C32 ACERT™
Petroleum Engine

CAT® ENGINE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Type</td>
<td>V-12, 4-Stroke-Cycle-Diesel</td>
</tr>
<tr>
<td>Emissions</td>
<td>EPA and CARB Non-Road Mobile Tier 2, IMO Tier II</td>
</tr>
<tr>
<td>Peak Torque at Speed</td>
<td>6219 lbs-ft</td>
</tr>
<tr>
<td>Bore</td>
<td>145 mm (5.7 in)</td>
</tr>
<tr>
<td>Stroke</td>
<td>162 mm (6.4 in)</td>
</tr>
<tr>
<td>Displacement</td>
<td>32.1 L (1960.5 cu. in)</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Turbocharged-Aftercooled</td>
</tr>
<tr>
<td>Governor and Protection</td>
<td>Electronic (ADEM™ A4)</td>
</tr>
<tr>
<td>Engine Weight, net dry (approx)</td>
<td>2286 kg (5040 lb)</td>
</tr>
<tr>
<td>Capacity for Liquids</td>
<td>72 L (19 gal)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>55 L (14.5 gal)</td>
</tr>
<tr>
<td>Oil Change Interval</td>
<td>250 hours</td>
</tr>
<tr>
<td>Rotation (from flywheel end)</td>
<td>Counterclockwise</td>
</tr>
<tr>
<td>Flywheel and Flywheel Housing</td>
<td>SAE No. 0 or SAE No. 1</td>
</tr>
<tr>
<td>Flywheel Teeth</td>
<td>136</td>
</tr>
</tbody>
</table>

FEATURES

Engine Design
- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range
- High power density — lightweight engine for weight-sensitive applications
- PTO drive options provide flexible access to auxiliary power for pumps and other needs

Advanced Digital Engine Management
ADEM A4 engine management system integrates speed control, air/fuel ratio control and ignition/detonation controls into a complete engine management system with integrated digital ignition, engine protection and monitoring.

Transmissions
Caterpillar has a full line of engine-transmission packages that can be fully integrated with your axle, hydraulics, and operator interface. Cat® transmissions deliver continuous operation under full load, smooth shifting at any speed, and maximum up time, with unmatched durability and easy maintenance.

Custom Packaging
For any petroleum application, trust Caterpillar to meet your exact needs with a factory custom package. Cat® engines, generators, enclosures, controls, radiators, transmissions — anything your project requires — can be custom designed and matched to create a one-of-a-kind solution. Custom packages are globally supported and are covered by a one-year warranty after startup.

Full Range of Attachments
Large variety of factory-installed engine attachments reduces packaging time

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
Cat factory-trained dealer technicians service every aspect of your petroleum engine
Cat parts and labor warranty
Preventive maintenance agreements available for repair-before-failure options
S•O•SS™ 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

Web Site
For all your petroleum power requirements, visit www.catoilandgas.cat.com.
STANDARD EQUIPMENT

**Air Inlet System**
- Quad turbocharger — 3 cylinder exhaust to each turbo
- Connections configured for ATAAC (Air-to-Air-Aftercooled) or remote heat exchanger

**Control System**
- ADEM A4 electronic control module
- Electronic governing, PTO speed control
- Customer programmable ratings
- Cold mode start strategy
- Automatic altitude compensation
- Automatic fuel temperature compensation
- Programmable low and high idle, and top engine speed limit
- Electronic diagnostics and fault logging
- Engine monitoring system
- SAE J1939 broadcast (diagnostic and engine status)

**Cooling System**
- Gear-driven centrifugal jacket water pump — RH
- Integrated thermostat and housing
- Engine oil cooler
- Optional installed transmission oil cooler

**Exhaust System**
- Exhaust manifold — dry
- Two vertical exhaust outlets (front and rear)

**Fuel System**
- MEUI
- Fuel priming pump
- Fuel transfer pump
- Primary and secondary fuel filter — RH configured for remote mounting (installed RH on shipping plate)

**Flywheels and Flywheel Housing**
- SAE No. 0 or SAE No. 1 flywheel iron housing
- SAE No. 0 or SAE No. 1 flywheel
- Optional transmission adapter

**Lube System**
- Crankcase breather
- Oil filter — RH standard, optional LH or remote mount service
- Oil level gauge — RH standard, optional LH or dual service
- Oil filter — RH standard, optional LH or dual service
- Shallow oil pan, rear sump

