

EU Locomotive Stage IIIB
839-895 bkW/1125-1200 bhp @ 1800 rpm

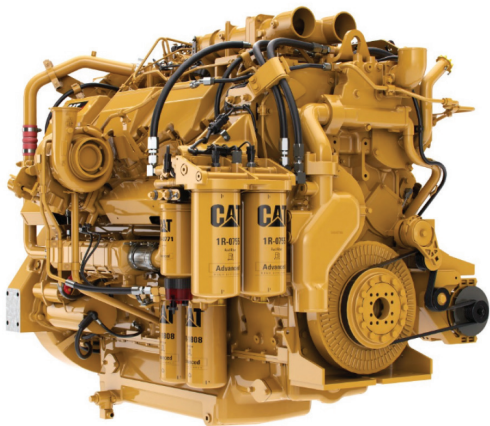


Image shown may not reflect actual configuration

Specifications

Cat® C32 ACERT™ Locomotive Engine	Metric	Imperial (English)
Configuration	V-12, 4-Stroke-Cycle Diesel	
Bore	145 mm	5.71 in
Stroke	162 mm	6.38 in
Displacement	32.1 L	1958.9 in³
Aspiration	Twin Turbocharged-Aftercooled (TTA)	
Compression Ratio	15.0:1	
Rotation (from flywheel end)	Counterclockwise	
Capacity for Liquids – Cooling System Lube Oil System (refill)	67.9 L 68 L	71.7 U.S. qts 71.9 U.S. qts
Weight, Net Dry (approx)	2946 kg	6495 lb
Flywheel and Flywheel Housing	SAE No. 0	
Flywheel Teeth	136	

Features

Emissions

Designed to meet EU Stage IIIB locomotive emission standards

On-engine NOx reduction system with optimized piston, ring, liner, and fuel system configuration to reduce NOx while minimizing in-cylinder sooting

Aftertreatment features diesel oxidation catalyst

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

Standard Equipment

Aftertreatment

Two DOC canisters remote- or engine-mounted

Air Inlet System

Twin side-mounted turbochargers

Air-to-air aftercooled

Control System

Automatic altitude compensation

Power compensation for fuel temperature

Electronic diagnostics and fault logging

Engine monitoring and protection system

(speeds, temperature, pressure);

J1939 Broadcast (diagnostic, engine

status, and control)

ADEM A4 electronic control

Cooling System

Thermostats and housing

Jacket water pump, gear driven,
centrifugal, RH

Exhaust System

Exhaust dry manifold

Rear-facing or forward-facing exhaust

Fuel System

Mechanical Electronic Unit Injection (MEUI)
system

Primary, secondary, and tertiary fuel filter

Electronic fuel priming pump — integrated
with primary fuel filter base

Fuel transfer pump

Lube System

Oil cooler — RH

Oil filler — RH

Oil level gauge — RH

Power Take-off

SAE A, B, C, & E drives available

Engine power can also be taken from front of the
engine on some applications

Optional Equipment

Air inlet adapters

Battery charger — 10 amp

Charging alternator — 24V

Flywheel housing — SAE No. 1 and heavy-duty
SAE No. 0

Oil pan — high capacity

Starting motor — dual 24V

Jacket water heater — 120V and 240V

Air inlet shutoff valve

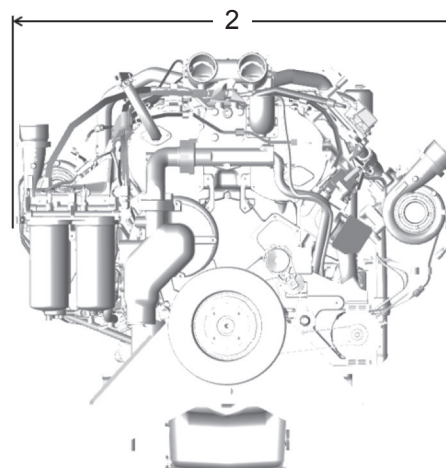
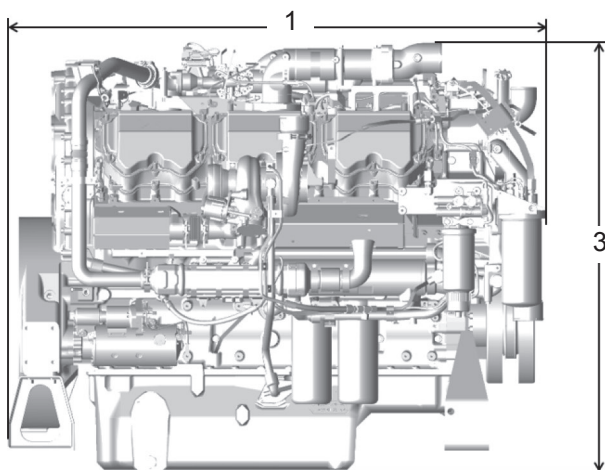
Freon compressor

Digital tachometer

J1939 messenger display

Instrument gauge panel — 24V

Engine Dimensions



(1) Length — 1819 mm (71.6 in)

