

# CATERPILLAR ENGINE IN STOCK



**PRIOR DIESEL**

A Suretank Company

**C15 DITA SCAC (ACERT)**      **400bKw**  
**Hazardous location**      **(536bhp)**  
**Engine**      **2000 rpm**  
**Emissions – IMO Tier II, Certified, Marine Tier 2**  
**Certified, Marine Tier 3 Capable.**



## Specifications

In-Line, 6 Cylinder, 4-Stroke, Cycle Diesel

Displacement	15.2L
Aspiration	Turbocharged-Aftercooled
Bore – in (mm)	5.4 (137)
Stroke – in (mm)	6.7 (171)
Rotation (from flywheel end)	CCW
Flywheel and flywheel housing	SAE1
Governor and protection	Electronic ADEM A4
Flywheel Teeth	113
Capacity for liquids (L)	
Cooling system (engine only) (L)	26.9
Lube oil (refill)	34.0
Engine weight, net dry (approx.) kg	1732

## Features

### Improving workforce efficiency

Standard factory certifications improve worksite safety, Class Division 2 (NEC 500) Class 1 Zone “ (NEC 505) Atex directive (94/9/EC) Group IIA, Electrical IIC and temperature class T3, Electrical harness and connectors are certified as intrinsically safe for Zone 2 and for protection against flame propagation. Certified flameproof intake system to prevent any internal explosions from propagating to external atmosphere, industry standard ADEM A4 control system improves operator interface.

Fully certified engine for easy integration to other certified components and systems.

Additional NEC/ATEX components available for fail-safe auxiliary system monitoring, customer harness, messenger display, hand throttle control and auxiliary temperature Sensors. Certified optional components for skid integration. Class 2 division 2 alternator, ATEX-approved alternator, gear driven compressor, fan belts and exhaust gas cooler connection option. Certified engine shutdown system.

### Reliable, quiet and durable power

World-class reliability and durability, factory certified engines reduce OEM's Overall certification costs, improved serviceability, industry leading component overhaul life, rugged testing on all components improving uptime and driving down total cost of ownership.

### Broad application range

Factory-certified engines for hazardous locations applications allow simplified certification for OEM, optimized for demanding well service applications, workover, pumping, cementing, blending, liquid nitrogen, coil tubing etc. Maintains high power over a broad range of operating speeds, improving performance, steady torque rises providing superior load acceptance. Optimized ambient and altitude capabilities for operating flexibility. Engine certified to maintain T3 skin temperatures for up to 50 degrees Celsius applications.

### Worldwide product support and parts

More than 2'200 dealer outlets, Caterpillar factory trained technicians service every aspect of your hazardous package with global reach.

**Tel: 00 44 (0)1493 441383**

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## Standard Equipment

### Air compressor – gear driven and mounted

One cylinder ATEX approved Bendix BA921 CRH (Closed room head) complete with coolant and lubrication lines.

#### *Technical-*

Reciprocating, single stage, single cylinder, gear driven, operates at 1.2 Times engine speed, rated displacement of 0.44m<sup>3</sup>/min (15.7 CFM) @ 1250 rpm (compressor speed). Maximum inlet air temperature 76°C (170°F)

Air supply to be naturally aspirated only.

Refer to publication LEBW0003 hazardous location and installation guide for further hazardous environment compliance information.

### Air intake

Air cleaner

Aftercooler – separate circuit.

90Deg turbo inlet connection 304.8 mm (12") hose connection with inlet

flame arrestor to meet Zone 2, T3 Gas group II A

### Charging system

ATEX 24V -35 AMP alternator, LH mounted with poly V-belt

#### *Technical-*

ATEX 24V – 35 AMP V-groove, a heavy duty brushless alternator with V groove Alternator pulley. Provides 409mm (16.1) diameter non-finned damper, a 0.5 in v-belt single groove 292.15mm (11.5in) diameter crankshaft accessory drive pulley (to drive the alternator and refrigerant compressor when present), and 11/16 in v-belt 3 groove 203.2mm (8.0 in) diameter crankshaft fan drive pulley. This option will include a 25ft. installed alternator harness.

Alternator is ATEX compliant from -14°C to 93°C

Refer to LEBW0003 Hazardous location application and installation guide for further hazardous environment compliance information.

### Control System

- Governor – Electronic ADEM 4, PTO speed control
- Programmable ratings
- Cold mode start strategy
- Automatic altitude compensation
- Power compensation for fuel temperature
- Programmable low and high idle and TEL
- Electronic diagnostics and fault logging
- Engine monitoring and protection system (speeds, temperature, pressure)
- J1939 Broadcast (diagnostic, engine status and control)
- ATEX guarded ECM
- ATEX approved hand throttle control – shipped loose
- Engine ECM interconnect harness – shipped loose

### Cooling

- Thermostats & housing, vertical outlet engine fan drive with 0.8 drive ratio, 4 V-Belt set with 24in height
- Jacket water centrifugal pump, gear driven, RH front water pump inlet
- Water lines with exhaust gas cooler connection but does not include a Transmission cooler
- Lubricating oil cooler

### Exhaust System

Water cooled carbon steel exhaust manifold

### Filters, left side

Fuel, secondary, lower (LH 2 micron high performance)

