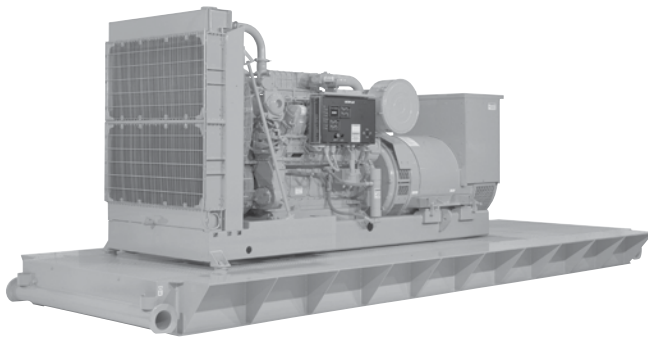


**682 bkW  
915 bhp  
1200 rpm**



Picture shown may not reflect actual configuration

## Specifications

Cat® 3508C Land Electric-Drive Drilling Module	Metric	Imperial (English)
Configuration	V-8, 4-Stroke-Cycle Diesel	
Emissions	U.S. EPA/CARB Nonroad Tier 2 Emissions Certified, China Nonroad III	
Bore	170 mm	6.7 in
Stroke	190 mm	7.5 in
Displacement	34.5 L	2111 in <sup>3</sup>
Aspiration	Turbocharged-Aftercooled	
Governor and Protection	Electronic ADEM™ A3	
Engine Weight, net dry (approx)	5218 kg	11,503 lb
Module Weight, net dry (approx)*	15 352 kg	33,846 lbs
Capacity for Liquids Lube Oil System (refill) Cooling System (engine only) Cooling System (radiator)	227.1 L 103 L 206 L	60 U.S. gal 27.2 U.S. gal 54.4 U.S. gal
Oil Change Interval	500 hours	

\*Module weight includes inner and outer base, radiator, generator, and engine.

## **Benefits & Features**

### **Engine Design**

- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Assembled, tested, and validated as a package to minimize package vibration and maximize component life
- Market-leading power density
- Designed to perform in oilfield conditions, including high ambient high altitude applications
- Long overhaul life proven in oilfield applications
- Core engine components designed for reconditioning and reuse at overhaul

### **Advanced Digital Engine Management**

ADEM A3 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system. ADEM A3 has improved user interface, display system, shutdown controls, and system diagnostics and allows electronic integration with transmissions.

### **Safety**

- E-Stop pushbutton on instrument panel
- Air shutoff and explosion relief valves
- Configurable alarm and shutdown features
- Extra alarm switches available for customer-supplied panel

### **Ease of Installation and Packaging**

- Customer interface harness
- Simple engine/package wiring
- Adapters, fittings, and connectors available for cooling, air and exhaust system

### **Improved Serviceability**

Large inspection openings allow convenient access to core engine internals

### **Reduction of Owning and Operating Costs**

- Long filter change intervals, aligned with service intervals
- Excellent fuel economy — direct injection electronic unit injectors precisely meter fuel

### **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 Cat module is full-load tested to ensure proper engine performance.

### **Product Support Offered Through Global Cat Dealer Network**

More than 2,200 dealer outlets

Caterpillar 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•S<sup>SM</sup> 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.cat.com/oilandgas](http://www.cat.com/oilandgas).

## **Standard Equipment**

### **Air Inlet System**

Aftercooler core — corrosion resistant  
Air cleaner — regular duty with soot filter  
Service indicators

### **Control System**

Caterpillar ADEM A3 ECU — LH

### **Cooling System**

Radiator cooled land based  
Outlet controlled thermostat and housing  
Jacket water pump — gear-driven  
Dual outlet  
Aftercooler fresh water cooling pump (SCAC) —  
gear-driven centrifugal

### **Exhaust System**

Exhaust flexible fitting and adapter  
Weldable flange  
Exhaust manifold — dry

### **Flywheels and Flywheel Housings**

SAE No. 00  
SAE standard rotation

### **Fuel System**

Fuel filter, fuel transfer pump  
Flexible fuel lines  
Fuel priming pump — LH  
Electronically controlled unit injectors

### **Instrumentation**

Electronic instrument panel — LH  
Analog gauges with digital display data for: engine oil  
pressure gauge, engine water temperature gauge,  
fuel pressure gauge, system DC voltage gauge,

air inlet restriction gauge, exhaust temperature  
(prior to turbochargers) gauge, fuel filter differential  
pressure gauge, oil filter differential pressure  
gauge, service meter (digital display only),  
tachometer (digital display only), instantaneous  
fuel consumption (digital display only), total fuel  
consumed (digital display only), engine start-stop  
(off, auto start, manual start, cooldown timer)

### **Lube System**

Crankcase breather  
Oil cooler, oil filter  
Shallow oil pan  
Oil pan drain valve, 2" NPT female connection

### **Mounting System**

Oilfield base 7.85 m (25 ft 9 in) length  
Heavy-duty land rig inner base frame — three-point  
mount to oilfield base

### **Power Take-Offs**

Accessory drive

### **Protection System**

ADEM A3 ECU monitoring system provides engine  
protection strategies to protect against adverse  
operating conditions. Selected parameters are  
customer programmable.

