



Shown with
Optional Equipment

3516B POWER PACKAGE

(Walk-In Sound Attenuated Enclosure)

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

FEATURES

The Caterpillar Power Package is bundled with the 3516B 60 Hz, 1800 rpm, 3-phase, 480/227 Volt, diesel package generator set

ENCLOSURE

- Application-engineered airflow to meet cooling and sound requirements.
- Roof pitch prevents moisture accumulation
- 43°C (110°F) ambient capability
- Wind load rated to 150 mph
- Roof load rated to 40 psf
- Sound attenuated to provide a four point logarithmic average of 72 dB(A) @ 50 feet
- Built in accordance with UL2200 rainproof designation
- Integrally insulated exhaust silencing system housed within the enclosure for operator safety, maximum product life, and additional sound attenuation
- 5000 gallon double wall, UL 142 Listed, closed-top diked, generator base tank with integral lift provisions
- Compatible with Cat® generator set control panel attachments

FULL RANGE OF ATTACHMENTS

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

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT

- Caterpillar dealers provide extensive post sale support including maintenance and repair agreements

- Caterpillar dealers fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1844 dealer branch stores operating in 166 countries
- 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 and low emissions



CAT SR4B GENERATOR

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



CAT CONTROL PANELS

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

LEHE2482

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Single element canister type air cleaner Service indicator	
Cooling	Vertical Stacked Core Radiator sized for 43° C/110° F Coolant drain line with valve Fan and belt guards Coolant level sensors SCAC (3500B only) Low coolant level alarm and shutdown Caterpillar Extended Life Coolant	
Exhaust	Dry exhaust manifold Flanged faced outlets Muffler; pancake style, self-insulated, and internally mounted from ceiling of enclosure Attenuates specific PGS exhaust noise to a level consistent with overall noise requirement	
Fuel	5000 gallon double wall, UL 142 Listed, closed-top diked generator base tank with integral lift provisions Vent and emergency vents in accordance with NFPA30 Annunciator panel indicating rupture/overflow basin, low fuel level and 90% full Water separator installed, with fuel filter before engine Secondary fuel filters Fuel cooler radiator mounted Fuel priming pump Flexible fuel lines piped to tank	3500 USG double wall UL142 listed, closed-top diked generator base tank 2000 USG double wall UL142 listed, closed-top diked generator base tank Base frame with optional 250 USG double wall UL142 secondary containment listed day tank Fuel transfer system Fuel tank heaters
Generator	3-phase brushless, salient pole Permanent magnet excited 6 lead (>1250 kW @ 60 Hz) Digital Voltage Regulator, 3-phase sensing Class H insulation Class F temperature rise (105° C prime/130° C standby) Reactive droop Bus bar connections Winding temperature detectors Anti-condensation space heaters, 820 Frames: 220-240 VAC, 1200 W	
Circuit Breaker Enclosure and Distribution Panel	Floor standing circuit breaker enclosure: <ul style="list-style-type: none"> • 3200 amp magnum DS Circuit breaker fixed mounted in NEMA 1 enclosure • Manually operated • 65 kA interrupt current @ 480 V • 24 VDC shunt trip • 4A-4B auxiliary switch • Digitrip 220 trip unit with LI trip function and 3000A rating plug • Secondary terminal kit AC Distribution panel: <ul style="list-style-type: none"> • Integrated into the floor standing breaker NEMA 1 enclosure • 120/240V 3-wire distribution • Breaker • Provides power for lights and receptacles • Provides power for battery charger, jacket water heaters, and generator space heaters • Includes fault protection and relays to de-energize jacket water heaters and generator space heater when engine is running 	
Governing	ADEMII	
Control Panel	EMCP II+ (Generator terminal box mounted)	Load share module Customer Control Module Local alarm modules Remote annunciator modules Customer Interface Module Synchronizing module Auto starting aid: Switch Engine failure relay
Lube	Lubricating oil and filter Oil drain line with valves Gear type lube oil pump	
Mounting	330 mm (13 in) structural steel rails Spring-type, anti-vibration mounts (Seismic Zone 4) installed between generator set and fuel tank base (or enclosure floor if day tank is used)	

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Starting/Charging	24 VDC/20 amp battery charger with float /equalize modes and charging Jacket water heater, 6 kW total 45 amp charging alternator Batteries with rack and cables Battery disconnect switch	NiCad batteries and charger Battery heating pads Jacket water heater, 12 kW total
Enclosure	Powder coated 14-gauge (minimum) galvanealed steel panels Bolted panel construction using Caterpillar grade 8 fasteners Steel deck plate on floor Three (3) lockable, gasketed personnel doors Steps, OSHA rated, one (1) for each personnel door, three (3) total. Two (2) access panels provided for bus bars and discharge plenum access Eight (8) 100 Watt incandescent lights with globes and guards. Switches at each door (3 total) Three (3) duplex GFI receptacles, one by each personnel door. Removable lift provisions	Powder coated exterior paint colors — white, green, ANSI61 gray, or Cat yellow
General	Right hand service SAE standard rotation Flywheel and flywheel housing — SAE No. 00	

SPECIFICATIONS



CAT 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 water-cooled diesel
Bore – mm (in) 170 (6.7)
Stroke – mm (in) 190 (7.5)
Displacement – L (cu in) 69.06 (4214.3)
Compression ratio 14:1
Aspiration TA
Fuel system Direct unit injection



CAT CONTROL PANELS

EMCP II+
24 Volt DC Control
NEMA 1, IP23 dust proof 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
Voltage adjustment potentiometer
True RMS AC 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 Indicator LED's (programmable for fuel high, low and rupture)
4 spare alarm/shutdown inputs

ENCLOSURE OPERATING CHARACTERISTICS

3516B Power Package					
Generator Set Rating 60 Hz/480 Volts	60 Hz (1800 rpm)				
	dBA @ Full Load			Ambient Capability * °C (°F)	
	1 m	7 m	15 m	SB	PP
1640-2000 ekW	79.7	75	72	43° C (110° F)	43° C (110° F)

*Ambient measured with Caterpillar Extended Life Coolant

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 MG1-22, 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 shutdown temperature.

