



Image shown may not reflect actual package.

STANDBY 2000 kW 2500 kVA 60 Hz 1800 rpm 480 Volts

Caterpillar® is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES



EMISSIONS

- EPA and CARB Emissions Certified for non-road mobile applications

UL 2200

- UL 2200 Listed configuration available

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

ENCLOSURES (optional)

- Weather protective and sound attenuated

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1844 dealer branch stores operating in 166 countries, you're never far from the Caterpillar part you need
- 99.7% of parts orders filled within 24 hours. The best product support record in the industry
- Caterpillar dealer service technicians are trained to service every aspect of your electric power generation system
- Preventive maintenance agreements
- The Cat Scheduled Oil Sampling (S•O•SSM) program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products



CAT® 3516B TA DIESEL ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- UL 2200 Listed packages are available. Certain restrictions may apply. Consult with your Caterpillar dealer



CAT SR4B GENERATOR

- Designed to match performance and output characteristics of Caterpillar diesel engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Single point access to accessory connections
- UL 1446 recognized Class H insulation system



CAT CONTROL PANELS

- Controls designed to meet individual customer needs:
 - EMCP II+ provides full-featured power metering and protective relaying
- UL 508A Listed

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Single element canister type air cleaner • Service indicator 	<ul style="list-style-type: none"> • Dual element & heavy duty air cleaners • Air inlet adapters & shutoff
Cooling	<ul style="list-style-type: none"> • Radiator with guard (43°C) • Coolant drain line with valve • Fan and belt guards • Caterpillar Extended Life Coolant* • Coolant level sensors <p>*Not included with packages without radiators</p>	<ul style="list-style-type: none"> • Radiator with 50°C ambient capability • Radiator removal • Heat exchanger and expansion tank • Radiator duct flange • Coolant level switch gauge • Jacket water heater
Exhaust	<ul style="list-style-type: none"> • Dry exhaust manifold • Flanged faced outlets 	<ul style="list-style-type: none"> • Mufflers (15 dba) • Stainless steel exhaust flex fittings • Elbows, flanges, expanders & Y adapters
Fuel	<ul style="list-style-type: none"> • Secondary fuel filters • Fuel priming pump • Flexible fuel lines • Fuel cooler* <p>*Not included with packages without radiators</p>	<ul style="list-style-type: none"> • Water separator • Duplex fuel filter
Generator	<ul style="list-style-type: none"> • Permanent magnet excited • Class H insulation • Class F temperature (105°C prime/130°C standby) • Reactive droop • Digital Voltage Regulator, 3-phase sensing • Bus bar connections • Winding temperature detectors • Anti-condensation space heaters 	<ul style="list-style-type: none"> • Digital Voltage Regulator with KVAR/PF control • Bearing temperature detectors • Oversize & premium generators • Cable access box • European bus bars • Circuit breakers, UL listed, 3 pole with shunt trip (low & medium voltage only) • Circuit breakers, IEC compliant, 3-pole with shunt trip (low & medium voltage only)
Governing	<ul style="list-style-type: none"> • ADEM II 	<ul style="list-style-type: none"> • Load share module
Control Panels	<ul style="list-style-type: none"> • EMCP II+ (package mounted, rear facing) 	<ul style="list-style-type: none"> • Customer Communication Module • Local alarm modules • Remote annunciator modules • Auto starting aid & switch* <p>*Cannot be used with UL LIST</p>
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Gear type lube oil pump 	<ul style="list-style-type: none"> • Oil level regulator • Deep sump oil pan • Electric & air prelube pumps • Manual prelube with sump pump • Duplex oil filter • Oil level regulator
Mounting	<ul style="list-style-type: none"> • 330 mm (13 in) structural steel rails • Spring-type, anti-vibration mounts (shipped loose) 	<ul style="list-style-type: none"> • Isolator removal
Starting/Charging	<ul style="list-style-type: none"> • 24 volt starting motor(s) • 45 amp charging alternator • Batteries with rack and cables • Battery disconnect switch 	<ul style="list-style-type: none"> • Battery chargers (10 Amp) • Oversize batteries • Ether starting aids • Heavy duty starting motors • Barring device (manual) • Air starting motor with control & silencer
General	<ul style="list-style-type: none"> • Right-hand service • Paint - Caterpillar Yellow except rails and radiators gloss black • SAE standard rotation • Flywheel and flywheel housing - SAE No. 00 	<ul style="list-style-type: none"> • Enclosures • Front stub shaft • CSA certification • EU Certificate of Conformance
Note	<p>Standard and optional equipment may vary for UL 2200 Listed Packages. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.</p>	

