Cat® C15 Diesel Engine
Industrial

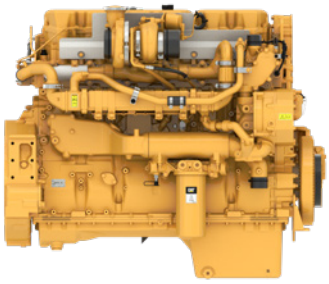

Image shown may not reflect actual configuration

The Cat® C15 Industrial Diesel Engine is offered in ratings ranging from 354-433 bkW (475-580 bhp) @ 1800-2100 rpm. These ratings meet U.S. EPA Tier 4 Final, EU Stage V, Japan 2014, and Korea Tier 4 Final* or China Nonroad Stage IV emission standards.

C15 engines are ideal choices to power applications in agriculture, aircraft ground support, construction, forestry, general industrial, material handling, and mining.

Specifications

Power Rating		
Minimum Power	354 bkW	475 bhp
Maximum Power	433 bkW	580 bhp
Rated Speed		1800-2100 rpm

Emission Standards	
Emissions	EU Stage V, U.S. EPA Tier 4 Final, Japan 2014, and Korea Tier 4 Final* or China Nonroad Stage IV

Engine Specifications		
Engine Configuration		In-Line 6, 4-Stroke-Cycle Diesel
Bore	137 mm	5.4 in
Stroke	171 mm	6.7 in
Displacement	15.2 L	927.6 in³
Aspiration		Turbocharged-Aftercooled (TA)
Compression Ratio		17.0:1
Combustion System		Direct Injection
Rotation (from flywheel end)		Counterclockwise
Cooling System Capacity (engine)	26.9 L	28.4 qts
Lube System (refill)	38-72 L	40-76 qts

Engine Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	1438 mm	56.6 in
Width	943 mm	37.1 in
Height	1239 mm	48.8 in
Weight – Net Dry (Basic Operating Engine Without Optional Attachments)	1542 kg	3399.5 lb

Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	1153 mm	45.4 in
Width	1112 mm	43.8 in
Height	652 mm	25.7 in
Weight	268 kg	590.8 lb

*Korea Tier 5 Capable

Benefits & 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, materials-handling, construction, mining, forestry, waste, and other industrial applications.

Fluid Efficiency

Fluid consumption optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs.

Installation

- Fully configurable engine with multiple ratings, a wide range of power, and numerous options to minimize total package size and enable commonization across a broad array of applications.
- Aftertreatment installation flexibility to meet all applications – including remote-mount and engine-mounted from the factory.
- Industrial power unit (IPU) available from factory to avoid significant design, validation, and manufacturing costs.
- Low heat rejection levels allow for optimized cooling package at equivalent power.
- The C15 is available as a single label certification for EU Stage V, U.S. EPA Tier 4 Final, Japan 2014, and Korea Tier 4 Final* or certified to China Nonroad Stage IV. Common installation across regions covered by these emissions regulations simplifies customer design and installation.

Low Cost Maintenance

- Worldwide service delivers ease of maintenance and simplifies the servicing routine.
- Minimum 5000-hour diesel particulate filter (DPF) ash service interval ensures low-cost maintenance.
- Standard service intervals of 500 hours under normal operating conditions.
- The S•O•S℠ program is available from your Cat dealer to optimize oil change intervals.
- Ideal for high-hour applications over 10,000 hours.
- Remote mount options for serviceable items such as oil and fuel filters.

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 sample
- Customer support agreements (CSA)
- Extended service coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

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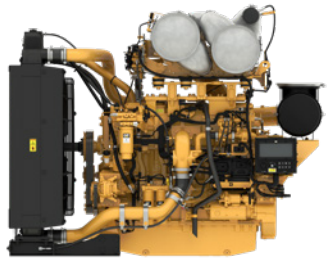
Benefits & Features (continued)

U.S. EPA Tier 4 Final and EU Stage V or China Nonroad Stage IV Aftertreatment Features

- Clean emissions module (CEM) consisting of diesel oxidation catalyst (DOC), diesel particulate filter (DPF), and selective catalytic reduction (SCR)
- Maximum uptime with transparent aftertreatment regeneration. No operator distraction or impact to machine performance.
- Remote-mounted aftertreatment standard for greatest flexibility. Engine-mounted aftertreatment (EMAT) optional for simplified installation.
- Pump Electronic Tank Unit (PETU) Diesel Exhaust Fluid (DEF) capacity up to 93.7 liters (24.8 U.S. gal)
- Minimum 5000-hour service interval for DPF/PETU filters



Optional IPU shown with engine-mounted aftertreatment (EMAT)

Enhanced Electronics

- The C15 is equipped for the future with the latest technology from a single on-engine ECM.
- 2-wire Ethernet connection allows for simpler, faster installation and for remote service and software flash.
- 12V and 24V available

Standard Equipment

Air Inlet System

- Turbocharged
- Air-to-Air Aftercooled
- Mid-mount turbocharged system with front and rear exhaust configurations