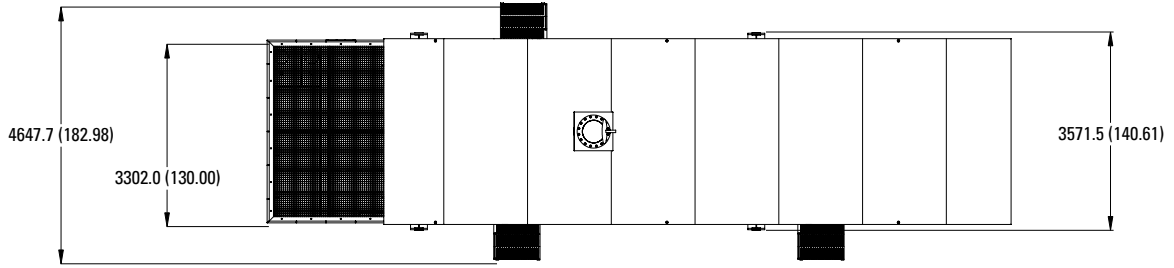
Prime — Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514 available on request. Prime power ambients shown indicate ambient at 100 percent load which results in a coolant top tank temperature just below the alarm temperature.

Ratings are based on SAE J1349 standard conditions. These ratings also apply to ISO3046/1, DIN6271, and BS5514 standard conditions.

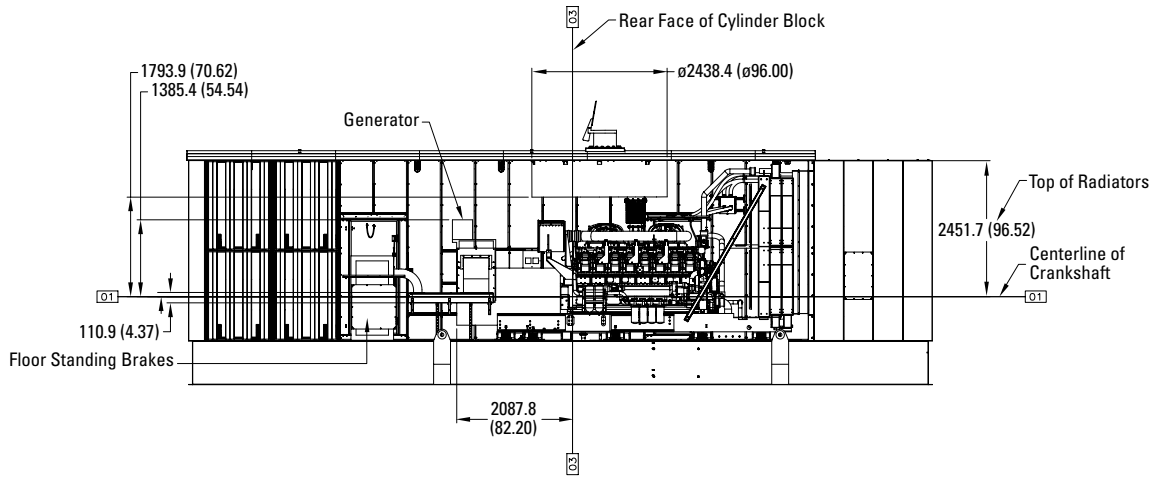
Fuel rates are based on fuel oil of 35° API [@16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

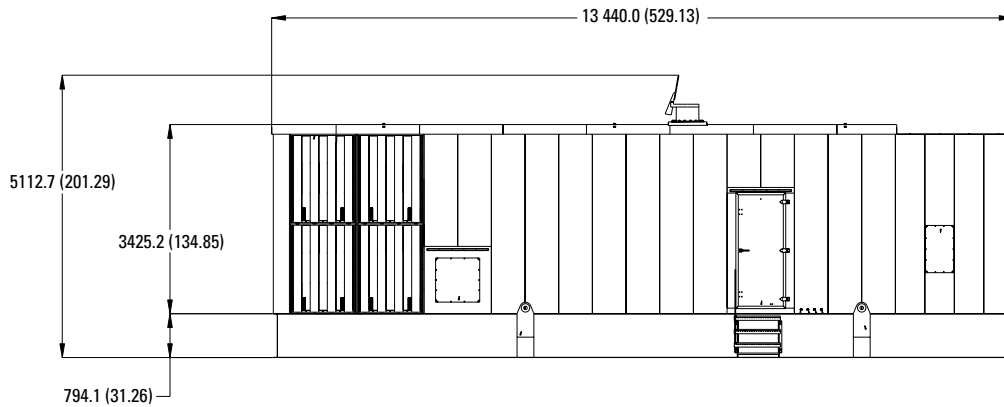
TOP VIEW



SIDE VIEW/CUTAWAY



SIDE VIEW



Power Package Dimensions		
Length	13 440.0 mm	529.13 in
Width	4647.7 mm	182.98 in
Height*	5112.7 mm	201.29 in
Approx. weight w/genset	36 363 kg	80,000 lbs

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 220-3466).

For shipping, steps and exhaust rain cap are not installed.

*Height reflects the empty 5000 gallon fuel tank.

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P O W E R P A C K A G E



U.S. sourced

LEHE2482 (7-02)

www.CAT-ElectricPower.com

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