



# C18 ACERT™ Industrial Engine

Tier 4 Final

563 & 597 bkW/755 & 800 bhp @ 1800 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)*	40-74 L (42.3-78.1 U.S. qts)
Engine Weight, Net Dry	
(approximate)	1717 kg (3785 lbs)

\*Capable of up to 500-hour oil change interval, dependent on oil pan size, rating, application, operating conditions, and maintenance practices.

## FEATURES

### Emissions

Designed to meet EPA (U.S.) Tier 4 Final requirements, achieving environmental benefits sooner than required.

### 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.

### High Performance

Equipped with series turbocharger for high power applications.

### Fuel & Oil

Tier 4 Final engines require 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.

### Broad Application Range

Industry leading range of factory configurable ratings and options for agricultural, materials-handling, construction, mining, forestry, waste, and other industrial applications.

### Package Size

Exceptional power density enables standardization across numerous applications. Multiple installation options minimize total package size.

### Low-Cost Maintenance

Worldwide service delivers ease of maintenance and simplifies the servicing routine. Capable of optimal oil change intervals of up to 500 hours, depending on rating, application, operating conditions, and maintenance practices. The S•O•S<sup>SM</sup> program is available from your Cat dealer to determine oil change intervals and provide optimal performance.

### Quality

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

### World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including S•O•S<sup>SM</sup> sample
- Customer Support Agreements (CSA)
- Cat Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

**Web Site: For additional information on all your power requirements, visit [www.cat-industrial.com](http://www.cat-industrial.com).**



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## STANDARD ENGINE EQUIPMENT

### Air Inlet System

Turbocharged Aftercooled

### Control System

Electronic control system, over-foam wiring harness, 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, optional exhaust outlet, CEM that includes Diesel Oxidation Catalyst (DOC)

### Flywheels and Flywheel Housing

SAE 0 and SAE 1 flywheel housing

### Fuel System

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

### Lube System

Open crankcase ventilation system, oil cooler, oil filler, oil filter, oil dipstick, oil pump (gear driven), choice of sumps (front, rear, and center)

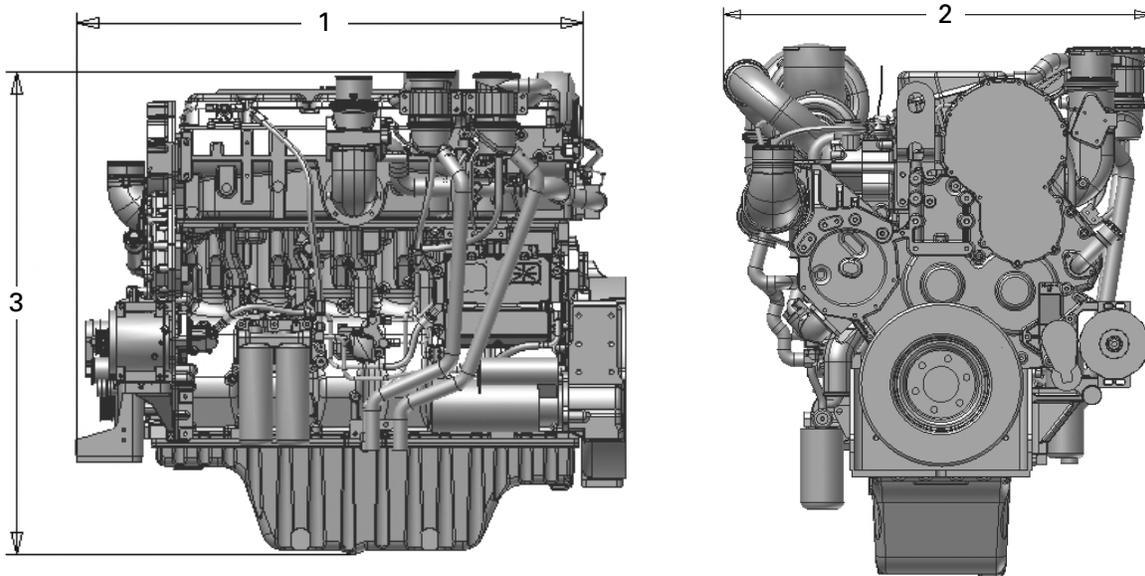
### Power Take Off

SAE A, SAE B, SAE C drives available, engine power can also be taken from the front of the engine on some applications

