

# EXHAUST EMISSION DATA SHEET

## MQ POWER GENERATOR SET

Model: DA7000SS



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:	KUBOTA	Bore:	2.63 in	(67 mm)
Model:	Z482	Stroke:	2.67 in	(68 mm)
Type:	4-Cycle Diesel, 2-Cylinder, Swirl Chamber	Displacement:	29.2 cid	(.479 liters)
Aspiration:	Naturally Aspirated	Compression Ratio:	23:1	

### PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	13.9
Rated Load Fuel Consumption (gal/Hr)	0.69
Rated Load Exhaust Gas Flow (cfm)	74.4
Rated Load Exhaust Gas Temperature (F)	327

### United States EPA - Mobile Off-Highway Tier 4 Limits - $\geq 11$ BHP - $< 25$ BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO <sub>2</sub> )	5.59 gr/bhp-hr	5.07 gr/bhp-hr
HC (Total Unburned Hydrocarbons)	(NOx + HC)* Combined	(NOx + HC)* Combined
CO (Carbon Monoxide)	4.92 gr/bhp-hr	1.79 gr/bhp-hr
PM (Particulate Matter)	0.30 gr/bhp-hr	0.15 gr/bhp-hr

EPA Engine Family:	BKBXL.719KCC
EPA Certificate of Conformance:	KBX-NRCI-11-10
ARB Executive Order:	U-R-025-0470
Effective Date:	Model Year 2011

*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  
OFFICE OF TRANSPORTATION AND AIR QUALITY  
WASHINGTON, DC 20460



CERTIFICATE OF CONFORMITY  
2011 MODEL YEAR

Manufacturer: **KUBOTA CORPORATION**  
Engine Family: **BKBL.719KCC**  
Certificate Number: **KBX-NRCI-11-10**  
Intended Service Class: **NR 2 (8-19)**  
Fuel Type: **DIESEL**  
FELs: g/kW-hr NMHC + NOx: N/A NOx: N/A PM: N/A  
Effective Date: **9/29/2010**  
Date Issued: **9/29/2010**

Karl J. Simon, Director  
Compliance and Innovative Strategies Division  
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 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 nonroad engines, by engine family, more fully described in the documentation required by 40 CFR 1039 and produced in the stated model year.

This certificate of conformity covers only those nonroad 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 Part 1039 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 1039.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR Part 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 a revocation or suspension of this certificate for reasons specified in 40 CFR Part 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 Part 1039.

This certificate does not cover nonroad 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.

 <b>AIR RESOURCES BOARD</b>	<b>KUBOTA Corporation</b>	<b>EXECUTIVE ORDER U-R-025-0470</b> New Off-Road Compression-Ignition Engines

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)
2011	BKBXL719KCC	0.479, 0.719	Diesel	3000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Indirect Diesel Injection			Generator Set, Welder, Air Conditioner for Trucks	

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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
0 ≤ kW < 19	Tier 4	OPTIONAL STD	N/A	N/A	7.5	6.6	0.40	N/A	N/A	N/A
		CERT	--	--	6.8	2.4	0.20	--	--	--

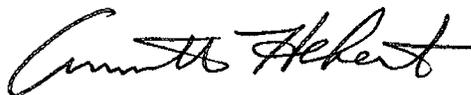
**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005.

**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 2 day of December 2010.



Annette Hebert, Chief  
Mobile Source Operations Division