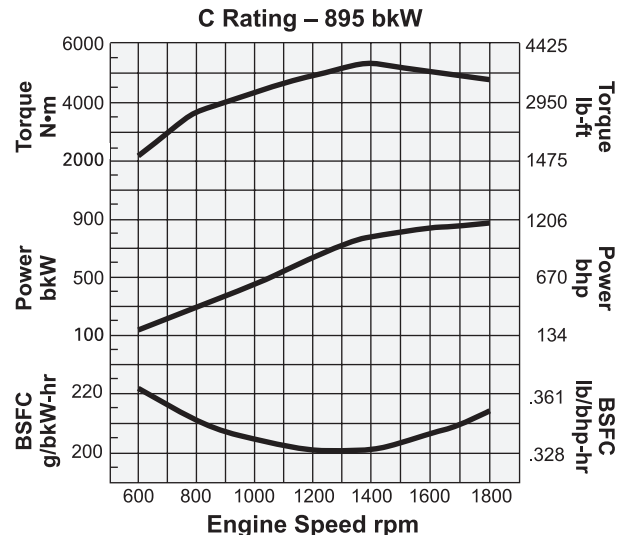
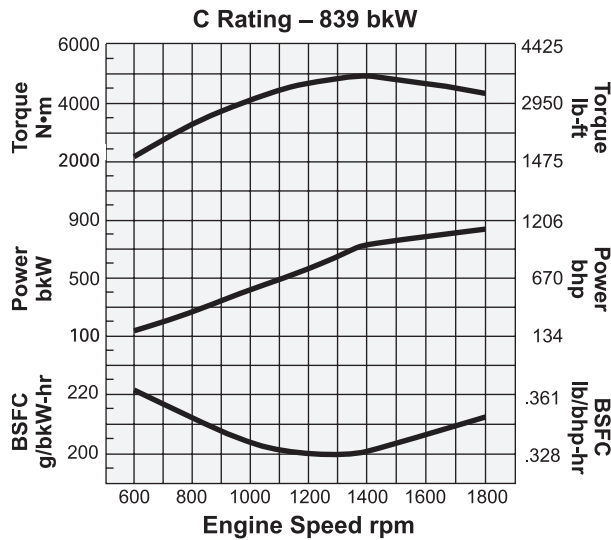
(2) Width — 1527 mm (60 in)

(3) Height — 1442 mm (56.7 in)

Note: Final dimensions dependent on selected options

Performance Data

Twin Turbocharged-Aftercooled — 1800 rpm



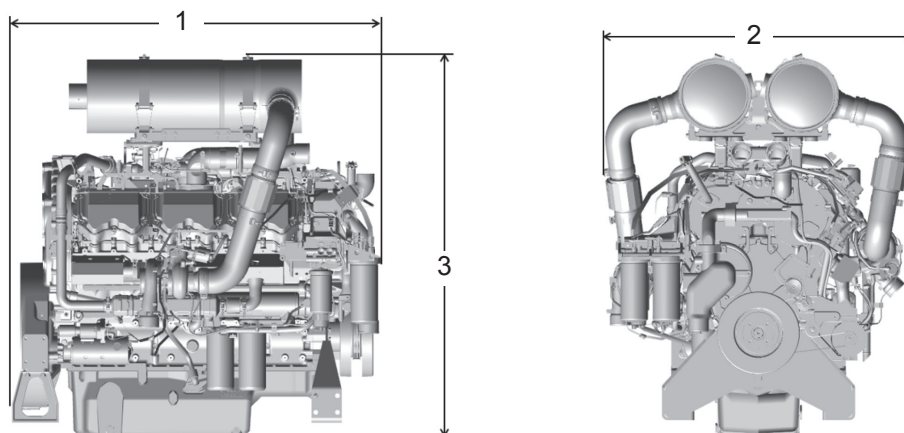
Rating	Peak Power			Peak Torque		
	Speed rpm	Peak Power kW	Peak Power bhp	Speed rpm	Peak Power kW	Peak Power bhp
C	1800	839	1125	1350	5052	3726
C	1800	895	1200	1350	5367	3959

Ratings Definitions and Conditions

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

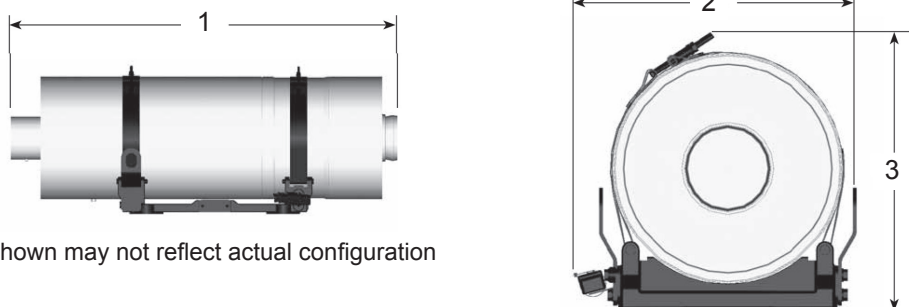
Engine Performance Diesel Engines — 7 liter and higher are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42 780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

Clean Emissions Module Aftertreatment Engine-mounted Configuration



(1) Length — 1819 mm (71.6 in) (2) Width — 1528 mm (60.1 in) (3) Height — 1886 mm (74.2 in)

Clean Emissions Module Aftertreatment Remote-mounted Configuration



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AFTERTREATMENT DIMENSIONS*

Approximate Size and Weight

- (1) Length — 1120 mm (44 in)
 - (2) Width — 400 mm (15.7 in)
 - (3) Height — 440 mm (17.3 in)
- Weight — 66 kg (145 lb)

Aftertreatment Features

Factory-installed engine-mounted aftertreatment. Forward exhaust only applications.

Remote installation options provide OEM flexibility for many applications. Rear or forward exhaust applications.

*Dimensions and image are for individual canister. Two canisters are required. They can be shipped loose for customizable mounting options.

Each canister features a single diesel oxidation catalyst. Two canisters required to meet emission standards.

Standard Emissions Control Equipment

DOC: Diesel Oxidation Catalyst

NRS: NOx Reduction System

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