

# Cat® D550 GC DIESEL GENERATOR SETS



Standby: 60 Hz, 480V & 600V



Image shown might not reflect actual configuration

Engine Model	Cat® C18 In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.1 L (1106 in <sup>3</sup> )
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

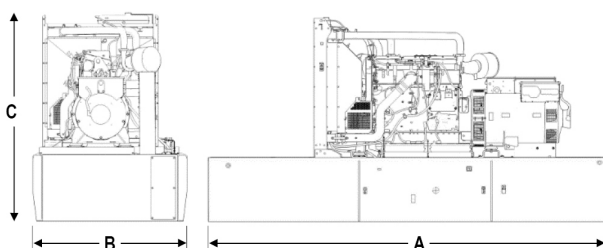
Standby	Performance Strategy
550 ekW, 688 kVA	EPA Certified for Stationary Emergency Application

## PACKAGE PERFORMANCE

Performance	Standby	
Frequency	60 Hz	
Genset Power Rating	688 kVA	
Gen set power rating with fan @ 0.8 power factor	550 ekW	
Emissions	EPA TIER 2	
Performance Number	DM8517	
Fuel Consumption		
100% load with fan	151.1 L/hr	33.2 gal/hr
75% load with fan	118.1 L/hr	26.0 gal/hr
50% load with fan	86.1 L/hr	18.9 gal/hr
25% load with fan	44.2 L/hr	11.7 gal/hr
Cooling System <sup>1</sup>		
Radiator air flow restriction (system)	0.12 kPa	0.48 in. Water
Radiator air flow	803 m <sup>3</sup> /min	28357 cfm
Engine coolant capacity	20.8 L	5.5 gal
Radiator coolant capacity	61 L	16 gal
Total coolant capacity	82 L	22 gal
Inlet Air		
Combustion air inlet flow rate	46.3 m <sup>3</sup> /min	1634.9 cfm
Max. Allowable Combustion Air Inlet Temp	50°C	121°F
Exhaust System		
Exhaust stack gas temperature	520.6°C	969.1°F
Exhaust gas flow rate	128.9 m <sup>3</sup> /min	4551.5 cfm
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.0 in. water
Heat Rejection		
Heat rejection to jacket water	180 kW	10236 Btu/min
Heat rejection to exhaust (total)	595 kW	33837 Btu/min
Heat rejection to aftercooler	141 kW	8019 Btu/min
Heat rejection to atmosphere from engine	77 kW	4379 Btu/min
Heat rejection from alternator	33 kW	1854 Btu/min

Emissions(Nominal) <sup>2</sup>	Standby	
NOx	2703.5 mg/Nm <sup>3</sup>	5.5 g/hp-hr
CO	161.0 mg/Nm <sup>3</sup>	0.3 g/hp-hr
HC	4.6 mg/Nm <sup>3</sup>	0.01 g/hp-hr
PM	13.2 mg/Nm <sup>3</sup>	0.03 g/hp-hr
Alternator <sup>3</sup>		
Voltages	<b>480V</b>	<b>600V</b>
Motor Starting Capability @ 30% Voltage Dip	1125	1292
Current	826.9	661.5
Frame Size	M3156L4	M3156L4
Excitation	S. E	AREP
Temperature Rise	130°C	105°C

## WEIGHTS & DIMENSIONS – OPEN SET



Base	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Generator Set Weight kg (lb)
Skid (Wide Base)	4980 (196.1)	1865 (73.4)	2009 (79.1)	3981 (8776.6)
Integral Tank Base	4980 (196.1)	1865 (73.4)	2560 (100.8)	5200 (11464.0)

## FUEL TANK CAPACITY

Tank Design	Total Capacity		Useable Capacity	
	Litre	Gallon	Litre	Gallon
Integral	4292	1133.8	3889	1027.3

## 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, 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>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.

**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.

LEHE2012-04 (05-20)

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