

EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET

Model: SG1600C4F



The engine used in this generator set is certified to comply with United States EPA Tier 4 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Manufacturer: Cummins	Bore: 4.21 in. (107 mm)
Model: QSB7-G9	Stroke: 4.88 in. (124 mm)
Type: 4-Cycle, In-Line, 6-cylinder, Diesel	Displacement: 409 cid (6.7 liters)
Aspiration: Electric Direct Injection, TurboCharged, Charged Air Cooled, ECM, EGR, DOC, SCR	Compression Ratio: 17.3:1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	282
Rated Load Fuel Consumption (gal/Hr)	13.5
Rated Load Exhaust Gas Flow (cfm)	1038
Rated Load Exhaust Gas Temperature (°F)	795

United States EPA - Mobile Off-Highway Tier 4 Limits - ≤174 ~ <751 BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO2)	0.298 gr/bhp-hr	0.141 gr/bhp-hr
HC (Total Unburned Hydrocarbons)	N/A gr/bhp-hr	N/A gr/bhp-hr
NOx + HC (Combined)	N/A gr/bhp-hr	N/A gr/bhp-hr
CO (Carbon Monoxide)	2.6 gr/bhp-hr	0.0 gr/bhp-hr
PM (Particulate Matter)	0.014 gr/bhp-hr	0.007 gr/bhp-hr
NMHC (Non-Methane Hydrocarbons)	0.141 gr/bhp-hr	0.029 gr/bhp-hr
NMHC + NOx	N/A gr/bhp-hr	N/A gr/bhp-hr

EPA Engine Family:	GCEXL06.7AAL
EPA Certificate of Conformance:	GCEXL06.7AAL-037
ARB Executive Order:	U-R-002-0635
Effective Date:	Model Year 2016

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

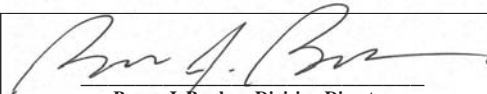


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2016 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Cummins Inc.
(U.S. Manufacturer or Importer)
Certificate Number: GCEXL06.7AAL-037

Effective Date:
11/04/2015
Expiration Date:
12/31/2016


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
11/04/2015
Revision Date:
N/A

Model Year: 2016
Manufacturer Type: Original Engine Manufacturer
Engine Family: GCEXL06.7AAL

Mobile/Stationary Indicator: Both
Emissions Power Category: 130<kW<=560
Fuel Type: Diesel
After Treatment Devices: Diesel Oxidation Catalyst, Ammonia Slip Catalyst, Selective Catalytic Reduction
Non-after Treatment Devices: Electronic Control, Electronic/Electric EGR - Cooled

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Parts 60 and 1039, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Parts 60 and 1039 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 60 and 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 60 and 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 60 and 1039. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 60 and 1039.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2016	GCEXL06.7AAL	6.7	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst			Generator Set	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.04	0.19	--	0.00	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 7th day of October 2015.

M. Hebert
 FOR Annette Hebert, Chief
 Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

U-R-002-0635

Attachment pg 1/1

9/18/2015

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
GCEXL06.7AAL	4197:94196	QSB7-G	274@1500	192	98	N/A	N/A	N/A	ECM,EGR,06,SCR CAC ECM,EGR,06,SCR CAC ECM,EGR,06,SCR CAC ECM,EGR,06,SCR CAC ECM,EGR,06,SCR CAC DDI, Te, Dvc, Amx
GCEXL06.7AAL	4197:94194	QSB7-G	314@1800	182	111	N/A	N/A	N/A	
GCEXL06.7AAL	4197:94761	QSB7-G	274@1500	192	98	N/A	N/A	N/A	
GCEXL06.7AAL	4197:94761	QSB7-G	314@1800	182	111	N/A	N/A	N/A	
GCEXL06.7AAL	4197:94793	QSB7-G	222@1500	146	74	N/A	N/A	N/A	
GCEXL06.7AAL	4197:94793	QSB7-G	241@1800	135	82	N/A	N/A	N/A	