



Exhaust Emission Data Sheet

C3000 D5e

50 Hz Diesel Generator Set

Engine Information:

Model:	Cummins Inc. QSK78-G16	Bore:	6.69 in. (170 mm)
Type:	4 Cycle, VEE, 18 Cylinder Diesel	Stroke:	7.48 in. (190 mm)
Aspiration:	Turbocharged and Low Temperature After-cooled	Displacement:	4735 cu. in. (77.6 liters)
Compression Ratio:	15.5:1		
Emission Control Device:	Turbocharged and After-cooled		
Emission Level:	Stationary Emergency Emission - Nonroad		

	<u>1/4</u>	<u>1/2</u>	<u>3/4</u>	<u>Full</u>	<u>Full</u>	<u>Full</u>
<u>Performance Data</u>	<u>Standby</u>	<u>Standby</u>	<u>Standby</u>	<u>Standby</u>	<u>Prime</u>	<u>Continuous</u>
BHP @ 1500 RPM (50 Hz)	851	1702	2553	3403	3088	2358
Fuel Consumption (L/Hr)	178	317	479	627	574	442
Exhaust Gas Temperature (°C)	381	424	443	481	468	439

Exhaust Emission Data

NOx (Oxides of Nitrogen as NO ₂)	1.633	1.804	1.782	2.091	1.935	1.787
CO (Carbon Monoxide)	0.283	0.114	0.125	0.263	0.218	0.123
PM (Particulate Matter)	0.066	0.018	0.015	0.023	0.019	0.015

All values are: mg/Nm³ @ 5% O₂

Test Conditions

Steady-state emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

Fuel Specification:	40-48 Cetane Number, 0.03 - 0.05 Wt.% Sulfur; Reference ISO8178-5, 40 CFR 86, 1313—98 Type 2-D and ASTM D975 No. 2-D.
Air Inlet Temperature	25°C (77°F)
Fuel Inlet Temperature:	40°C (104°F)
Barometric Pressure:	100 kPa (29.53 in Hg)
Humidity:	NOx measurement corrected to 10.7 g/kg (75 grains H ₂ O/lb) of dry air
Intake Restriction:	Set to maximum allowable limit for clean air
Exhaust Back:	Pressure set to maximum allowable limit

The NOx, HC, CO and PM emission data tabulated here are representative of test data taken from a single engine under the test conditions shown above. Data for the other components are estimated. These data are subjected to instrumentation and engine-to-engine variability. Field emission test data are not guaranteed to these levels. Actual field test results may vary due to test site conditions, installation, fuel specification, test procedures and instrumentation. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.