Control System

- Electronic control system
- Over-foam wiring harness
- Configurable software features
- Engine monitoring system SAE J1939 broadcast and control
- Integrated Electronic Control Unit (ECU)
- Remote fan control
- 12V and 24V available

Cooling System

- Vertical outlet thermostat housing
- Centrifugal water pump
- Guidance on cooling system design available through your dealer to ensure equipment reliability

Flywheels and Flywheel Housing

- SAE No. 0 and SAE No. 1 flywheel housings
- Available SAE 1 power take-off (PTO) housing with optional SAE B and SAE C power take-off drives
- Engine power can also be taken from the front of the engine with optional attachments

Standard Equipment (continued)

Fuel System

- Mechanical Electronic Unit Injectors (MEUI)
- Primary fuel filter
- Secondary and tertiary fuel filters
- Fuel transfer pump
- Electronic fuel priming

Lube System

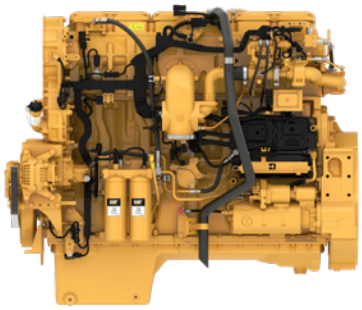
- Oil cooler
- Oil filler
- Lube oil filter
- Oil dipstick
- Gear-driven oil pump
- Choice of front, rear or center sumps
- Open crankcase ventilation system (optional OCV filter system)

PTO

- SAE B or SAE C PTO drives
- Engine power can also be taken from the front of the engine on some applications

General

- Caterpillar Yellow paint, with optional colors available



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Emissions: U.S. EPA Tier 4 Final, EU Stage V, Japan 2014, and Korea Tier 4 Final* or China Nonroad Stage IV Emission Standards

C15

354-433 bkW/ 475-580 bhp
1800-2100 rpm

	Metric	English
General Engine		
Number of Cylinders	6	
Bore	137 mm	5.4 in
Stroke	171 mm	6.7 in
Displacement	15.2 L	928 in^3
Compression Ratio	17.0:1	

RATING DEFINITIONS AND CONDITIONS

IND-A (Continuous) for heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

IND-B for service where power and/or speed are cyclic (time at full load not to exceed 80%).

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 (time at full load not to exceed 10% of the duty cycle).

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.

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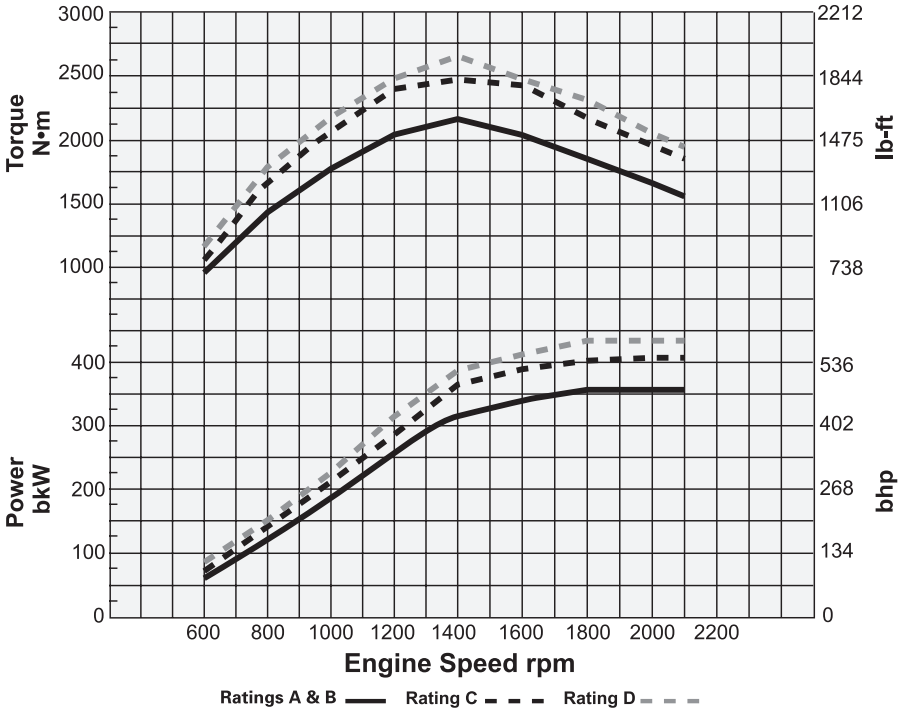
Performance Data



Rating	Aspiration	Rated Speed rpm	Rated Power bkW	Rated Power bhp	Peak Torque N•m	Peak Torque lb-ft	Speed rpm
A	TA	1800-2100	354	475	2176	1605	1400
B	TA	1800-2100	354	475	2176	1605	1400
C	TA	1800-2100	403	540	2469	1821	1400
D	TA	1800-2100	432.5	580	2655	1958	1400

RATING CONDITIONS FOR DIESEL ENGINES - GREATER THAN 7 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.

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