



Shown with
Optional
Equipment

STANDBY 900 kVA PRIME 810 kVA

50 Hz

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

FEATURES

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

- Complete systems designed and built at Caterpillar ISO 9001 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 STA 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
- Segregated AC/DC, low voltage accessory box provides single point access to accessory connections



CAT CONTROL PANELS

- Four 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
 - EMCP II+ Auto-Paralleling provides EMCP II+ features along with synchronization and load sharing
 - Switchgear Conversion provides easy interface for remote switchgear

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FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Modular air cleaner, single element with dust evacuator Service indicator	Dual element air cleaner Heavy-duty air cleaner
Cooling	Radiator with guard Coolant drain line with valve Fan and belt guards Caterpillar Extended Life Coolant Low coolant level alarm and shutdown	Radiator duct flange Jacket water heater with shutoff valves Heat exchanger and expansion tank
Exhaust	Stainless steel exhaust flex and ANSI weld flange	10 dBA muffler and ANSI weld flanges 25 dBA muffler and ANSI weld flanges 35 dBA muffler and ANSI weld flanges Elbow kit, through-wall installation kit Manifold and turbocharger guards
Fuel	Primary fuel filter Secondary fuel filter Fuel priming pump Flexible fuel lines Water separator	Manual transfer pump (3) Automatic transfer systems to choose from Low fuel level alarm and shutdown
Generator	Self excited class H insulation class F temperature rise [130° C standby/105° C prime] 2:1 Volts/Hz AVR Reactive droop kit Extension box	Permanent magnet Digital Voltage Regulator Digital Voltage Regulator with KVAR/PF control Anti-condensation space heater Premium generators Circuit breaker, IEC compliant, 3-pole with shunt trip Circuit breaker, IEC compliant, 4-pole with shunt trip
Governor	Cat electronic	Electronic load sharing
Control Panels	EMCP II	Switchgear conversion EMCP II+ EMCP II+ with Auto-Paralleling Local alarm and remote annunciator modules
Lube	Lubricating oil and filter Oil drain line with valves Fumes disposal	Manual sump pump
Mounting	Formed steel base Linear vibration isolators between base and engine-generator	Fuel tank base Extended capacity fuel tank base Skid base
Starting/Charging	45 amp charging alternator Energized To Run (ETR) fuel shutoff solenoid 24 Volt starting motor Batteries with rack and cables	Heavy-duty starting system Integral 5 and 10 amp battery chargers Oversize batteries Ether starting aid Battery disconnect switch
Other		Enclosures — sound attenuated, weather protective Automatic transfer switches Floor standing circuit breakers EU Certificate of Conformance (CE)

SPECIFICATIONS

 **CAT SR4B GENERATOR**

Frame size 598
 Type Self excited, static regulated, brushless
 Construction Single bearing, close coupled
 Three phase 12 lead reconnectable
 Insulation Class H with tropicalization and antiabrasion
 IP rating Drip proof IP22
 Alignment Pilot shaft
 Overspeed capability
 Prototype tested 180%
 Production tested 150%
 Wave form Less than 5% deviation
 Paralleling capability Standard
 Voltage regulator 3-phase sensing with
 2:1 Volts-per-Hertz
 Voltage regulation Less than ± 1/2% (steady state)
 Less than ± 1% (no load to full load)
 Voltage gain Automatic
 TIF Less than 50
 THD Less than 5%

 **CAT ENGINE**

3412 STA, V-12, 4-stroke-cycle watercooled diesel
 Bore — mm (in) 137 (5.4)
 Stroke — mm (in) 152 (6.0)
 Displacement — L (cu in) 27.0 (1649)
 Compression ratio 13.0:1
 Aspiration Turbocharged-Aftercooled
 Fuel system Mechanical pump
 Governor type Electronic

 **CAT CONTROL PANEL**

24 Volt DC Control
 NEMA 1, IP22 enclosure
 Electrically dead front
 Lockable hinged door
 Generator instruments meet ANSI C-39-1
 Terminal box mounted
 Single location customer connector point
 EC compliant — segregated AC/DC connection

Consult your Caterpillar dealer for available voltages.

