CAT® ENGINE SPECIFICATIONS

V-8, 4-Stroke-Cycle-Diesel

- Emissions: Not Emissions Certified
- Peak Torque at Speed: 3137 lb-ft
- Bore: 170 mm (6.7 in.)
- Stroke: 190 mm (7.5 in.)
- Displacement: 34.5 L (2107 cu. in.)
- Aspiration: Turbocharged-Aftercooled
- Governor and Protection: W3161
- Engine Weight, net dry (approx): 4309 kg (9500 lb.)
- Capacity for Liquids
  - Lube Oil System (refill): 227.1 L (60 U.S. gal.)
  - Cool System (engine only): 103 L (27.2 U.S. gal.)
  - Cool System (radiator): 160.1 L (42.3 U.S. gal.)
- Oil Change Interval: 500 hours
- Rotation (from flywheel end): Counterclockwise
- Flywheel and Flywheel Housing: SAE No. 00
- Flywheel Teeth: 151

FEATURES

Engine Design
- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- 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
- Broad torque curve optimized for petroleum mechanical drive application

Improved Serviceability
Large inspection openings allow convenient access to core engine internals

Control System
- Woodward 3161 governor
- E-stop pushbutton on instrument panel
- Air shutoff and explosion relief valves
- Extra alarm switches available for customer-supplied panel
- Instrument panel — LH analog display of key package operation parameters

Reduction of Owning and Operating Costs
- Long filter change intervals, aligned with service intervals
- Torsional vibration analysis available from factory to maximize component life

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•S™ 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 with soot filter
- Service indicators

Control System
- Governor — RH, 3161
- Pneumatic control (10-60 psi)
- Governor control — positive locking

Cooling System
- Thermostats and housing for conventional core radiator
- Jacket water pump — gear-driven, centrifugal

Radiator Cooled Land Based
- Outlet controlled thermostat and housing
- Jacket water pump — gear-driven

Exhaust System
- Exhaust flexible fitting, adapter, flange

Flywheels and Flywheel Housings
- Flywheel — SAE No. 00, 151 teeth
- Flywheel housing — SAE No. 00

Fuel System
- Fuel filter, with service indicator
- Priming pump — LH
- Fuel transfer pump
- Flexible fuel lines

Instrumentation
- Instrument panel — LH
- Gauges — engine oil pressure gauge, fuel pressure gauge, oil filter differential gauge, jacket water temperature gauge

Lube System
- Service meter — electric
- Tachometer

Power Take-Offs
- Accessory drive — upper RH
- Front housing — two-sided

Protection System
- Junction box
- Manual shutoff — RH
- Safety shutoff protection, energized to shutdown
- Low oil pressure
- Water temperature
- Overspeed

Starting System
- Air starting motor, RH, 620 to 1034 kPa (90 to 150 psi), LH control
- Air silencer

General
- Paint — Cat yellow
- Vibration damper and guard
- Lifting eyes

OPTIONAL EQUIPMENT

Air Compressor

Air Inlet System
- Air cleaners
- Remote air inlet adapters

Charging Systems
- Battery chargers and charging alternators

Control System
- Load sharing modules
- Local speed throttle control
- Governor conversion
- 2301A speed control governors and actuator
- 3161 mechanical governors
- Throttle position sensors

Cooling System
- High gloss black folded core radiators and conventional core radiators
- Belt guard
- Blower fan
- Fan drive and fan pulley
- Radiator cover
- Water level switch gauge
- Coolant level sensors
- Air separator

Exhaust System
- Flexible fitting, elbows
- Flange and exhaust expanders
- Mufflers

Flywheel and Flywheel Housing

Fuel System
- Fuel priming pumps, flexible fuel lines
- Fuel filter — primary
- Fuel cooler, fuel level switch

Instrumentation
- Gauges and instrument panels

Lube System
- Fumes disposal
- Oil filters
- Prelube pumps, sump pumps

Power Take-Offs
- Flexible couplings, coupling hubs
- Front accessory drives
- Auxiliary drive shafts and pulleys
- Front stub shaft and flywheel stub shaft
- Pulleys

Protection System
- Shutoffs
- Switches and contactors
- Explosion relief valves
- Oil pressure monitor

Starting System
- Starting motors — air, gas, electric
- Air pressure regulators, controls and silencer
- Air controls — manual and electric
- Redundant start systems
- Start switch
- Starting aids — JW heater and ether injection
- Battery sets — 24 volts with rack

General
- Flywheel guard
- Special paint
PERFORMANCE CURVES*

Turbocharged-Aftercooled
566 bkW (760 bhp) @ 1200 rpm
DM2894-02

Heat Rejection Data

<table>
<thead>
<tr>
<th>Engine Speed rpm</th>
<th>Engine Power bkW</th>
<th>Engine Power bhp</th>
<th>Rej to JW Btu/min</th>
<th>Rej to Atmos Btu/min</th>
<th>Rej to Exh Btu/min</th>
<th>From Aft Clr Btu/min</th>
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</thead>
<tbody>
<tr>
<td>1200</td>
<td>567.0</td>
<td>760.4</td>
<td>309</td>
<td>17573</td>
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<td>644.4</td>
<td>247</td>
<td>14047</td>
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<td>4959</td>
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</tbody>
</table>

Approximate Power (bhp) as function of Altitude and Inlet Manifold Temperature for DM2894-02

<table>
<thead>
<tr>
<th>Inlet Manifold Temp. (°F)</th>
<th>Altitude (feet)</th>
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<tbody>
<tr>
<td></td>
<td>10,499</td>
</tr>
<tr>
<td>50</td>
<td>685</td>
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<tr>
<td>68</td>
<td>662</td>
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<tr>
<td>86</td>
<td>641</td>
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<tr>
<td>104</td>
<td>620</td>
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<td>122</td>
<td>601</td>
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<tr>
<td>Normal</td>
<td>687</td>
</tr>
</tbody>
</table>

*Other ratings and performance data available.
LAND MECHANICAL ENGINE

3508

470-847 bkW (680-1135 bhp)

Object Dimensions

<table>
<thead>
<tr>
<th>Length</th>
<th>2136.14 mm</th>
<th>84.1 in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>1701.80 mm</td>
<td>67.0 in.</td>
</tr>
<tr>
<td>Height</td>
<td>1719.58 mm</td>
<td>67.7 in.</td>
</tr>
<tr>
<td>Engine Weight (dry)</td>
<td>4309 kg</td>
<td>9500 lb.</td>
</tr>
</tbody>
</table>

Note: Do not use for installation design. See general dimension drawings for detail. (Drawing #132-4873)

RATING DEFINITIONS AND CONDITIONS

IND-C (Intermittent)
Intermittent service where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

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 (18,290 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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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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