### **Starting System**

Air starting motor, air silencer

### **General**

Paint — Caterpillar yellow  
Vibration damper and guard  
Lifting eyes

## **Optional Equipment**

### **Air Inlet System**

Heavy-duty air cleaners and precleaners  
Remote air inlet adapters

### **Charging Systems**

Charging alternators

### **Control System**

Load sharing modules  
Governor conversion  
2301A load sharing governors

### **Cooling Systems**

High gloss black folded core radiators and  
conventional core radiator  
Coolant regulator conversions  
Belt guard, radiator guard  
Blower fan  
Fan drive and fan pulley  
Radiator cover  
Water level switch gauge, coolant level sensors  
Connections, heat exchangers, air separator

### **Exhaust System**

Flexible fitting  
Removal — flexible exhaust fitting  
Elbows  
Flange and exhaust expanders  
Mufflers, watercooled manifold

### **Flywheels and Flywheel Housings**

### **Fuel System**

Flexible fuel lines  
Fuel priming pumps — manual  
Fuel filters — primary, duplex  
Fuel cooler

### **Generator**

Heavy-duty oilfield spec  
Twin-bearing, close-coupled  
Factory aligned

### **Generator Attachments**

Air filter  
Low voltage extension box  
Potential transformer, current droop transformers  
Manual voltage control, cable access box  
Bearing temperature detectors

### **Instrumentation**

Customer management device  
Removal panel display, remote cylinder  
temperature display  
Gauges and instrument panels  
Switches and contactors

### **Lube System**

Fumes disposal  
Oil filter, oil pan accessories  
Sump pumps

### **Mounting System**

Bases, base removal

### **Power Take-offs**

Front stub shaft  
Pulleys

### **Protection System**

Explosion relief valve  
Shutoffs  
Switches and contactors  
Oil pressure monitors

### **Starting System**

Air pressure regulator  
Starting aids

### **General**

Tool set  
Cat data link wire

## Generator Data

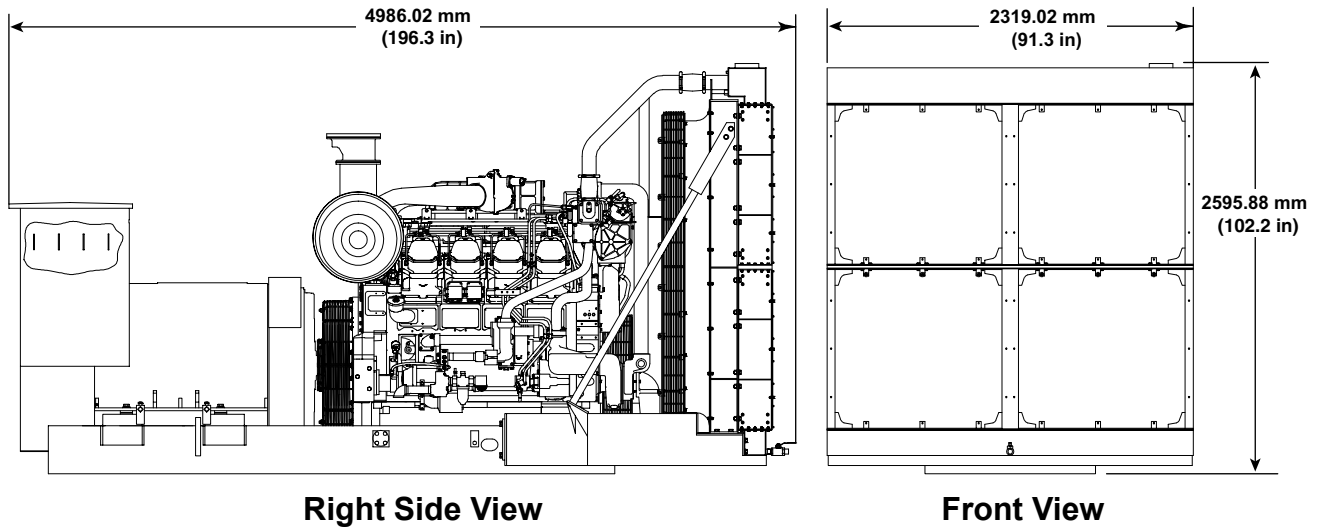
60 Hz Standard	
Rating — ekW (kVA)	840 (1200)
rpm	1200
Rated PF	0.7
Temperature Rise	80°C @ 40°C Ambient
Insulation Class	VPI
Overload	50%/2 min
Excitation	Permanent Magnet
Voltage	600
Voltage Regulator	Optional
Configuration	2-Bearing, Close-Coupled
Coastal Protection	Yes
Space Heater	Included
Construction	Form Wound
Frame Size	864

## Altitude Capability

Altitude Capability Data (corrected power altitude capability)									
Ambient Operating Temp (°F)	Altitude (feet)								
	10,499	9843	8202	6562	4921	3281	1640	984	0
50	831	853	908	915	915	915	915	915	915
68	802	823	877	915	915	915	915	915	915
86	776	797	848	903	915	915	915	915	915
104	751	771	821	873	915	915	915	915	915
122	728	747	795	846	900	915	915	915	915
Normal	831	849	894	915	915	915	915	915	915

## Dimensions

### LAND ELECTRIC-DRIVE DRILLING MODULE



Dimensions and Weight		
Length	4986.02 mm	196.3 in
Width	2319.02 mm	91.3 in
Height	2595.88 mm	102.2 in
Engine Weight (dry)	5218 kg	11,503 lb
Module Weight (dry)*	15 352 kg	33,846 lb

Do not use for installation design. See general dimension drawing for details.  
(Drawing #230-7331)

\*Module weight includes inner and outer base, radiator, generator, and engine.

## Rating Definitions and Conditions

**Ratings** are based on SAE J1995 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F), and 60% relative humidity. Ratings are valid for air cleaner inlet temperatures up to and including 50°C (122°F).

**Fuel consumption** has a tolerance of +5% and is based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 82 780 kJ/kg (18 390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal). Fuel consumption shown with all oil, fuel, and water pumps, engine driven.

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