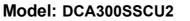
# **EXHAUST EMISSION DATA SHEET**

### **MQ POWER GENERATOR SET**





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

ENGINE DA	TA								
Manufacturer:	CUMMINS			Bore:	4.49	in.	(114	mm)	
Model:	QSL9-G8		Stroke:	5.69	in.	(145	mm)		
Туре:	4-Cycle, In-Line, 6-cylinde	r, Diesel		Displacement	: 543	cid	(8.9	liters)	
	Turbocharger, Charge Air ECM, EGR, DOC, PTO	Cool		Compression	Ratio:		16.6	:1	
PERFORMANCE DATA									
SAE Gross HP	@ 1800 RPM (60 Hz)	433	3						
Rated Load Fue									
Rated Load Exh	naust Gas Flow (cfm)	149	96						
Rated Load Exh	naust Gas Temperature	(°F) 913	3						
Unit	ted States EPA - M	f-Highway Tier 4	i Limits -	1	174.3 ≤ ~ < 750.9 BHP				
Criteria Pollutant Emission Requirem			sion Requirements	Certified Engine Emissions					
NOx (Oxides of	Nitrogen as NO2)	1.49	gr/bhp-hr	1.27	gr/b	hp-hr			
•	rned Hydrocarbons)	0.141	gr/bhp-hr	0.007	gr/bł	np-hr			
NOx + HC (Con		N/A	gr/bhp-hr	N/A	-	np-hr			
CO (Carbon Mo		2.609	gr/bhp-hr	0.015	•	np-hr			
PM (Particulate	Matter)	0.0149	gr/bhp-hr	0.002	gr/bł	np-hr			
EPA Engine Fa	mily: DCI	EXL08.9A	AI	•					
EPA Certificate	of Conformance: DCI	EXL08.9A	AI-020						
ARB Executive	Order: U-F	8-002-059	90						
Effective Date:	Мос	del Year	2013						
-	peration with excessive limits, or with imprope			-					



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2013 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT OF 1990

#### OFFICE OF TRANSPORTATION AND AIR QUALITY ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Cummins Inc. (U.S. Manufacturer or Importer) Certificate Number: DCEXL08.9AAI-020	Effective Date: 05/01/2012 Expiration Date: 12/31/2013	Byron J. Bunker, Acting Division Director Compliance Division	Issue Date: 05/01/2012 Revision Date: N/A			
Model Year: 2013 Manufacturer Type: Original Engine Manufacturer Engine Family: DCEXL08.9AAI	En Fu Afi	Mobile/Stationary Indicator: Both   Emissions Power Category: 130 <kw<=560< th="">   Fuel Type: Diesel   After Treatment Devices: Diesel Oxidation Catalyst, PTOX-DPF-Active   Non-after Treatment Devices: Electronic/Electric EGR - Cooled, Electronic Control</kw<=560<>				

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.

AL PROTES

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-02-003;

**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)		
2013	DCEXL08.9AAI	8.9	Diesel	8000		
	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Cooler	c Direct Injection, Turbo , Electronic Control Mod tion, Diesel Oxidation C Trap Oxidizer	lule, Exhaust Gas atalyst, and Periodic	Generator	Set		

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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	EMISSION STANDARD		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
130 ≤ kW < 560	Interim Tier 4 /ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	1.7		0.02	0.002			

**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 \_\_\_\_

Z day of August 2012.

Annette Hebert, Chief Mobile Source Operations Division

U-R-002-0590

Attachmet 111 71201202

Ingine 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
EXL08.9AAI	3511:FR92977	QSL9-G	459@1800	263	163	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX
EXL08.9AAI	3511:FR92865	QSL9-G	433@1800	247	153.3	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX
EXL08.9AAI	3511:FR92865	QSL9-G	370@1500	249	131	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX