

Shown with
Optional
Equipment

STANDBY 500 kW PRIME 455 kW 60 Hz

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.

FULL RANGE OF ATTACHMENTS

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

SINGLE-SOURCE SUPPLIER

- Complete systems designed at Caterpillar ISO9001 certified facilities
- **Certified Prototype Tested** with torsional analysis

WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1,200 dealer outlets operating in 166 countries, you're never far from the Caterpillar part you need.
- 99.5% of parts orders filled within 48 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® 3412 TTA 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



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



CAT CONTROL PANELS

- Three levels of controls, designed to meet individual customer needs:
 - EMCP II provides digital monitoring, metering, and protection
 - EMCP II+ provides EMCP II features along with full-featured power metering and protective relaying
 - Switchgear conversion provides easy interface for remote switchgear

STANDBY 500 ekW
PRIME 455 ekW
60 Hz



TECHNICAL DATA

Generator Set — 1800 rpm/60 Hz/480 Volt			Standby		Prime	
Package Performance						
Power rating	ekW		500		455	
Power rating @ 0.8 PF	kVA		625		569	
Fuel Consumption						
100% load with fan	L/hr	Gal/hr	144.6	38.2	131	34.6
75% load with fan	L/hr	Gal/hr	111.7	29.5	105	27.7
50% load with fan	L/hr	Gal/hr	80.3	21.2	72.1	19.0
Cooling System						
Ambient air temperature	Deg C	Deg F	46	114	43	109
Air flow restriction (system)	kPa	in water	0.12	0.5	0.12	0.5
Air flow (maximum @ rated speed for standard radiator arrangement)	m ³ /min	cfm	673	23,767	673	23,767
Engine coolant capacity with radiator	L	Gal	115.3	30.9	115.3	30.9
Engine coolant capacity without radiator	L	Gal	58.7	15.5	58.7	15.5
Exhaust System						
Combustion air inlet flow rate	m ³ /min	cfm	50.3	1776	46.1	1627
Exhaust stack gas temperature	Deg C	Deg F	495	923	480	896
Exhaust gas flow rate	m ³ /min	cfm	132.2	4668	119.6	4222
Exhaust flange size (internal diameter)	mm	in	203	8	203	8
Exhaust system backpressure (maximum allowable)	kPa	in water	6.7	27	6.7	27
Heat Rejection						
Heat rejection to coolant (total)	kW	Btu/min	335	19,051	304	17,288
Heat rejection to exhaust (total)	kW	Btu/min	532	30,254	485	27,581
Heat rejection to atmosphere from engine	kW	Btu/min	101	4925	90	5101
Heat rejection to atmosphere from generator	kW	Btu/min	36.33	2066.05	32.15	1828.34
Alternator						
Motor starting capability @ 30% voltage dip	kVA		1224		1224	
Frame			588		588	
Temperature rise	Deg C		130		105	
Lube System						
Refill volume with filter change for standard pump	L	Qts	60	15.9	60	15.9
Emissions*						
NOx	g/hp-hr		<6.9		<6.9	
CO	g/hp-hr		<8.5		<8.5	
HC	g/hp-hr		<1.0		<1.0	
PM	g/hp-hr		<0.4		<0.4	

*Emissions data measurement is consistent with those described in EPA CFR 40 Part 86 Subpart D and ISO 8178-1 for measuring HC, CO, PM, NOx.

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.

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.

Ratings are based on SAE J1349 standard conditions.

These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

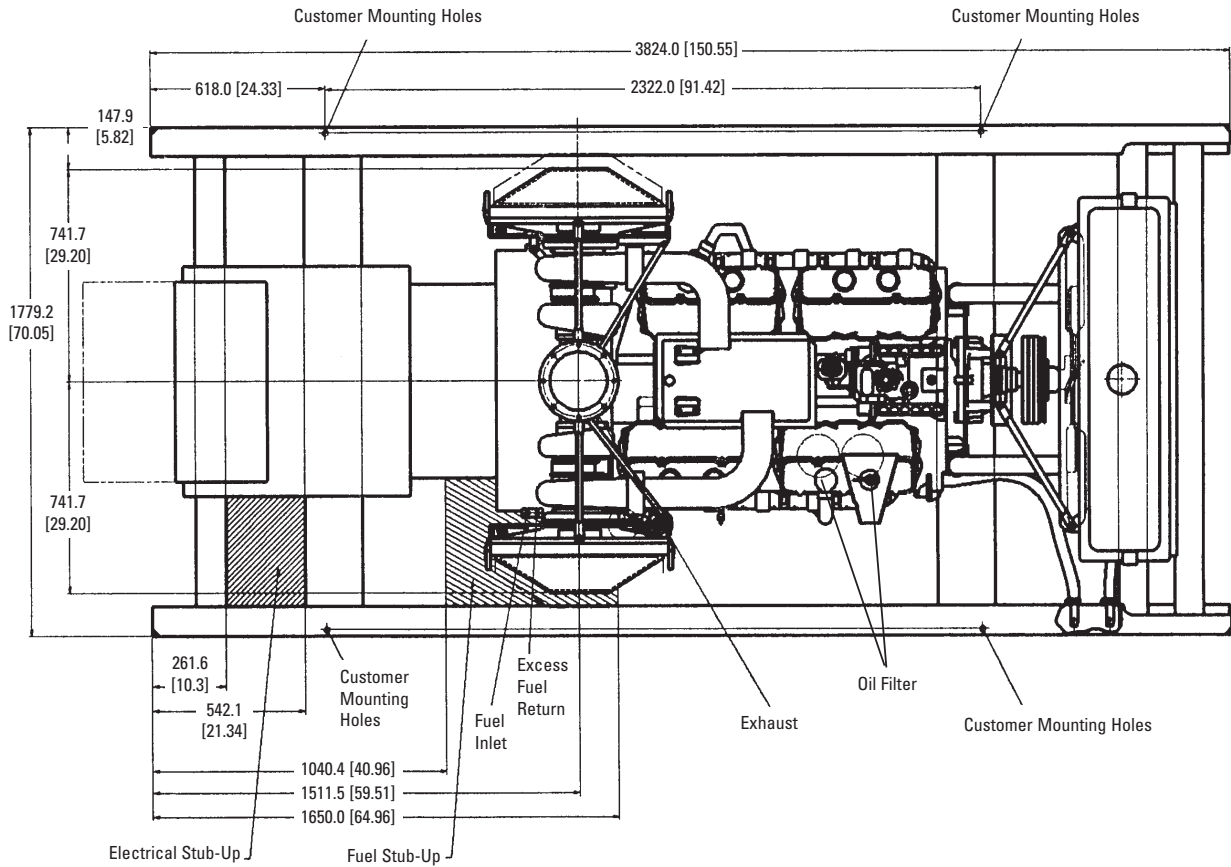
Fuel rates are based on fuel oil of 35° API (@ 16° C (60° F)) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

STANDBY 500 kW
 PRIME 455 kW
 60 Hz



STANDBY/PRIME POWER GENERATOR SET PACKAGE — TOP VIEW



Package Dimensions		
Length	3824.0 mm	150.55 in
Width	1779.2 mm	70.05 in
Radiator Height	2004.8 mm	78.93 in
Control Panel Height	1811.3 mm	71.31 in
Shipping Weight	4427 kg	9760 lb

Note: General configuration not to be used for installation. See general dimension drawings for detail.



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