

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



Engine Model	Cat® C18 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.1 L (1106 in³)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Standby	Prime	Performance Strategy
600 ekW, 750 kVA	545 ekW, 681 kVA	TIER II Non-Road

PACKAGE PERFORMANCE

Performance	Standby		Prime	
Frequency	60 Hz		60 Hz	
Genset power rating	750 kVA		681 kVA	
Genset power rating with fan @ 0.8 power factor	600 ekW		545 ekW	
Fuelling strategy	TIER II Non-Road		TIER II Non-Road	
Performance number	DM8518-04		DM8522-05	
Fuel Consumption				
100% Load with fan	161.6 L/hr	42.7 gal/hr	151.1 L/hr	39.9 gal/hr
75% Load with fan	129.6 L/hr	34.2 gal/hr	123.6 L/hr	32.6 gal/hr
50% Load with fan	91.7 L/hr	24.2 gal/hr	89.2 L/hr	23.6 gal/hr
25% Load with fan	46.8 L/hr	12.4 gal/hr	48.7 L/hr	12.9 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	803 m³/min	28357 cfm	803 m³/min	28357 cfm
Engine coolant capacity	20.8 L	5.5 gal	20.8 L	5.5 gal
Radiator coolant capacity	61 L	16 gal	61 L	16 gal
Total coolant capacity	82 L	22 gal	82 L	22 gal
Inlet Air				
Combustion air inlet flow rate	47.8 m³/min	1687.8 cfm	46.7 m³/min	1649.0 cfm
Max. allowable combustion air inlet temp	49 ° C	120 ° F	49 ° C	120 ° F
Exhaust System				
Exhaust stack gas temperature	534.6 ° C	994.3 ° F	518.2 ° C	964.8 ° F
Exhaust gas flow rate	135.5 m³/min	4784.4 cfm	129.6 m³/min	4576.4 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	189 kW	10747 Btu/min	175 kW	9953 Btu/min
Heat rejection to Exhaust (Total)	634 kW	36053 Btu/min	596 kW	33895 Btu/min
Heat rejection to Aftercooler	153 kW	8700 Btu/min	142 kW	8076 Btu/min
Heat rejection to Atmosphere from Engine	86 kW	4902 Btu/min	83 kW	4726 Btu/min
Heat rejection from alternator	38 kW	2178 Btu/min	34 kW	1911 Btu/min

Emissions (Nominal) ²	Standby		Prime	
	NOx	2798.7 mg/Nm ³	5.8 g/hp-hr	2462.2 mg/Nm ³
CO	225.2 mg/Nm ³	0.5 g/hp-hr	195.1 mg/Nm ³	0.4 g/hp-hr
HC	3.8 mg/Nm ³	0.01 g/hp-hr	5.0 mg/Nm ³	0.01 g/hp-hr
PM	13.3 mg/Nm ³	0.03 g/hp-hr	13.1 mg/Nm ³	0.03 g/hp-hr
Alternator ³	Standby		Prime	
	Voltages	480V	600V	480V
Motor starting capability @ 30% Voltage Dip	1633 skVA	2023 skVA	1633 skVA	2023 skVA
Current	902 amps	722 amps	819 amps	656 amps
Frame Size	LC7024F	LC7024H	LC7024F	LC7024H
Excitation	AR	AR	AR	AR
Temperature Rise	150 ° C	130 ° C	125 ° 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, 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.

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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