



Exhaust emission data sheet

C40 N6

60 Hz Spark ignited generator set

EPA emissions

Engine information:

Model:	QSJ2.4	Bore:	3.41 in. (86.5 mm)
Type:	4 cycle, in-line, 4 cylinder	Stroke:	3.94 in. (100 mm)
Aspiration:	Turbocharged after-cooled	Displacement:	146.46 cu. in. (2.4 liters)
Compression ratio:	9.5:1		
Emission control device:	Electronic air/fuel ratio control, and closed-loop breather system.		

	<u>Natural gas</u>	<u>Propane</u>
	<u>Standby</u>	<u>Standby</u>
<u>Performance data</u>		
BHP @ 1800 RPM (60 Hz)	70	70
Fuel consumption (SCFH)	519.0	193.6
Air to fuel ratio	16.4	14.6
Exhaust gas flow (CFM)	299.2	259.8
Exhaust gas temperature (°F)	1400	1475
<u>Exhaust emission data</u>		
HC (Total unburned hydrocarbons)*	43	466
NOx (Oxides of nitrogen as NO ₂)	1400	1320
CO (Carbon monoxide)	11080	19619
		Values are ppmvd
HC (Total unburned hydrocarbons)*	0.07	0.58
NOx (Oxides of nitrogen as NO ₂)	5.65	4.49
CO (Carbon monoxide)	31.44	47.14
		Values are Grams per HP-Hour

*HC includes all NMHC, VOC, POC, and ROC constituents (Non-Methane HC, Volatile Organic Compounds, Precursor Organic Compounds, and Reactive Organic Compounds).

Test conditions

Data was recorded during steady-state rated engine speed (± 25 RPM) with full load ($\pm 2\%$). Pressures, temperatures, and emission rates were stabilized.

Fuel specification:

Natural gas	Dry gas as received from Supplier (1000 BTU/SCF).
Propane	Meets the requirements for Commercial Grade Propane under the ASTM D1835 Standard Specification for Liquefied Gases
Fuel temperature	60 \pm 9 °F at Flow Transmitter
Fuel pressure	14.73 PSIA \pm 0.5 PSIA at Flow Transmitter
Intake air temperature:	77 \pm 9 °F at inlet
Barometric pressure:	29.92 in. Hg \pm 1 in. Hg
Humidity:	NOx measurement corrected to 75 grains H ₂ O/lb dry air

The NO_x, HC, and CO emission data tabulated here were from a single engine under the test conditions shown above. 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 limit, or with improper maintenance, may result in elevated emission levels.