C7 ACERT™
Industrial Engine
Tier 3/Stage IIA
187 bkW/250 bhp @ 2200 rpm

CAT® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel
Bore...................................................... 110.0 mm (4.33 in)
Stroke..................................................... 127.0 mm (5.0 in)
Displacement............................................... 7.2 L (442 in³)
Aspiration...................................... Turbocharged ATAAC
Compression Ratio...................................................... 17:1
Rotation (from flywheel end).............. Counterclockwise
Lube Oil System (refill)......................... 28 L (7.4 U.S. gal)
Weight, Net Dry (approximate kg, lb)........... 588 kg (1296 lbs)

FEATURES

Emissions
Meets U.S. EPA Tier 3, EU Stage IIIA emission requirements.

Worldwide Supplier Capability
Caterpillar
- Casts engine blocks and heads
- Machines critical components
- Assembles complete engine
- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities
- Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Testing
Prototype testing on every model:
- Proves computer design
- Verifies system torsional stability
- Functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance.

Full Range of Attachments
Wide range of bolt-on system expansion attachments, factory designed and tested.

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network
More than 1,500 dealer outlets
Caterpillar factory-trained dealer technicians service every aspect of your industrial engine
99.7% of parts orders filled within 24 hours worldwide
Caterpillar parts and labor warranty
Preventive maintenance agreements available for repair before failure options

Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products

Web Site
For all your industrial power requirements, visit www.cat-industrial.com.

Image shown may not reflect actual engine
Air Inlet System
Air to air aftercooled (ATAAC)
Turbocharged

Control System
Electronic governing, PTO speed control
Programmable ratings
Cold mode start strategy
Automatic altitude compensation
Power compensation for fuel temperature
Programmable low and high idle and total engine limit
Electronic diagnostics and fault logging
Engine monitoring system
J1939 Broadcast (diagnostic and engine status)
ADEM™ A4 Electronic Control Unit (ECU)

Cooling System
Thermostats and housing, vertical outlet
Jacket water pump, centrifugal
Water pump, inlet

Fuel System
HEUI™ injection
Fuel filter, secondary (2 micron high performance)
Fuel transfer pump
Fuel priming pump
ACERT™ Technology

Lube System
Crankcase breather
Oil cooler
Oil filler
Oil filter
Oil pan front sump
Oil dipstick
Oil pump (gear driven)

General
Paint, Caterpillar Yellow
Vibration damper
Lifting eyes

Exhaust System
Exhaust manifold, dry
Optional exhaust outlet

Flywheels and Flywheel Housing
SAE No. 1 Flywheel housing
C7 ACERT™
Industrial Engine
Tier 3/Stage IIIA
187 bkW/250 bhp @ 2200 rpm

PERFORMANCE CURVES

IND - C (Intermittent) - DM9221-01

<table>
<thead>
<tr>
<th>Engine Speed rpm</th>
<th>Engine Power kW</th>
<th>Torque N-m</th>
<th>BSFC g/kW-hr</th>
<th>Fuel Rate L/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200</td>
<td>187</td>
<td>810</td>
<td>239.7</td>
<td>53.3</td>
</tr>
<tr>
<td>2100</td>
<td>187</td>
<td>848</td>
<td>233.7</td>
<td>52.0</td>
</tr>
<tr>
<td>2000</td>
<td>187</td>
<td>890</td>
<td>228.7</td>
<td>50.8</td>
</tr>
<tr>
<td>1900</td>
<td>187</td>
<td>937</td>
<td>224.4</td>
<td>49.9</td>
</tr>
<tr>
<td>1800</td>
<td>187</td>
<td>989</td>
<td>222.2</td>
<td>49.4</td>
</tr>
<tr>
<td>1700</td>
<td>184</td>
<td>1035</td>
<td>220.6</td>
<td>48.4</td>
</tr>
<tr>
<td>1600</td>
<td>180</td>
<td>1077</td>
<td>220.1</td>
<td>47.3</td>
</tr>
<tr>
<td>1500</td>
<td>175</td>
<td>1115</td>
<td>219.7</td>
<td>46.9</td>
</tr>
<tr>
<td>1400</td>
<td>167</td>
<td>1142</td>
<td>219.4</td>
<td>43.8</td>
</tr>
<tr>
<td>1300</td>
<td>154</td>
<td>1128</td>
<td>221.8</td>
<td>40.6</td>
</tr>
<tr>
<td>1200</td>
<td>114</td>
<td>906</td>
<td>218.5</td>
<td>29.7</td>
</tr>
<tr>
<td>1000</td>
<td>74</td>
<td>707</td>
<td>224.9</td>
<td>19.8</td>
</tr>
</tbody>
</table>
# C7 ACERT™ Industrial Engine

**Tier 3/Stage IIIA**

187 bkW/250 bhp @ 2200 rpm

## Performance Curves

**IND - C (Intermittent) - DM9221-01**

### Engine Torque (lb•ft)

<table>
<thead>
<tr>
<th>Engine Speed (rpm)</th>
<th>Engine Torque (lb•ft)</th>
<th>BSFC (lb/bhp-hr)</th>
<th>Fuel Rate (gal/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200</td>
<td>597</td>
<td>.394</td>
<td>14.1</td>
</tr>
<tr>
<td>2100</td>
<td>625</td>
<td>.384</td>
<td>13.7</td>
</tr>
<tr>
<td>2000</td>
<td>656</td>
<td>.376</td>
<td>13.4</td>
</tr>
<tr>
<td>1900</td>
<td>691</td>
<td>.369</td>
<td>13.2</td>
</tr>
<tr>
<td>1800</td>
<td>729</td>
<td>.365</td>
<td>13.1</td>
</tr>
<tr>
<td>1700</td>
<td>763</td>
<td>.363</td>
<td>12.8</td>
</tr>
<tr>
<td>1600</td>
<td>794</td>
<td>.362</td>
<td>12.5</td>
</tr>
<tr>
<td>1500</td>
<td>822</td>
<td>.361</td>
<td>12.1</td>
</tr>
<tr>
<td>1400</td>
<td>842</td>
<td>.361</td>
<td>11.6</td>
</tr>
<tr>
<td>1300</td>
<td>832</td>
<td>.365</td>
<td>10.7</td>
</tr>
<tr>
<td>1200</td>
<td>668</td>
<td>.359</td>
<td>7.8</td>
</tr>
<tr>
<td>1000</td>
<td>521</td>
<td>.370</td>
<td>5.2</td>
</tr>
</tbody>
</table>

[English]
IND - C (Intermittent) 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. 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.

**Engine Dimensions**

<table>
<thead>
<tr>
<th>Dimension (mm)</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Length</td>
<td>1052.7 mm</td>
</tr>
<tr>
<td>(2) Width</td>
<td>758.2 mm</td>
</tr>
<tr>
<td>(3) Height</td>
<td>1032.1 mm</td>
</tr>
</tbody>
</table>

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 283578).

Performance Number: DM9221-01
Feature Code: C07DI01 Arr. Number: 2666732
Materials and specifications are subject to change without notice.

© 2012 Caterpillar
All rights reserved.

The International System of Units (SI) is used in this publication.

CAT, CATERPILLAR, their respective logos, “Caterpillar Yellow,” 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.