMENSIONS



(1) Length — 1438 mm (56.6 in)

(2) Width — 1132 mm (44.6 in)

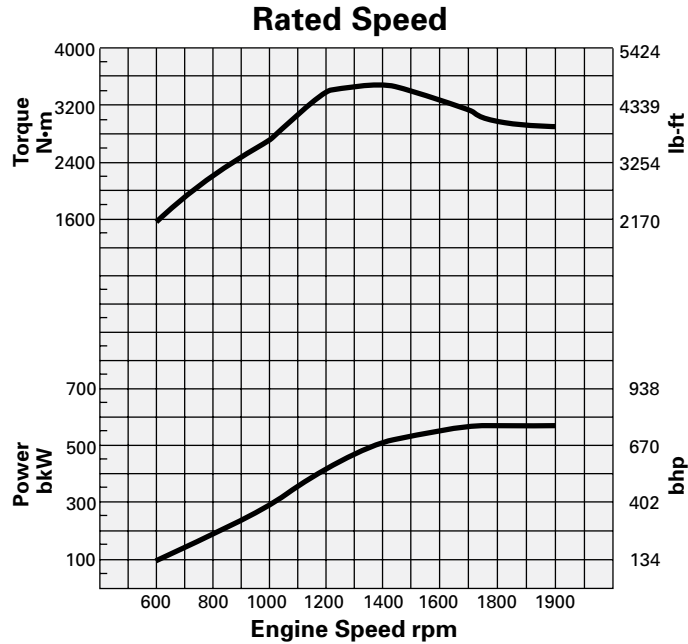
(3) Height — 1356 mm (53.4 in)

**Note:** Final dimensions dependent on selected options



**PERFORMANCE DATA — PRELIMINARY**

Turbocharged Aftercooled — 1900 rpm



**Speed Range**

Rating	Speed rpm	Peak Power bkW	Peak Power bhp	Speed rpm	Peak Torque N·m	Peak Torque lb-ft
C	1900	563	755	1300	3501	2581

**RATING DEFINITIONS AND CONDITIONS**

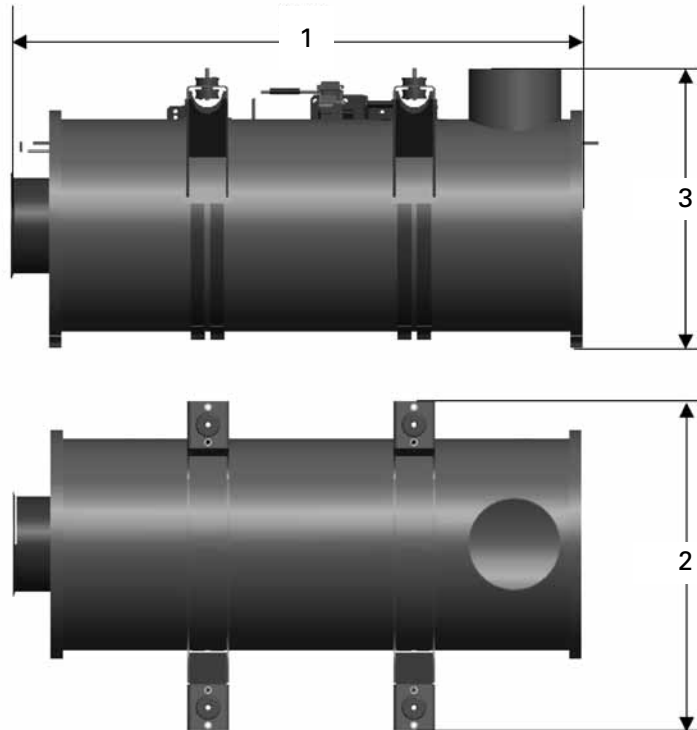
**C Rating (Intermittent)** is the horsepower and speed capability of the engine where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

**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.



## AFTERTREATMENT CONFIGURATION

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### BASE CONFIGURATION SHOWN

#### Approximate Size and Weight

(1) Length — 1040 mm (40.9 in)

(2) Width — 600 mm (23.6 in)

(3) Height — 492 mm (19.4 in)

Weight — 100 kg (220.5 lb)

## STANDARD EMISSIONS CONTROL EQUIPMENT

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**DOC:** Diesel Oxidation Catalyst

**DPF:** Diesel Particulate Filter

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ACERT, ADEM, 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.