### 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

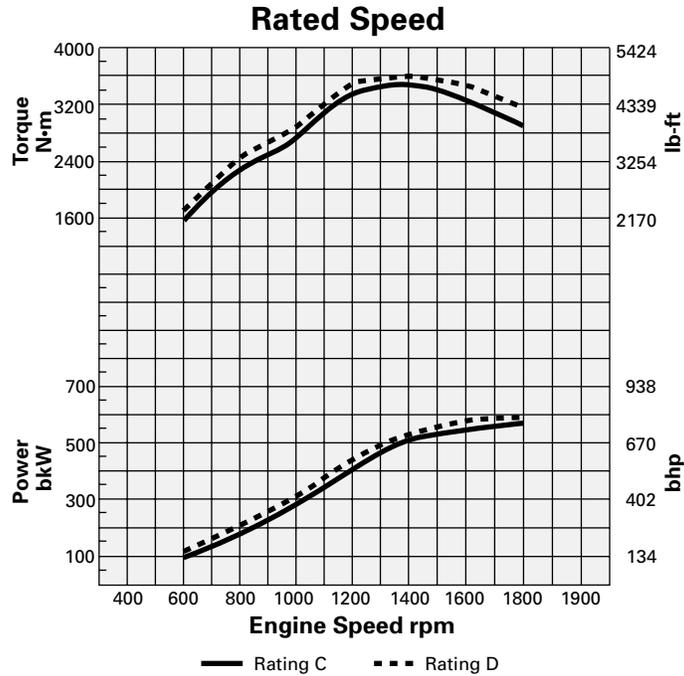


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## PERFORMANCE DATA — PRELIMINARY

Turbocharged Aftercooled — 1800-1900 rpm



### Speed Range

Rating	Speed rpm	Peak Power bkW	Peak Power bhp	Speed rpm	Peak Torque N·m	Peak Torque lb-ft
C	1800	563	755	1300	3501	2581
D	1800	597	800	1300	3661	2699

## RATING DEFINITIONS AND CONDITIONS

**IND-C (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%).

**IND-D** for service where maximum power is required for periodic overloads.

**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.

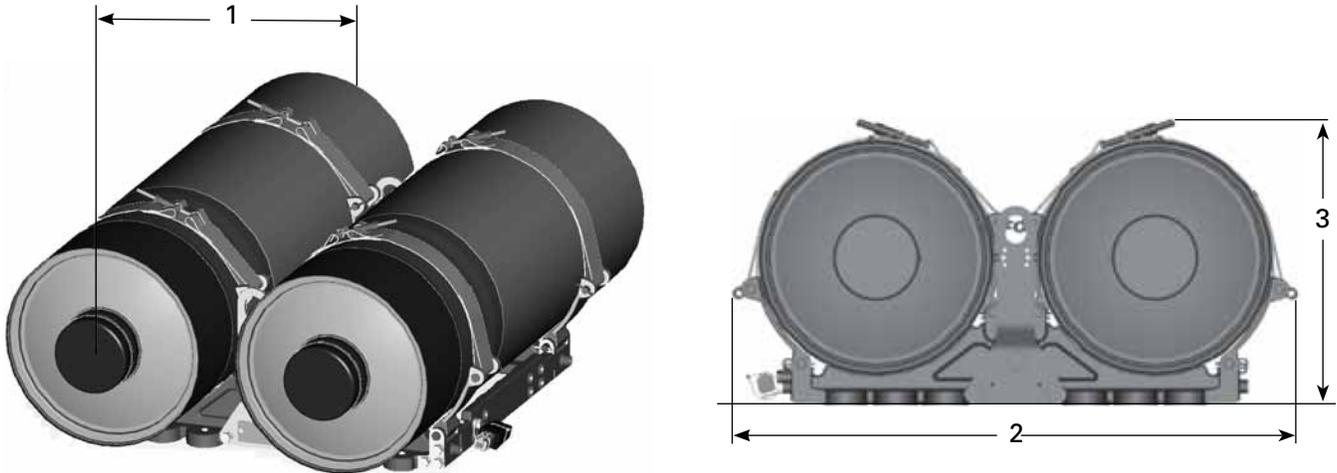


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## AFTERTREATMENT CONFIGURATION

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Images shown reflect side-by-side configuration.

### BASE CONFIGURATION SHOWN

#### Approximate Size and Weight

(1) Length — 1162.5 mm (45.77 in)

(2) Width — 870.59 mm (34.27 in)

(3) Height — 439.23 mm (17.29 in)

Images above reflect side-by-side configuration.

### Aftertreatment Options

Configuration includes DOC and rear-facing exhaust

## AFTERTREATMENT FEATURES

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**Mounting:** Remote installation options provide OEM flexibility for many applications.

## STANDARD EMISSIONS CONTROL EQUIPMENT

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**DOC:** Diesel Oxidation Catalyst

**NRS:** NOx Reduction System

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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, 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.