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PRIME 810 kVA
50 Hz



TECHNICAL DATA

Generator Set — 1500 rpm/50 Hz/400 Volt		Standby DM1909-02		Prime DM1908-02	
Package Performance					
Power rating @ 0.8 PF	kVA	900		810	
Power rating	ekW	720		648	
Fuel Consumption					
100% load with fan	L/hr Gal/hr	192	51	172	45
75% load with fan	L/hr Gal/hr	144	38	130	34
50% load with fan	L/hr Gal/hr	100	26	91	24
Cooling System					
Ambient air temperature	Deg C Deg F	50	122	50	122
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	1089	38,429	1089	38,429
Engine coolant capacity with radiator	L Gal	162	43	162	43
Engine coolant capacity without radiator	L Gal	59	16	59	16
Exhaust System					
Combustion air inlet flow rate	m ³ /min cfm	55	1930	49	1722
Exhaust stack gas temperature	Deg C Deg F	545	1013	539	1003
Exhaust gas flow rate	m ³ /min cfm	157	5550	139	4915
Exhaust flange size (internal diameter)	mm in	254	10	254	10
Exhaust system backpressure (maximum allowable)	kPa in water	6.7	27	6.7	27
Heat Rejection					
Heat rejection to coolant (total)	kW Btu/min	429.0	24,396	386.0	21,951
Heat rejection to exhaust (total)	kW Btu/min	721.0	41,002	637.0	36,225
Heat rejection to atmosphere from engine	kW Btu/min	119.0	6767	108.0	6142
Heat rejection to atmosphere from generator	kW Btu/min	35.5	2019	30.9	1757
Alternator					
Motor starting capability @ 30% voltage dip	kVA	1806		1806	
Frame		598		598	
Temperature rise	Deg C	130		105	
Lube System					
Refill volume with filter change for standard sump	L Qts	60	63	60	63

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.

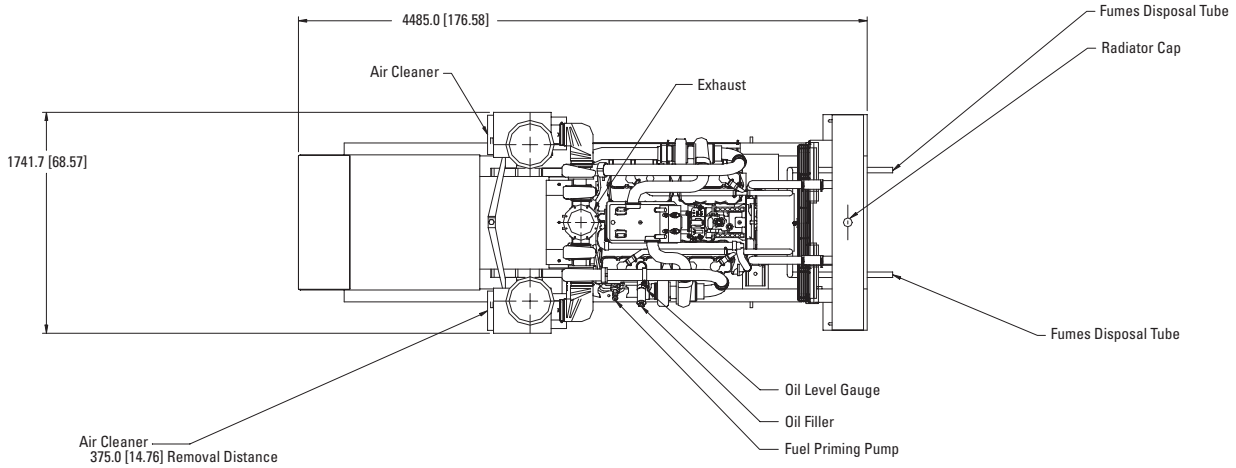
Fuel rates are based on fuel oil of 35° API (@ 16° C (60° F)) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

