3512
Land Electric
Drilling Module
985, 1070, 1090 bkW
(1321, 1435, 1462 bhp)
1200, 1200, 1500 rpm

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle-Diesel

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>Emissions</td>
<td>Not Emissions Certified</td>
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<tr>
<td>Bore</td>
<td>170 mm (6.7 in.)</td>
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<tr>
<td>Stroke</td>
<td>190 mm (7.5 in.)</td>
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<tr>
<td>Displacement</td>
<td>51.8 L (3258 cu. in.)</td>
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<tr>
<td>Aspiration</td>
<td>Turbocharged-Aftercooled</td>
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<tr>
<td>Governor and Protection</td>
<td>Woodward</td>
</tr>
<tr>
<td>Engine Weight, net dry</td>
<td>5580 kg (12,301 lb.)</td>
</tr>
<tr>
<td>Module Weight, net dry</td>
<td>15,714 kg (34,644 lb.)</td>
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<tr>
<td>Capacity for Liquids</td>
<td></td>
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<tr>
<td>Lube Oil System (refill)</td>
<td>318 L (84 U.S. gal.)</td>
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<tr>
<td>Cooling System (engine only)</td>
<td>157 L (41.5 U.S. gal.)</td>
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<tr>
<td>Cooling System (radiator)</td>
<td>185 L (48.9 U.S. gal.)</td>
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<tr>
<td>Oil Change Interval</td>
<td>500 hours</td>
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</tbody>
</table>

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

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

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
- Available 25’ outer base
- Inner base frame three-point mount maintains factory alignment
- Installed radiator
- 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 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•SSM™ 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**
- Aftercooler core — corrosion resistant
- Air cleaner — regular duty (dry, circular type, with soot filter and service indicators)

**Control System**
- Governor, Woodward EG6PC actuator — RH (controls provided by the SCR supplier)
- Magnetic pickup

**Cooling System**
- Thermostats and housing (dual outlet)
- Jacket water pump — gear-driven

**Exhaust System**
- Exhaust flexible fitting
- Exhaust adapters
- Weldable flange
- Exhaust manifolds — dry

**Flywheels and Flywheel Housings**
- SAE No. 00
- SAE standard rotation

**Fuel System**
- Fuel filter
- Fuel transfer pump
- Fuel return line — hard, with flexible connection
- Fuel priming pump — LH

**Instrumentation**
- Instrument panel — LH, 8 hole, 7 gauge
- Oil pressure
- Fuel pressure
- Oil filter differential pressure
- Water temperature
- Tachometer
- Service meter
- Exhaust temperature — dual

**Lube System**
- Crankcase breather
- Oil cooler
- Oil filter
- Shallow oil pan
- Oil drain extension, 2” NPT female connection

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

**Power Take-Offs**
- Accessory drive

**Protection System**
- Hydra-mechanical shutoffs (low oil pressure, high water temperature and overspeed, air inlet shutoff); monitoring gauge and emergency remote shutoff
- Alarm switches, low oil pressure, high water temperature (Marine Society approved) for connection to customer-supplied alarm panel
- Manual shutoff control — LH

**Starting System**
- Air starting motor
- Air silencer

**General**
- Paint — Cat yellow
- Vibration damper and guard
- Lifting eyes
- Lift and cable tow provisions

OPTIONAL EQUIPMENT

**Air Inlet System**
- Air cleaners
- Remote air inlet adapters

**Charging Systems**
- Charging alternators

**Control System**
- Load sharing modules
- Governor conversion
- 2301A load sharing governors

**Cooling Systems**
- High gloss black conventional core radiator
- Coolant regulator conversions
- Belt guard, radiator guard
- Blower fan
- Fan drive and fan pulley
- Radiator mounting
- Water level switch gauge
- Coolant level sensors

**European Union Certifications**

**Exhaust System**
- Removal — flexible exhaust fitting
- Elbows
- Mufflers

**Fuel System**
- Primary fuel filter
- Fuel cooler

**Generator**
- Oilfield spec, twin-bearing, close-coupled
- Factory aligned

**Generator Attachments**
- Air filter
- Low voltage extension box
- Potential transformer
- Manual voltage control
- Current droop transformers
- Cable access box
- Bearing temperature detectors

**Instrumentation**
- Customer management device
- Gauges and instrument panels
- Switches and contractors

**Lube System**
- Fumes disposal
- Oil filter
- Oil pan accessories

**Mounting System**
- Outer oilfield inner base with three-point mount
- Base removal

**Power Take-Offs**
- Front stub shaft
- Pulleys

**Protection System**
- Explosion relief valve
- Air shutoffs
- Hydra-mechanical shutoffs
- Switches and contactors

**Starting System**
- Air pressure regulator
- Starting aids

**General**
- Tool set


### GENERATOR DATA

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*Contact dealer for Altitude Capability for other ratings
LAND ELECTRIC DRILLING MODULE

Module Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
<th>Unit</th>
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<tr>
<td>Length</td>
<td>7874 mm</td>
<td>310 in.</td>
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<tr>
<td>Width</td>
<td>2385.06 mm</td>
<td>93.9 in.</td>
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<tr>
<td>Height</td>
<td>2936.24 mm</td>
<td>115.6 in.</td>
</tr>
<tr>
<td>Engine Weight (dry)</td>
<td>5580 kg</td>
<td>12,301 lb.</td>
</tr>
<tr>
<td>Module Weight (dry)*</td>
<td>15,714 kg</td>
<td>34,644 lb.</td>
</tr>
</tbody>
</table>

Note: Do not use for installation design. See general dimension drawings for detail. (Drawing #231-4621)

*R 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 42 780 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.

Performance Number: DM6801-00
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