

# EXHAUST EMISSION DATA SHEET

## MQ POWER GENERATOR SET

Model: DCA70SSJU4F



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:	JOHN DEERE	Bore:	4.17 in. (106 mm)
Model:	4045HFG04	Stroke:	5.0 in. (127 mm)
Type:	4-Cycle, In-Line, 4-Cylinder, Diesel	Displacement:	275 cid (4.5 liters)
Aspiration:	Turbocharger, ECM, EGR, DOC, SCR Electronic Direct Injection, Charge Air Cooler	Compression Ratio:	17.0:1

### PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) Rated	107
Load Fuel Consumption (gal/Hr) Rated	4.6
Load Exhaust Gas Flow (cfm) Rated Load	445
Exhaust Gas Temperature (°F)	752

### United States EPA - Mobile Off-Highway Tier 4

Limits -

75 ≤ ~ ≤ 100 BHP

Criteria Pollutant	Emission Requirements		Certified Engine Emissions	
NOx (Oxides of Nitrogen as NO <sub>2</sub> )	0.298	gr/bhp-hr	0.246	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)	3.72	gr/bhp-hr	0.074	gr/bhp-hr
PM (Particulate Matter)	0.014	gr/bhp-hr	0.014	gr/bhp-hr
NMHC (Non-Methane Hydrocarbons)	0.141	gr/bhp-hr	0.014	gr/bhp-hr
NMHC + NOx	N/A	gr/bhp-hr	N/A	gr/bhp-hr

EPA Engine Family:	NJDXL04.5315
EPA Certificate of Conformance:	NJDXL04.5315-014
ARB Executive Order:	U-R-004-0627
Effective Date:	Model Year 2022

**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.

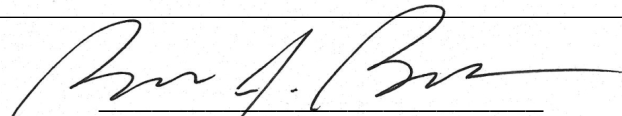


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
2022 MODEL YEAR  
CERTIFICATE OF CONFORMITY  
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION  
AND AIR QUALITY  
ANN ARBOR, MICHIGAN 48105

**Certificate Issued To:** Deere & Company  
(U.S. Manufacturer or Importer)  
**Certificate Number:** NJDXL04.5315-014

**Effective Date:**  
09/03/2021  
**Expiration Date:**  
12/31/2022

  
Byron J. Bunker, Division Director  
Compliance Division

**Issue Date:**  
09/03/2021  
**Revision Date:**  
N/A

**Model Year:** 2022  
**Manufacturer Type:** Original Engine Manufacturer  
**Engine Family:** NJDXL04.5315

**Mobile/Stationary Indicator:** Both  
**Emissions Power Category:** 56<=kW<130  
**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, Non-standard Non-After Treatment Device Installed

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.

 <b>CALIFORNIA</b> AIR RESOURCES BOARD	<b>JOHN DEERE POWER SYSTEMS</b>	<b>EXECUTIVE ORDER U-R-004-0627</b> New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in California 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-19-095;

**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)
2022	NJDXL04.5315	4.5	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Control Module, Exhaust Gas Recirculation, Selective Catalyst Reduction-Urea, Electronic Direct Injection, Turbocharger, Charge Air Cooler, Oxidation catalyst, Ammonia Oxidation Catalyst			Loader, Tractor, Dozer, Pump, Compressor, Generator Set, Other Industrial Equipment	

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
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.02	0.33	--	0.1	0.02	--	--	--

**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).

**BE IT FURTHER RESOLVED:** That for the listed engine models which include engines from different power categories in the same engine family, the manufacturer is complying with the more stringent set of standards from the 56 ≤ kW < 130 power categories in conformance with the incorporated Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

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 on this 29th day of December 2021.