**Mounting System**
- Trunnion front support
- Vertical and horizontal pads on rear flywheel housing

**Protection System**
- 24V electronic
- Engine overspeed with optional air shut-offs with indicators
- Low engine oil pressure
- Fuel filter restriction
- Fuel temperature
- High engine coolant temperature
- Low engine coolant temperature

**General**
- Vibration damper and optional guard
- Lifting eyes
- Optional customer wiring connector
- Service tool connector
- Paint — Cat yellow

OPTIONAL ATTACHMENTS

**Air Compressors**

**Air Inlet System**
- Air cleaner
- Air inlet adapters
- Turbocharger outlet adapters
- Air lines

**Charging System**
- Battery chargers
- Charging alternators
- Alternator mounting
- Circuit breakers and mountings

**Cooling System**
- Dry charge coolant conditioners
- Thermostat housing
- Coolant level sensor
- Radiator
- Blower fans
- Suction fans
- Fan adapters
- Fan drives

**Emissions**
- IMO certifications

**Exhaust System**
- Elbows
- Mufflers

**Fuel Systems**
- Electric fuel priming pump

**Instrumentation**
- Customer management device
- Interconnect harness
- Gauges and instrument panels

**Lube System**
- Oil pans
- Oil service side
- Oil level gauge
- Oil filters
- Lubricating oils

**Mounting System**
- Structural steel base
- Engine support — front
- Engine support — rear

**Power Take-Offs**
- Auxiliary drive
- Damper pulley
- Hydraulics gear pumps

**Protection System**
- Mechanical shutoffs
- Solenoid shutoffs

**Starting System**
- Electric starting motors – 12V, 24V
- Battery sets – 24V
- Battery cable
- Battery rack
- Starting aids

**Transmission Arrangement**
- Transmissions water lines
- Transmissions cooler
PERFORMANCE CURVES

Turbocharged-Aftercooled
E Rating — 1007 bkW (1350 bhp) @ 2100 rpm*
DM9033-00

Heat Rejection Data

<table>
<thead>
<tr>
<th>Engine Speed</th>
<th>Engine Power</th>
<th>Rej to JW</th>
<th>Rej to Atmos</th>
<th>Rej to Exh</th>
<th>From Aft Clr</th>
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<tbody>
<tr>
<td>rpm</td>
<td>bkW</td>
<td>bhp</td>
<td>Btu/min</td>
<td>bkW</td>
<td>Btu/min</td>
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<tr>
<td></td>
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<tr>
<td>2100</td>
<td>1007.0</td>
<td>1350.4</td>
<td>377</td>
<td>21440</td>
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<td>2000</td>
<td>1007.0</td>
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<tr>
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<tr>
<td>1800</td>
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<td>375</td>
<td>21326</td>
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<td>339</td>
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<td>1300</td>
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<td>1200</td>
<td>727.3</td>
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<td>322</td>
<td>18312</td>
<td>186</td>
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<tr>
<td>1100</td>
<td>575.9</td>
<td>772.3</td>
<td>233</td>
<td>13251</td>
<td>158</td>
</tr>
</tbody>
</table>

*Other engine ratings are available. Please contact dealer for performance data.
# C32 ACERT™ PETROLEUM ENGINE

## PETROLEUM ENGINE

### Engine Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
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<tbody>
<tr>
<td>Length</td>
<td>1918 mm (75.5 in)</td>
</tr>
<tr>
<td>Width</td>
<td>1473 mm (58 in)</td>
</tr>
<tr>
<td>Height</td>
<td>1321 mm (52 in)</td>
</tr>
<tr>
<td>Engine Weight (dry)</td>
<td>2286 kg (5040 lb)</td>
</tr>
</tbody>
</table>

**Note:** Do not use for installation design. See general dimension drawings for detail (Drawing #276-8867).

## RATING DEFINITIONS AND CONDITIONS

**Engine Performance** is corrected to inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. These values correspond to the standard atmospheric pressure and temperature as shown in SAE J1995.

Performance measured using a standard fuel with fuel gravity of 35 degrees API having a lower heating value of 42,780 kJ/kg (18,390 BTU/lb) when used at 29°C (84.2°F) where the density is 838.9 g/L (7.001 lb/U.S. gal).

The corrected performance values shown for Cat engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2, ISO 8665, ISO 2288, ISO 9249, ISO 1585, EEC 80/1269, and DIN 70020 standard reference conditions.

**IND-E**

For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable (time at full load not to exceed 5% of the duty cycle).