

**Standby & Prime: 60 Hz, 480V & 600V**



Engine Model	Cat® C9 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	112mm x 149mm (4.4in x 5.9in)
Displacement	8.8 L (538 in³)
Compression Ratio	16.1:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Standby	Prime	Performance Strategy
<b>300 ekW, 375 kVA</b>	<b>275 ekW, 344 kVA</b>	<b>TIER III Non-Road</b>

## PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	60 Hz		60 Hz	
Genset power rating	375 kVA		344 kVA	
Genset power rating with fan @ 0.8 power factor	300 ekW		275 ekW	
Fuelling strategy	TIER III Non-Road		TIER III Non-Road	
Performance number	DM8168-04		DM8500-05	
<b>Fuel Consumption</b>				
100% load with fan	86.0 L/hr	22.7 gal/hr	80.5 L/hr	21.3 gal/hr
75% load with fan	66.8 L/hr	17.6 gal/hr	64.0 L/hr	16.9 gal/hr
50% load with fan	51.5 L/hr	13.6 gal/hr	50.5 L/hr	13.3 gal/hr
25% load with fan	33.1 L/hr	8.7 gal/hr	32.8 L/hr	8.7 gal/hr
<b>Cooling System<sup>1</sup></b>				
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	13.9 L	3.7 gal	13.9 L	3.7 gal
Radiator coolant capacity	43 L	11.5 gal	43 L	11.5 gal
Total coolant capacity	57 L	15 gal	57 L	15 gal
<b>Inlet Air</b>				
Combustion air inlet flow rate	26.0 m³/min	916.6 cfm	25.3 m³/min	891.8 cfm
Max. allowable combustion air inlet temp	50 °C	123 °F	51 °C	124 °F
<b>Exhaust System</b>				
Exhaust stack gas temperature	497.3 °C	927.2 °F	495.7 °C	924.2 °F
Exhaust gas flow rate	69.7 m³/min	2460.9 cfm	67.4 m³/min	2379.6 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.0 in. water	10.0 kPa	40.0 in. water
<b>Heat Rejection</b>				
Heat rejection to jacket water	120 kW	6838 Btu/min	113 kW	6431 Btu/min
Heat rejection to exhaust (total)	320 kW	18223 Btu/min	307 kW	17454 Btu/min
Heat rejection to aftercooler	92 kW	5239 Btu/min	83 kW	4726 Btu/min
Heat rejection to atmosphere from engine	23 kW	1312 Btu/min	18 kW	1009 Btu/min
Heat rejection from alternator	22 kW	1245 Btu/min	20 kW	1120 Btu/min

Emissions (Nominal) <sup>2</sup>	Standby		Prime	
	NO <sub>x</sub>	2196.0 mg/Nm <sup>3</sup>	4.0 g/hp-hr	1975.0 mg/Nm <sup>3</sup>
CO	115.5 mg/Nm <sup>3</sup>	0.2 g/hp-hr	103.9 mg/Nm <sup>3</sup>	0.2 g/hp-hr
HC	23.1 mg/Nm <sup>3</sup>	0.06 g/hp-hr	23.2 mg/Nm <sup>3</sup>	0.06 g/hp-hr
PM	12.7 mg/Nm <sup>3</sup>	0.03 g/hp-hr	10.5 mg/Nm <sup>3</sup>	0.03 g/hp-hr
Alternator <sup>3</sup>	Standby		Prime	
	Voltages	480V	600V	480V
Motor starting capability @ 30% Voltage Dip	683 skVA	754 skVA	683 skVA	754 skVA
Current	451 amps	361 amps	414 amps	331 amps
Frame Size	LC5014J	LC5024J	LC5014J	LC5024J
Excitation	SE	AR	SE	AR
Temperature Rise	150 ° C	150 ° C	125 ° C	125 ° C

## DEFINITIONS AND CONDITIONS

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

<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, NO<sub>x</sub>. 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>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.

## 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 kW 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.

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