

Standby & Prime: 50Hz; 380, 400V & 415V



Image shown might not reflect actual configuration

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 in ³)
Compression Ratio	16.3:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

Model	Standby	Prime	Emission Strategy
DE450E0	450 kVA, 360 ekW	400 kVA, 320 ekW	Non-Certified Emissions

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	50 Hz	50 Hz
Genset Power Rating	450 kVA	400 kVA
Gen set power rating with fan @ 0.8 power factor	360 ekW	320 ekW
Fuelling strategy	Non-Certified Emissions	Non-Certified Emissions
Performance Number	EM0426	EM0432
Fuel Consumption		
100% load with fan	93.9 L/hr, 24.8 gal/hr	82.9 L/hr, 21.9 gal/hr
75% load with fan	69.9 L/hr, 18.5 gal/hr	62.2 L/hr, 16.4 gal/hr
50% load with fan	48.0 L/hr, 12.7 gal/hr	43.3 L/hr, 11.4 gal/hr
25% load with fan	28.1 L/hr, 7.4 gal/hr	25.8 L/hr, 6.8 gal/hr
Cooling System ¹		
Radiator air flow restriction (system)	0.12 kPa, 0.48 in. Water	0.12 kPa, 0.48 in. Water
Radiator air flow	398 m ³ /min, 14055 cfm	398 m ³ /min, 14055 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	56.9 L, 15.2 gal	56.9 L, 15.2 gal
Inlet Air		
Combustion air inlet flow rate	24.7 m ³ /min, 872 cfm	22.9 m ³ /min 807.9 cfm
Max. Allowable Combustion Air Inlet Temp	48 °C, 118 °F	44 °C, 111 °F
Exhaust System		
Exhaust stack gas temperature	531.1 °C, 988 °F	507.8 °C 946.0 °F
Exhaust gas flow rate	70.4 m ³ /min, 2486 cfm	62.9 m ³ /min 2219.5 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	137 kW, 7775 Btu/min	125 kW, 7100 Btu/min
Heat rejection to exhaust (total)	326 kW, 18562 Btu/min	288 kW, 16381 Btu/min
Heat rejection to aftercooler	71 kW, 4014 Btu/min	58 kW, 3302 Btu/min
Heat rejection to atmosphere from engine	56 kW, 3177 Btu/min	48 kW, 2712 Btu/min
Heat rejection to atmosphere from generator	27 kW 1535 Btu/min	21 kW, 1194 Btu/min

Emissions (Nominal) ²						
NOx	2503.4 mg/Nm ³ , 4.9 g/hp-hr			2605.3 mg/Nm ³ 5.1 g/hp-hr		
CO	702.2 mg/Nm ³ , 1.4 g/hp-hr			705.8 mg/Nm ³ 1.4 g/hp-hr		
HC	3.1 mg/Nm ³ , 0.0 g/hp-hr			2.7 mg/Nm ³ 0.0 g/hp-hr		
Alternator ³						
Voltages	415V		400V		380V	
Motor Starting Capability @ 30% Voltage Dip	1202 skVA		891 skVA		1005 skVA	
Current	Standby: 626A Prime: 556A		Standby: 650A Prime: 577A		Standby: 664A Prime: 577A	
Frame Size	A2955L4		A2955L4		A2955L4	
Excitation	SE		SE		SE	
Temperature Rise	Standby 163 °C, 325 °F	Prime 125 °C, 257 °F	Standby 163 °C, 325 °F	Prime 125 °C, 257 °F	Standby 163 °C, 325 °F	Prime 125 °C, 257 °F

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: 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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