



Locomotive Engine **C27 ACERT™**

**709 bkW/950 bhp
@1800 rpm**

EU Stage IIIA

CAT® ENGINE SPECIFICATIONS

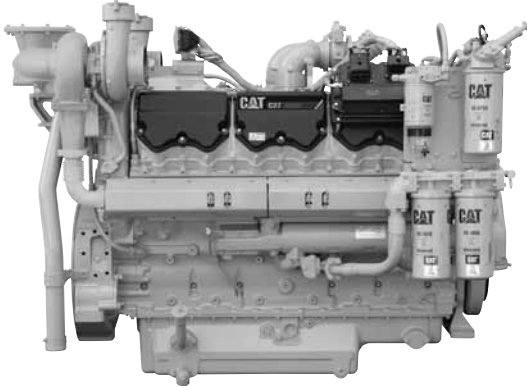


Image shown may not reflect actual engine configuration

V-12, 4-Stroke-Cycle Diesel

Emissions.....	EU Stage IIIA
Bore.....	137.2 mm (5.4 in)
Stroke.....	152.4 mm (6 in)
Displacement.....	27.03 L (1649.47 in ³)
Aspiration.....	Turbocharged-Aftercooled
Compression Ratio.....	16.5:1
Governor and Protection..	Electronic ADEM™ A4
Engine Weight, Net Dry (approximate).....	2946 kg (6495 lbs)
Capacity for Liquids	
Lube System (refill)	137 L (145 U.S. qts)
Cooling System	60 L (63 U.S. qts)
Oil Change Interval	250/500 hours
Rotation (from flywheel end)...	Counterclockwise
Flywheel and Flywheel Housing.....	SAE No. 1 (standard), SAE No. 0 (optional)
Flywheel Teeth	136

FEATURES

Emissions

Meets EU Stage IIIA emissions standards.

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 providing 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 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•SSM 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



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STANDARD ENGINE EQUIPMENT

Air Inlet System

Turbocharged air-to-air aftercooled, twin rear-mounted turbochargers

Control System

Electronic governing, PTO speed control, cold mode start strategy, automatic altitude compensation, power compensation for fuel temperature, electronic diagnostics and fault logging, engine monitoring system, J1939 broadcast (diagnostic and engine status), ADEM A4

Cooling System

Thermostats and housing; vertical outlet; jacket water pump, gear-driven, centrifugal

Exhaust System

Exhaust dry manifold, optional exhaust outlet

Flywheels and Flywheel Housing

SAE No. 1 flywheel housing (standard), SAE No. 0 flywheel housing (optional)

Fuel System

Mechanical Electronic Unit Injection (MEUI™) system, secondary fuel filter (2 micron high performance), fuel transfer pump, fuel priming pump, ACERT™ technology

Lube System

Crankcase breather, oil cooler, oil filler, oil filter, front sump oil pan, oil dipstick, gear-driven oil pump

General

Caterpillar yellow paint, vibration damper, lifting eyes



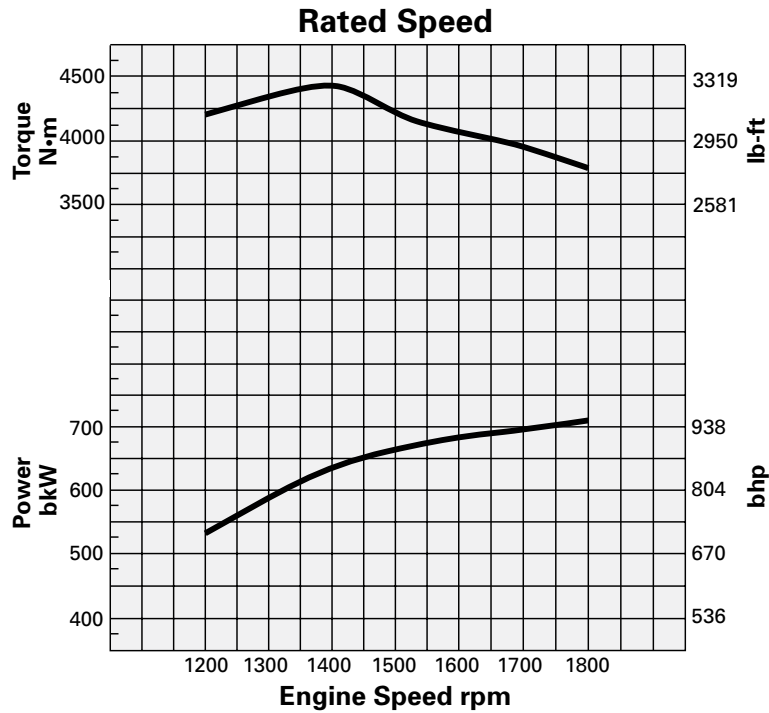
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PERFORMANCE DATA

Turbocharged — 1800 rpm
IND – C Intermittent Rating (EM0025-01)



Peak Power

Peak Torque

Rating	Speed rpm	Peak Power bkW	Peak Power bhp	Speed rpm	Peak Torque N·m	Peak Torque lb-ft
C	1800	708	950	1400	4341	3202

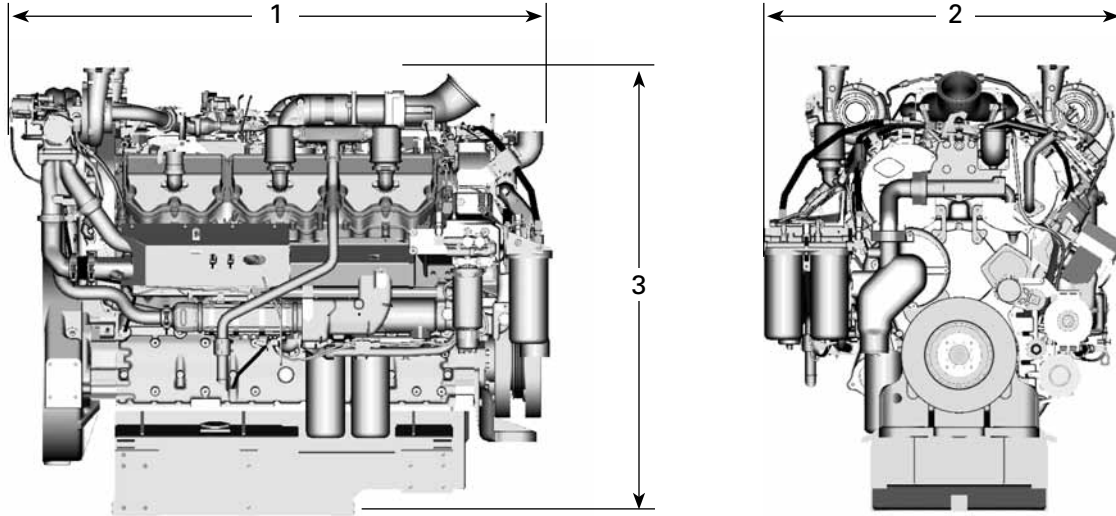


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DIMENSIONS



(1) Length — 1804 mm (71 in)

(2) Width — 1325 mm (52.2 in)

(3) Height — 1386 mm (54.6 in)

RATING DEFINITIONS AND CONDITIONS

C Rating (Intermittent) service where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

Engine Performance Diesel Engines — 7 liter and higher 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.

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, MEUI, "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.