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

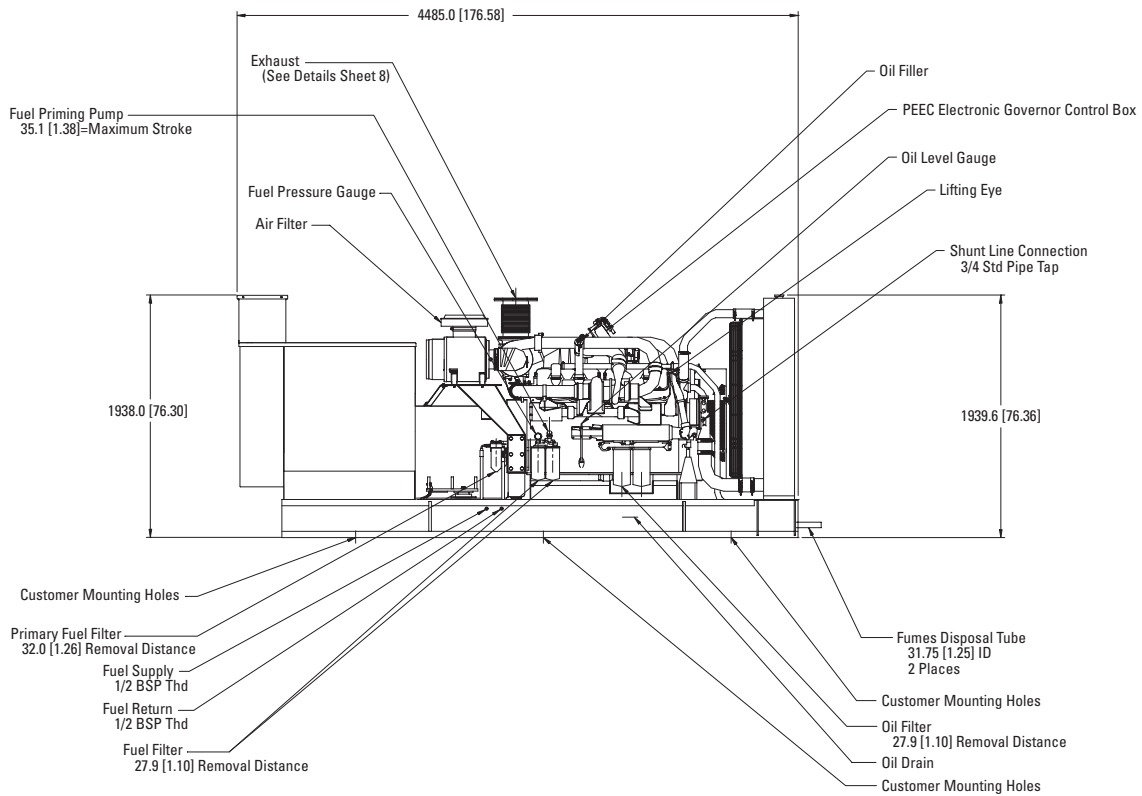
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STANDBY/PRIME POWER GENERATOR SET PACKAGE — TOP VIEW



STANDBY/PRIME POWER GENERATOR SET PACKAGE — SIDE VIEW



Package Dimensions		
Length	4485.0 mm	176.58 in
Width	1741.7 mm	68.57 in
Radiator Height	1939.6 mm	76.36 in
Control Panel Height	1938.0 mm	76.30 in
Shipping Weight	6130 kg	13,500 lb

Note: General configuration not to be used for installation. See general dimension drawings for detail (Drawing #154-0166).



www.CAT-ElectricPower.com

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European sourced

LEHX9414 (06-00)
 Replaces LEHX7632-03 and LEHX7633-03

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