Allen Lyons, Chief  
Emissions Certification and Compliance Division

**Attachment: Engine Models****EO #:** U-R-004-0627**Family:** NJDXL04.5315**Attachment Last Revised:** 11/16/2021

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	Peak Torque - Fuel	Peak Torque - Fuel Units	OBD	GHG	Special	Notes
4045	4045HFC04A		I-4	4.5	Liters	104	kilowatt	2200	100.9	mm3/stroke	540	N-m	1600	113.7	mm3/stroke	N/A	N/A		
4045	4045HFC04B		I-4	4.5	Liters	104	kilowatt	2200	104.3	mm3/stroke	540	N-m	1600	114.2	mm3/stroke	N/A	N/A		
4045	4045HFC04C		I-4	4.5	Liters	93	kilowatt	2400	88.6	mm3/stroke	493	N-m	1600	103.1	mm3/stroke	N/A	N/A		
4045	4045HFC04D		I-4	4.5	Liters	93	kilowatt	2200	90.8	mm3/stroke	536	N-m	1600	112.7	mm3/stroke	N/A	N/A		
4045	4045HFC04E		I-4	4.5	Liters	86	kilowatt	2400	82.2	mm3/stroke	461	N-m	1600	96.8	mm3/stroke	N/A	N/A		
4045	4045HFC04F		I-4	4.5	Liters	86	kilowatt	2200	84.6	mm3/stroke	506	N-m	1600	105.8	mm3/stroke	N/A	N/A		
4045	4045HFC04G		I-4	4.5	Liters	80	kilowatt	2200	80	mm3/stroke	391	N-m	1600	84.2	mm3/stroke	N/A	N/A		
4045	4045HFC04H		I-4	4.5	Liters	74	kilowatt	2400	70.4	mm3/stroke	391	N-m	1600	84.2	mm3/stroke	N/A	N/A		
4045	4045HFC04I		I-4	4.5	Liters	80	kilowatt	2000	84.4	mm3/stroke	427	N-m	1600	89.3	mm3/stroke	N/A	N/A		
4045	4045HFC04J		I-4	4.5	Liters	74	kilowatt	2200	73.5	mm3/stroke	427	N-m	1600	89.3	mm3/stroke	N/A	N/A		
4045	4045HFC04K		I-4	4.5	Liters	68	kilowatt	2200	69.8	mm3/stroke	333	N-m	1600	72.2	mm3/stroke	N/A	N/A		
4045	4045HFC04L		I-4	4.5	Liters	63	kilowatt	2400	63.9	mm3/stroke	333	N-m	1600	72.2	mm3/stroke	N/A	N/A		
4045	4045HFC04M		I-4	4.5	Liters	68	kilowatt	2000	72.8	mm3/stroke	363	N-m	1600	68.4	mm3/stroke	N/A	N/A		
4045	4045HFC04N		I-4	4.5	Liters	63	kilowatt	2200	64.2	mm3/stroke	363	N-m	1600	68.4	mm3/stroke	N/A	N/A		
4045	4045HFC04O		I-4	4.5	Liters	110	kilowatt	2200	107.4	mm3/stroke	540	N-m	1600	113.8	mm3/stroke	N/A	N/A		
4045	4045HFG04A		I-4	4.5	Liters	99	kilowatt	1800	115.1	mm3/stroke	525	N-m	1800	115.1	mm3/stroke	N/A	N/A		
4045	4045HFG04B		I-4	4.5	Liters	80	kilowatt	1800	92.6	mm3/stroke	424	N-m	1800	92.6	mm3/stroke	N/A	N/A		
4045	4045HFG04C		I-4	4.5	Liters	67	kilowatt	1800	77.1	mm3/stroke	355	N-m	1800	77.1	mm3/stroke	N/A	N/A		
4045	4045HFG04D		I-4	4.5	Liters	80	kilowatt	1500	106.7	mm3/stroke	508	N-m	1500	106.7	mm3/stroke	N/A	N/A		
4045	4045HFG04E		I-4	4.5	Liters	67	kilowatt	1500	90.8	mm3/stroke	427	N-m	1500	90.8	mm3/stroke	N/A	N/A		
4045	4045HLV73		I-4	4.5	Liters	99	kilowatt	2200	98.2	mm3/stroke	540	N-m	1600	113.2	mm3/stroke	N/A	N/A		
4045	4045HLV76		I-4	4.5	Liters	94	kilowatt	2200	92.5	mm3/stroke	519	N-m	1600	107.9	mm3/stroke	N/A	N/A		
4045	4045HLV78		I-4	4.5	Liters	94	kilowatt	2200	93.4	mm3/stroke	519	N-m	1600	107.9	mm3/stroke	N/A	N/A		
4045	4045HLV78A		I-4	4.5	Liters	99	kilowatt	2200	96.8	mm3/stroke	540	N-m	1600	113.7	mm3/stroke	N/A	N/A		
4045	4045HMC05A		I-4	4.5	Liters	104	kilowatt	2200	102	mm3/stroke	540	N-m	1600	113	mm3/stroke	N/A	N/A		
4045	4045HMC05B		I-4	4.5	Liters	90	kilowatt	2000	93.6	mm3/stroke	480	N-m	1600	101	mm3/stroke	N/A	N/A		
4045	4045HP075		I-4	4.5	Liters	94	kilowatt	2200	93.4	mm3/stroke	519	N-m	1600	107.9	mm3/stroke	N/A	N/A		
4045	4045HPRNT11		I-4	4.5	Liters	109	kilowatt	2200	99.6	mm3/stroke	577	N-m	1600	123.1	mm3/stroke	N/A	N/A		
4045	4045HPRNT14		I-4	4.5	Liters	109	kilowatt	2200	107.5	mm3/stroke	577	N-m	1600	123.1	mm3/stroke	N/A	N/A		
4045	4045HT096		I-4	4.5	Liters	94	kilowatt	2200	93.4	mm3/stroke	519	N-m	1600	107.9	mm3/stroke	N/A	N/A		