# Cat® C13 DIESEL GENERATOR SETS



### Standby & Prime: 60 Hz, 480V



Engine Model	Cat® C13 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	130mm x 157mm (5.1in x 6.2in)
Displacement	12.5 L (763 in³)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Standby	Prime	Performance Strategy
350 ekW, 437.50 kVA	320 ekW, 400 kVA	TIER III Non-Road

### PACKAGE PERFORMANCE

Performance	Sta	ndby	Pri	me
Frequency	60 Hz		60 Hz	
Genset power rating	437.50 kVA		400 kVA	
Genset power rating with fan @ 0.8 power factor	350 ekW		320 ekW	
Fuelling strategy	TIER III Non-Road		TIER III Non-Road	
Performance number	EM1692-00		EM1693-00	
Fuel Consumption				
100% load with fan	94.3 L/hr	24.9 gal/hr	88.6 L/hr	23.4 gal/hr
75% load with fan	81.9 L/hr	21.6 gal/hr	76.8 L/hr	20.3 gal/hr
50% load with fan	60.2 L/hr	15.9 gal/hr	55.7 L/hr	14.7 gal/hr
25% load with fan	34.3 L/hr	9.1 gal/hr	32.0 L/hr	8.5 gal/hr
Cooling System <sup>1</sup>				
Radiator air flow restriction (system)	0.12 kPa	0.48 in. Water	0.12 kPa	0.48 in. Water
Radiator air flow	497 m³/min	17551 cfm	497 m³/min	17551 cfm
Engine coolant capacity	14.2 L	3.8 gal	14.2 L	3.8 gal
Radiator coolant capacity	30 L	8 gal	30 L	8 gal
Total coolant capacity	34 L	12 gal	34 L	12 gal
Inlet Air				
Combustion air inlet flow rate	24.8 m³/min	874.4 cfm	24.2 m³/min	855.1 cfm
Max. allowable combustion air inlet temp	49 ° C	120 ° F	49 ° C	121 ° F
Exhaust System				
Exhaust stack gas temperature	571.2 ° C	1060.1 ° F	563.9 ° C	1047.0 ° F
Exhaust gas flow rate	73.4 m³/min	2591.3 cfm	71.0 m³/min	2508.3 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.0 in. water	10.0 kPa	40.0 in. water
Heat Rejection				
Heat rejection to jacket water	143 kW	8132 Btu/min	135 kW	7703 Btu/min
Heat rejection to exhaust (total)	360 kW	20484 Btu/min	344 kW	19549 Btu/min
Heat rejection to aftercooler	55 kW	3108 Btu/min	51 kW	2881 Btu/min
Heat rejection to atmosphere from engine	47 kW	2694 Btu/min	47 kW	2687 Btu/min
Heat rejection from alternator	24 kW	1382 Btu/min	22 kW	1245 Btu/min



LEHE1572-00 1,

## Cat® C13 DIESEL GENERATOR SETS



Emissions (Nominal) <sup>2</sup>	Standby		Prime	
NOx	2243.6 mg/Nm <sup>3</sup>	4.5 g/hp-hr	1888.6 mg/Nm <sup>3</sup>	3.9 g/hp-hr
CO	676.7 mg/Nm <sup>3</sup>	1.4 g/hp-hr	694.7 mg/Nm <sup>3</sup>	1.4 g/hp-hr
HC	6.2 mg/Nm <sup>3</sup>	0.0 g/hp-hr	7.9 mg/Nm <sup>3</sup>	0.0 g/hp-hr
PM	39.8 mg/Nm <sup>3</sup>	0.1 g/hp-hr	41.9 mg/Nm <sup>3</sup>	0.1 g/hp-hr
Alternator <sup>3</sup>	Standby		Prime	
Voltages	480V		480V	
Motor starting capability @ 30% Voltage Dip	880 skVA		880 skVA	
Current	526 amps		481 amps	
Frame Size	LC6114B		LC6114B	
Excitation	SE		SE	
Temperature Rise	130 ° C		105 ° C	

#### **DEFINITIONS AND CONDITIONS**

### **APPLICABLE CODES AND STANDARDS:**

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

**STANDBY:** Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

**PRIME:** Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 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/litre (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

LEHE1572-00 (	03	/18)	١
---------------	----	------	---

### **BUILT FOR IT.**



<sup>&</sup>lt;sup>1</sup> For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

<sup>&</sup>lt;sup>2</sup> Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. 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. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

<sup>&</sup>lt;sup>3</sup> 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° C ambient per NEMA MG1-32.