

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
250 ekW, 313 kVA	225 ekW, 281 kVA	TIER III Non-Road

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	60 Hz		60 Hz	
Genset power rating	313 kVA		281 kVA	
Gen set power rating with fan @ 0.8 power factor	250 ekW		225 ekW	
Fuelling strategy	TIER III Non-Road		TIER III Non-Road	
Performance number	DM8501-03		DM8505-03	
Fuel Consumption				
100% load with fan	73.3 L/hr	19.4 gal/hr	68.9 L/hr	18.2 gal/hr
75% load with fan	58.8 L/hr	15.5 gal/hr	55.7 L/hr	14.7 gal/hr
50% load with fan	43.8 L/hr	11.6 gal/hr	42.0 L/hr	11.1 gal/hr
25% load with fan	27.4 L/hr	7.3 gal/hr	27.2 L/hr	7.2 gal/hr
Cooling System¹				
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
Inlet Air				
Combustion air inlet flow rate	25.2 m³/min	889.8 cfm	24.2 m³/min	855.3 cfm
Max. allowable combustion air inlet temp	50 °C	122 °F	50 °C	122 °F
Exhaust System				
Exhaust stack gas temperature	455.5 °C	852.0 °F	444.1 °C	831.3 °F
Exhaust gas flow rate	63.6 m³/min	2245.6 cfm	59.8 m³/min	2112.4 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	104 kW	5928 Btu/min	99 kW	5631 Btu/min
Heat rejection to exhaust (total)	277 kW	15772 Btu/min	259 kW	14720 Btu/min
Heat rejection to aftercooler	82 kW	4686 Btu/min	72 kW	4115 Btu/min
Heat rejection to atmosphere from engine	18 kW	1004 Btu/min	26 kW	1500 Btu/min
Heat rejection from alternator	20 kW	1120 Btu/min	17 kW	978 Btu/min

Emissions (Nominal) ²	Standby		Prime	
	NO _x	1516.2 mg/Nm ³	2.9 g/hp-hr	1355.4 mg/Nm ³
CO	172.8 mg/Nm ³	0.4 g/hp-hr	188.9 mg/Nm ³	0.4 g/hp-hr
HC	37.7 mg/Nm ³	0.1 g/hp-hr	44.2 mg/Nm ³	0.1 g/hp-hr
PM	32.6 mg/Nm ³	0.1 g/hp-hr	37.0 mg/Nm ³	0.1 g/hp-hr
Alternator ³	Standby		Prime	
	Voltages	480V	600V	480V
Motor starting capability @ 30% Voltage Dip	543 skVA	656 skVA	543 skVA	656 skVA
Current	376 amps	301 amps	338 amps	271 amps
Frame Size	LC5014H	LC5024H	LC5014H	LC5024H
Excitation	SE	AR	SE	AR
Temperature Rise	150 ° C	150 ° C	105 ° C	105 ° C

DEFINITIONS AND CONDITIONS

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

² 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_x. 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.

³ 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.

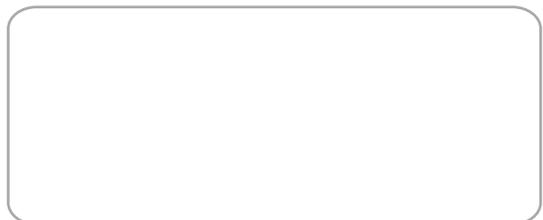
STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

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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