SPECIFICATIONS



CAT GENERATOR

SR4B Generator	
Excitation	Permanent Magnet
Pitch	.0.6666
Number of poles	.4
Number of bearings	Single Bearing
Insulation	.UL 1446 Recognized Class H with tropicalization and antiabrasion
IP rating	.Drip Proof IP22
Alignment	.Pilot Shaft
Overspeed capability - % of rated	.150
Wave form	.Less than 5% deviation
Paralleling kit/Droop transformer	.Standard
Voltage regulator	.3 Phase sensing with selectable volts/Hz
Voltage regulation	.Less than +/- 1/2% (steady state) Less than +/- 1% (no load to full load)
Telephone Influence Factor	.Less than 50
Harmonic Distortion	.Less than 5%



CAT DIESEL ENGINE

3516B TA, V-16, 4-stroke-cycle watercooled diesel	
Bore - mm	.170.00
Stroke - mm	.190.00
Displacement - L	.69.06
Compression ratio	.14.0 TO 1
Aspiration	.TA
Fuel system	.Direct unit injection



CAT CONTROL PANELS

- EMCP II+
- 24 Volt DC Control
- NEMA 12, IP44 enclosure
- Electronically dead front
- Lockable hinged door
- Generator instruments meet ANSI C-39-1
- Generator terminal box mounted
- Single location for customer connection
- UL508A Listed
- Panel illuminating lights
- Auto start/stop control
- True RMS metering, 3-phase
- Digital indications for:
 - RPM
 - Operating hours
 - Oil pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, Phase amps, Hz
- ekW, kVA, kVAR, kWhr, %kW, PF
- Shutdowns with indicating lights for:
 - Low oil pressure
 - High coolant temperature
- Low coolant level
 - Overspeed
 - Emergency stop
 - Failure to start (overcrank)
- Programmable protective relaying functions:
 - Under and over voltage
 - Under and over frequency
 - Reverse power
- Overcurrent (phase and total)
- Programmable kW level relay
- 3 spare indicator LED's (programmable)
- 4 spare alarm/shutdown inputs

TECHNICAL DATA

Open Generator Set - — 1800 rpm/60 Hz/480 Volts	STANDBY DM4682	
Package Performance Power rating Power rating @ 0.8 pf	2000 ekW 2500 kVA	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	514.2 L/hr 391.6 L/hr 276.3 L/hr	135.8 Gal/hr 103.4 Gal/hr 73.0 Gal/hr
Cooling System* Air flow restriction (system) Engine coolant capacity	.12 kPa 233.0 L	0.48 in. water 61.6 Gal
Exhaust System Combustion air inlet flow rate Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	173.1 m ³ /min 452.5 Deg C 438.1 m ³ /min 203.2 mm 6.7 kPa	6,113.0 cfm 847 Deg F 15,471.4 cfm 8.0 in 26.9 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	765 kW 1919 kW 145 kW 75.14 kW	43,505 Btu/min 109,133 Btu/min 8,246 Btu/min 4,273.2 Btu/min
Alternator** Motor starting capability @ 30% voltage dip Frame Temperature Rise	4418 skVA 825 130 Deg C	
Lube System Lube oil refill volume with filter change for standard sump	401.3 L	106.0 Gal
Emissions*** Nox g/hp-hr (not to exceed) CO g/hp-hr (not to exceed) HC g/hp-hr (not to exceed) PM g/hp-hr (not to exceed)	< 9.16 g/bhp-hr < .20 g/bhp-hr < .16 g/bhp-hr < .075 g/bhp-hr	

*Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer.

**UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40 degree C ambient per NEMA MG1-32.

***Emissions data measurements are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. This engine's exhaust emissions are in compliance with the US EPA and California nonroad regulations as identified above. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: - ABGSM TM3, AS1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG 1-22, VDE0530, 89/392/EEC, 89/336/EEC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514. Standby ambients shown indicate ambient temperature at 100 percent load which results in a coolant top tank temperature just below the shut-down temperature.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

Fuel Rates are based on fuel oil of 35° API (16° C or 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.).

Additional Ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

Package Dimensions		
Length	6015.5 mm	236.83 in
Width	2441.7 mm	96.13 in
Height	2940.1 mm	115.75 in
Weight	13 766 kg	30,349 lb

Note: Do not use for installation design.
See general dimension drawings
for detail (Drawing #2001188).

TMI Reference No.: DM4682

PL Reference No.: 516DE2C

U.S. Sourced

LEHE2092 4 April 2002

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The International System of Units (SI) is used in this publication.