Fuel priming pump – upward angle

### Filter, right side

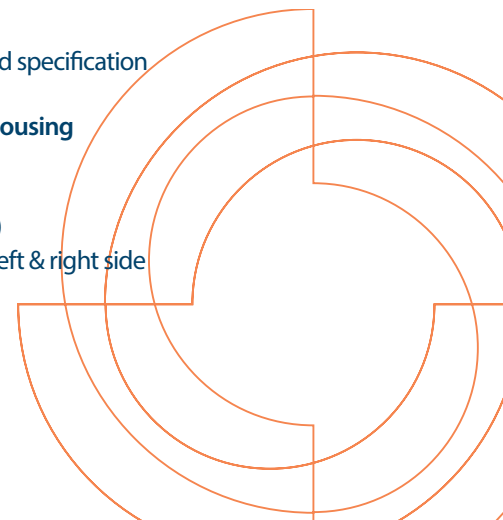
Lube oil- remote mounted specification

### Flywheel and flywheel housing

SAE No.1

### Oil level gauge (dipstick)

"Positive lock" gauge on left & right side



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## Standard Equipment

### Instrumentation

- ATEX approved messenger display – Shipped loose
- Electronic display unit for monitoring key engine operation data, and diagnostic information on a full graphic LCD screen. The product has four select buttons to scroll through the engine data diagnostic screens and navigate through the display configuration menu to change display settings. The connection to the engine control module is via the J1939 CAN data link.
- ATEX group II Category 3G
- ATEX gas group IIC, Temperature class is T3
- NEC 500 class 1 division 2 for gas groups ABCD
- NEC 505 class 1 Zone 2 for gas group IIC

### Technical-

- Display is ATEX compliant from -10c to 80C
- Refer to LEBW0003 Hazardous location application and installation guide for Further hazardous environment compliance information.

### Pump

Fuel transfer – LH front  
Centrifugal gear driven jacket water  
Rear sump oil pump

### Protection devices

Air inlet shutoff valve (ATEX approved)

### Support

Front  
Rear

### Turbocharger (Single)

Water-Cooled, rear mounted

### General

Engine lifting eyes  
Oil filler, LH Front  
Oil dipstick, LH & RH Side  
Oil pump  
Vibration damper  
Crankcase breather  
Oil pan, rear sump, 38 litre capacity  
Oil valve sampling, on filter base

## Documentation

- One copy of Caterpillar general arrangement and loose items
- One copy of Caterpillar engine wiring diagram
- One copy of declaration conformity
- One copy of Caterpillar standard parts book on CD ROM
- One copy of Caterpillar standard operation and Maintenance manual
- Performance and systems data
- Caterpillar electronic factory test results can be supplied on request



## Optional Equipment

'ATEX' compliant packaging services to include the following

- Control system – Various options available
- Exhaust gas cooling kit
- Fuel system
- Power take offs- Auxiliary drives, enclosed clutches, hydraulic pumps
- Protection devices (other)-

Various options available to include-

- Exhaust temperature
- Over-speed
- Water temperature
- Radiator
- Spark arrestor silencers
- Skid base – Engine or power-pack format
- Starter motor, air or electric format

All options can be supplied or mounted

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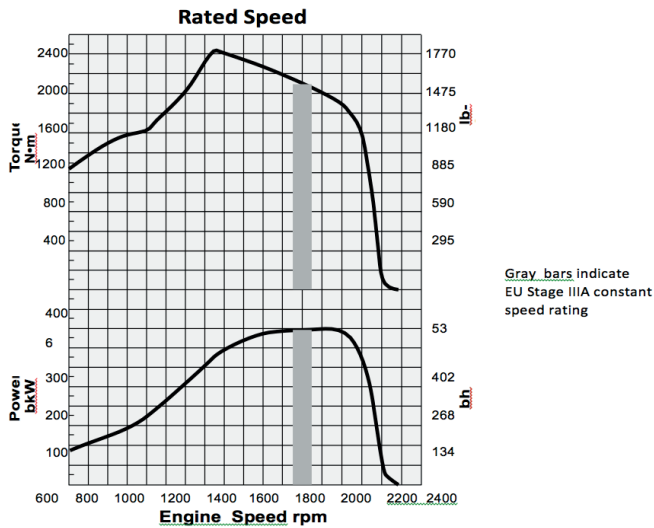


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## Performance Data

Turbocharged-Aftercooled — 1800-2000 rpm



### Peak Power

Rating	Speed rpm	Peak Power kW	Peak Power bhp
D	2000	400	536
D	1800	400	536

### Peak Torque

Speed rpm	Peak Torque N-m	Peak Torque lb-ft
1350	2437	1797
1800	2122	1565

### Emissions

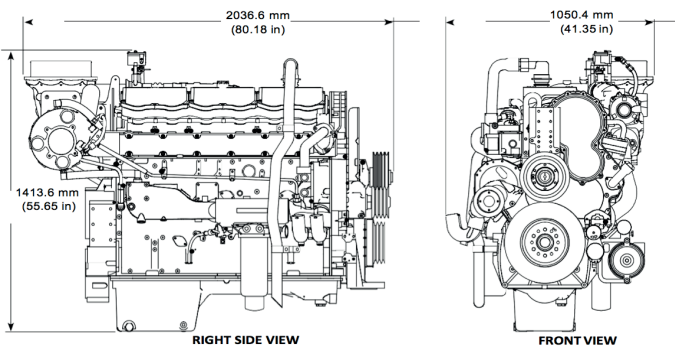
600-2200 rpm Variable Speed	1800 rpm Constant Speed
IMO Tier II	IMO Tier II
EPA Marine Tier 2 and Tier 3	EU Stage IIIA

## Rating Definitions and Conditions

**D Rating** for service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

**Engine Performance Diesel Engines** — 7 litre and higher 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.

## Dimensions



### DIMENSIONS\*

Length	mm (in)	2036.6 (80.18)
Width	mm (in)	1050.4 (41.35)
Height	mm (in)	1413.6 (55.65)
Shipping Weight	kg (lb)	1732 (3818)

\*Maximum dimensions are shown. Dimensions may be less depending on the alternator, fan adapter, and air shutoff selected.

**Please contact our Engine Sales Team for further information**

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