



The Cat® C13 ACERT™ Industrial Diesel Engine is offered in ratings ranging from 287-388 bkW (385-520 bhp) @ 1800-2100 rpm. Industries and applications powered by C13 ACERT engines include: Agriculture, Ag Tractors, Aircraft Ground Support, Bore/Drill Rigs, Chippers/Grinders, Combines/Harvesters, Compactors/Rollers, Compressors, Construction, Cranes, Crushers, Dredgers, Forestry, General Industrial, Hydraulic Power Units, Irrigation Equipment, Loaders/Forwarders, Material Handling, Mining, Mobile Earthmoving Equipment, Paving Equipment, Pumps, Shovels/Draglines, Specialty Ag Equipment, Surface Hauling Equipment, Trenchers and Underground Mining Equipment.

## Specifications

Power Rating		
Minimum Power	287 bkW	385 BHP
Maximum Power	388 bkW	520 BHP
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	U.S. EPA Tier 4 Final Nonroad, EU Stage IV Nonroad, U.S. EPA Tier 4 Interim Nonroad Equivalent (Not Currently EPA Certified) and EU Stage IIIB Nonroad Equivalent (Non-Current for EU) Emission Standards. Designed to meet proposed EU Stage V Nonroad Emission Standards

General	
Engine Configuration	In-Line 6, 4-Stroke-Cycle Diesel
Bore	130 mm (5.1 in)
Stroke	157 mm (6.2 in)
Displacement	12.5 L (762.8 in³)
Aspiration	Turbocharged-Aftercooled (TA)
Compression Ratio	17.0:1
Combustion System	Direct Injection
Rotation from Flywheel End	Counterclockwise
Cooling System - Capacity	18.7 L (19.8 qt)
Lube System - Refill	34 L (35.9 qt)

Engine Dimensions - Approximate	
Height	1132-1186 mm (44.6-46.7 in)
Length	1203-1272 mm (47.2-50.1 in)

Weight - Net Dry - Basic Operating Engine Without Optional Attachments	1143-1350 kg (2520-2976 lb)
Width	933-996 mm (36.74-39.2 in)

Cat Regeneration System Aftertreatment Dimensions - Approximate	
Diameter	330.2 mm (13 in)
Height	451.3-654 mm (17.8-25.7 in)
Length	1053-1077 mm (41.5-42.4 in)
Weight	248-259 kg (547-571 lb)
Width	779.8-1069 mm (30.7-42.1 in)

PETU Dimensions - Tier 4 Final, Stage IV Only	
Height	551 mm (21.7 in)
Length	854 mm (33.6 in)
Volume Capacity	48.4 L (51.1 qt)
Weight	19.42 kg (42.8 lb)
Width	287 mm (11.3 in)

Passive Regeneration System Aftertreatment Dimensions - Approximate	
Height	547.2 mm (21.5 in)
Length	974.8 mm (38.4 in)
Weight	140 kg (308.6 lb)
Width	958.3 mm (37.7 in)

## Benefits and 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.

### High Performance

Simple and efficient turbocharger with balance valve provides optimal air management and improved fuel efficiency.

### Fuel Efficiency

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

### Fuel & Oil

Tier 4 Interim or Tier 4 Final, Stage IIIB or Stage IV engines require Ultra Low Sulfur Diesel (ULSD) fuel containing a maximum of 10 ppm sulfur (EU) and 15 ppm sulfur (U.S.), 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, material handling, construction, mining, aircraft ground support, and other industrial applications.

### **Package Size**

Exceptional power density enables standardization across numerous applications. Multiple installation options minimize total package size. Ideal for equipment with narrow engine compartments.

### **Quality**

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

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

- Scheduled maintenance, including SOSSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

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### **Tier 4 Interim, Stage IIIB Aftertreatment Features**

**Regeneration.** Cat Regeneration System maximizes fuel efficiency during regeneration. Flexible regeneration options maximize uptime. **Mounting.** Remote installation options provide OEM flexibility for many applications, including horizontal and vertical mounting, with and without muffler. **Service.** Minimum 5000 hour DPF ash service interval.

### **Tier 4 Final, Stage IV Aftertreatment Features**

**Regeneration.** Cat Regeneration System maximizes fuel efficiency during regeneration. Transparent regeneration maximizes uptime. Aftertreatment life is twice as long as engine rebuild. Option available utilizing Passive Regeneration not requiring Cat Regeneration System - please speak with your Dealer to determine which option is most suitable for your application. **Mounting.** Industrial power units have standard horizontal mounting. **Service.** Minimum 5000-hour diesel particulate filter ash service interval. PETU filter service is 5000 hours.

## **Standard Equipment**

### **Air Inlet System**

- Turbocharged
- Air-to-Air Aftercooled
- Mid-mount turbocharged system with front and rear exhaust configurations (Tier 4 Final, Stage IV)

### **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 or RH thermostat outlet
- Centrifugal water pump
- Guidance on cooling system design available through your dealer to ensure equipment reliability

#### **Flywheels and Flywheel Housing**

- SAE No. 1 flywheel housing
- Available SAE No. 1 power take off with optional SAE A, SAE B or SAE C power take off drives. Engine power can also be taken from the front of the engine with optional attachments. (Tier 4 Final, Stage IV).

#### **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
- Lube oil filter
- Oil dipstick
- Gear driven oil pump
- Choice of front, rear or center sumps
- Open crankcase ventilation system with fumes disposal (optional OCV filter system) (Tier 4 Final, Stage IV)

#### **Power Take Off (PTO)**

- SAE A, SAE B or SAE C power take off (PTO) drives. Engine power can also be taken from the front of the engine on some applications.

#### **General**

- Paint: Caterpillar yellow, with optional colors available at request

#### **U.S. EPA Tier 4 Interim, EU Stage IIIB Aftertreatment / Clean Emissions Control Equipment**

- Cat Regeneration System
- Clean Emissions Module (CEM), consisting of Diesel Particulate Filter (DPF) and Diesel Oxidation Catalyst (DOC)
- NOx Reduction System (NRS)
- Flex pipe connection kit with 90° rotatable elbows to attach to Cat Regeneration System Inlet

- Available in 12 volt or 24 volt systems

**U.S. EPA Tier 4 Final, EU Stage IV Aftertreatment**

- Cat Regeneration System
- Clean Emissions Module (CEM), consisting of Diesel Particulate Filter (DPF) and Diesel Oxidation Catalyst (DOC)
- Aftertreatment Electronic Control Unit (ECU)
- NOx Reduction System (NRS)
- Pump Electronic Control Unit (PETU)
- Selective Catalytic Reduction (SCR)
- Available in 12V or 24V systems

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, 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.