#### **EXHAUST EMISSION DATA SHEET**

#### **MQ POWER GENERATOR SET**



Model: DCA220SSJ

# The engine used in this generator set is certified to comply with United States EPA Tier 3 and CARB Mobile Off-Highway emission regulations.

**ENGINE DATA** 

Manufacturer: JOHN DEERE Bore: 4.17 in. (106 mm) Model: 6068HF485 Stroke: 5.00 in. (127 mm) Type: 4-Cycle Diesel, In-Line, 6-Cylinder Displacement: 415 cid (6.8 liters) Aspiration:

Turbocharger, Charge Air Cooler, ECM, 17:1 Compression Ratio:

Exhaust Gas Recirculation, Smoke Limiter

**PERFORMANCE DATA** 

SAE Gross HP @ 1800 RPM (60 Hz) 315 Rated Load Fuel Consumption (gal/Hr) 13.6 Rated Load Exhaust Gas Flow (cfm) 1371 Rated Load Exhaust Gas Temperature (F) 905

United States EPA - Mobile Off-Highway Tier 3 Limits - ≥302 BHP ~ ≤603 BHP							
Emission Requirements	Certified Engine Emissions						
2.98 gr/bhp-hr	2.54 gr/bhp-hr						
(NOx + HC)* Combined	(NOx + HC)* Combined						
2.61 gr/bhp-hr	0.45 gr/bhp-hr						
0.15 gr/bhp-hr	0.09 gr/bhp-hr						
	Emission Requirements  2.98 gr/bhp-hr (NOx + HC)* Combined  2.61 gr/bhp-hr						

**EPA Engine Family:** AJDXL06.8115 EPA Certificate of Conformance: JDX-NRCI-10-13.1 ARB Executive Order: U-R-004-0393 Effective Date: Model Year 2010

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 2010 MODEL YEAR

Manufacturer:

JOHN DEERE POWER SYSTEMS

Engine Family:

AJDXL/16.8115

Certificate Number:

JDX-NRCI-10-13.1

Intended Service Class:

NR 6 (130-225) NR 7 (225-450)

Fuel Type:

DIESEL

reis g/kW-hr

NMHC+NOx: 3.6

NOX NA

PM: 18

Effective Date

Date Issued:

12/16/2009 12/16/2009

Karl J. Simon, Director

Compliance and Innovative Strategies Division

Office of Transportation and Air Quality

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60 and Part 89, 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 stationary and nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and 89, and produced in the stated model year.

This certificate of conformity covers only those new stationary and 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 60 and 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60 and 89.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 89, Subpart C. Failure to comply with these provisions may render this certificate void ab initio.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89 129-96 and 89 506-96 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 89. 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 89.

This certificate does not cover stationary and 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.

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 (IRETS)		FUEL TYPE	USEFUL LIFE (hours)			
2010 AJDXL06.811		4.5, 6.8	Diesel	8000			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION			
Electronic Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler, Smoke Puff Limiter, Exhaust Gas Recirculation			Loaders, Tractor, Dozer, Pump, Generator Set, Other Industrial Equipment				

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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		EXHAUST (g/kw-hr)				OPACITY (%)			
	STANDARD CATEGORY		HC	NOx	NMHC+NOx	CO	PM	ACCEL	rug	PEAK
130 ≤ KW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
225 < KW < 450	Tier3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		_	3.6		0.18		-			
CERT	3.4	0,6	0.12	7	2	14				

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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

day of December 2009.

Annette Hebert, Chief Mobile Source Operations Division