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C9 ACERT™
Petroleum Engine

224-298 bkW (300-400 bhp)
1800-2200 rpm

Tier 4 Final, Stage IV

CAT® ENGINE SPECIFICATIONS
I-6, 4-Stroke-Cycle Diesel
Emissions ............ EPA Tier 4 Final and EU Stage IV
Bore ......................... 115 mm (4.53 in)
Stroke ....................... 149 mm (5.87 in)
Displacement .................. 9.3 L (567.5 in³)
Aspiration .................... Turbocharged-Aftercooled
Compression Ratio .................. 17.0:1
Combustion System ................. Direct Injection
Rotation (from flywheel end) .... Counterclockwise
Capacity for Liquids
  Cooling System ............ 22 L (23.6 U.S. qts)
  Lube System (refill) ........ 30 L (31.7 U.S. qts)
Oil Change Interval ............. 250-500 hours
Engine Weight, Net Dry (basic operating engine
  without optional attachments)
  (approximate) ............. 885 kg (1950 lbs)
Flywheel and Flywheel Housing ........ SAE 1 or 2
Flywheel Teeth ............. 113 (SAE 1), 138 (SAE 2)

FEATURES

Emissions
Designed to meet U.S. EPA Tier 4 Final and EU Stage IV emission standards.

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.

Fuel & Oil
Tier 4 Final, Stage IV 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 available to minimize total package size.

Low-Cost Maintenance
Worldwide service delivers ease of maintenance and simplifies the servicing routine. Minimum 5000-hour diesel particulate filter (DPF) ash service interval enables low-cost maintenance. Capable of optimal oil change intervals of up to 500 hours, depending on rating, application, operating conditions, and maintenance practices. Engine is designed for a B10 life of up to 10,000 hours. The S•O•S™ 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™ 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
STANDARD ENGINE EQUIPMENT

Control System
Electronic control system, over-foam wiring harness, automatic altitude compensation, power compensated for fuel temperature, remote fan control, configurable software features, engine monitoring system SAE J1939 broadcast and control, integrated Electronic Control Unit (ECU)

Cooling System
Vertical outlet thermostat housing, centrifugal water pump, guidance on cooling system design available through your dealer to ensure equipment reliability. Available cooling package provides additional auxiliary heat load capacity capable of a minimum 10% of engine rated power. See the Web Ambient Tool (https://wbdat.cat.com/) for estimated ambient capability based on rating, fan drive ratio, fan, altitude and auxiliary heat load.

Exhaust System
Mid-mount turbocharged system with front and rear exhaust configurations

Flywheels and Flywheel Housing
SAE No. 1 and SAE No. 2 flywheel housings; available SAE 1 power take-off housing with optional SAE A, SAE B, and SAE C power take-off drives; engine power can also be taken from the front of the engine with optional attachments

Fuel System
Electronic high pressure common rail; primary fuel filter, secondary fuel filters, fuel transfer pump, electronic fuel priming

Lube System
Open crankcase ventilation system with fumes disposal (optional OCV filter system); oil cooler, oil filler, oil filter, oil dipstick, oil pump (gear-driven); choice of sumps (front, rear, and center)

General
Paint: Cat yellow

DIMENSIONS

<table>
<thead>
<tr>
<th>Engine Dimensions</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>(1) Length</td>
<td>1119 mm</td>
<td>44 in</td>
</tr>
<tr>
<td>(2) Width</td>
<td>1025 mm</td>
<td>40.4 in</td>
</tr>
<tr>
<td>(3) Height</td>
<td>1066 mm</td>
<td>41.9 in</td>
</tr>
<tr>
<td>Engine Weight (dry)</td>
<td>885 kg</td>
<td>1950 lb</td>
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</table>

Note: Do not use for installation design. See general dimension drawings for detail. Weights and dimensions are approximate. Final dimensions are dependent on selected options.
PERFORMANCE DATA — PRELIMINARY

Turbocharged-Aftercooled — 1800-2200 rpm

![Graph showing engine speed and power/torque relationship]

### Speed Range

<table>
<thead>
<tr>
<th>Rating</th>
<th>Aspiration</th>
<th>Rated Speed rpm</th>
<th>Rated Power bkW</th>
<th>Rated Power bhp</th>
<th>Speed rpm</th>
<th>Peak Torque N•m</th>
<th>Peak Torque lb-ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>TA</td>
<td>2200</td>
<td>224</td>
<td>300</td>
<td>1400</td>
<td>1369</td>
<td>1009</td>
</tr>
<tr>
<td>B</td>
<td>TA</td>
<td>2200</td>
<td>242</td>
<td>325</td>
<td>1400</td>
<td>1484</td>
<td>1095</td>
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<tr>
<td>C</td>
<td>TA</td>
<td>2200</td>
<td>261</td>
<td>350</td>
<td>1400</td>
<td>1596</td>
<td>1177</td>
</tr>
<tr>
<td>D*</td>
<td>TA</td>
<td>2200</td>
<td>290</td>
<td>389</td>
<td>1400</td>
<td>1719</td>
<td>1268</td>
</tr>
</tbody>
</table>

*298 bkW (400 bhp) @ 2000 rpm also available

### 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.

**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.
STANDARD CONFIGURATION SHOWN
Approximate Size and Weight
(1) Length — 885 mm (34.8 in)
(2) Width — 870 mm (34.25 in)
(3) Height — 570 mm (22.4 in)
Weight — 212 kg (467 lbs)

CEM Configuration
Standard configuration includes Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction (SCR), and supporting structure. Multiple configuration options available for aftertreatment system.

MAXIMUM 48.4 L (51.1 U.S. qt)
PETU CONFIGURATION SHOWN
Approximate Size and Weight
(1) Length — 854 mm (33.6 in)
(2) Width — 287 mm (11.3 in)
(3) Height — 551 mm (21.7 in)
Weight, dry — 19.42 kg (42.8 lbs)

PETU Configuration
Pump Electronic Tank Unit (PETU), consisting of Diesel Exhaust Fluid (DEF) tank with integrated Dosing Control Unit (DCU). Available in different volume configurations.

Contact your Cat dealer for additional information.

AFERTREATMENT FEATURES

Regeneration: Cat Regeneration System maximizes fuel efficiency during regeneration. Transparent regeneration maximizes uptime.

Mounting: Remote installation options provide OEM flexibility for many applications, including horizontal and vertical mounting.

Service: Minimum 5000-hour diesel particulate filter ash service interval.

Available in 12V or 24V systems

STANDARD EMISSIONS CONTROL EQUIPMENT

Cat Regeneration System
CEM: Clean Emissions Module
DOC: Diesel Oxidation Catalyst
ECU: Aftertreatment Electronic Control Unit

DPF: Diesel Particulate Filter
NRS: NOx Reduction System
SCR: Selective Catalytic Reduction
PETU: Pump Electronic Tank Unit

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.

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