## **EXHAUST EMISSION DATA SHEET**

MQ POWER

**GENERATOR SET** 

Model: DCA150SSJU4F3/B/PB/PD



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

**ENGINE DATA** 

Manufacturer: JOHN DEERE (106 mm) Bore: 4.17 Model: 6068HFG05 Stroke: 5.0 in. (127 mm) Type: 4-Cycle, In-Line, 6-Cylinder, Diesel Displacement: 415 cid (6.8 liters)

17.2:1

Aspiration: Compression Ratio: Turbocharger, ECM, EGR, DOC, SCR Electronic Direct Injection, Charge Air Cooler

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) Rated 215 Load Fuel Consumption (gal/Hr) Rated 8.9 Load Exhaust Gas Flow (cfm) Rated Load 812 Exhaust Gas Temperature (°F) 685

> United States EPA - Mobile Off-Highway Tier 4 Limits -

174≤ ~ ≤751 BHP

Criteria Pollutant	Emis	sion Requirements	Certifie	d Engine Emissions
NOx (Oxides of Nitrogen as NO2)	0.298	gr/bhp-hr	0.044	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)	2.60	gr/bhp-hr	0.007	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:** PJDXL06.8312 **EPA Certificate of Conformance:** PJDXL06.8312-018 ARB Executive Order: U-R-004-0646 Model Year 2023 **Effective Date:** 

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 2023 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: PJDXL06.8312-018

Effective Date: 09/29/2022

Expiration Date: 12/31/2023

Issue Date: 09/29/2022

 $\frac{\text{Revision Date:}}{N/A}$ 

Model Year: 2023

Manufacturer Type: Original Engine Manufacturer

**Engine Family: PJDXL**06.8312

Mobile/Stationary Indicator: Both

Emissions Power Category: 130<=kW<=560

Fuel Type: Diesel

After Treatment Devices: Diesel Oxidation Catalyst, Ammonia Slip Catalyst, Selective Catalytic

Byron J. Bunker, Division Director

Compliance Division

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.



## **DEERE & COMPANY**

EXECUTIVE ORDER U-R-004-0646 New Off-Road Compression-Ignition Engines

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)					
2023	PJDXL06.8312	6.8	Diesel 8000						
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Direct Inje Gas Recir	Air Cooler, Oxidation Cection, Electronic Controller Coulation, Turbocharger Controllera, Ammonia Ox	ol Module, Exhaust , Selective Catalyst	Pump, Compressor, Generator Set, O 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			I	EXHAUST (g/kw-ł	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	Tier 4 Final STD		0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.02	0.06		0.01	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).

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 <u>/8t/k</u> day of October 2022.

Robin U. Lang, Chief

**Emissions Certification and Compliance Division** 

Jolin U. Lang

Attachment: Engine Models EO #: U-R-004-0646 Family: PJDXL06.8312 Attachment Last Revised: 10/5/2022

	Trim					Peak Power -	Peak Power -	Peak Power -	Peak Power - Fue	•	. can rorque	Torque - Peak Torque - Fue						
	1111111	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel Units		OBD	GHG	Special	Notes
6068HFG05A		I-6	6.8	Liters	192	kilowatt	1800	143.5	mm3/stroke	1019	N-m	1800	143.5	mm3/stroke	N/A	N/A		
6068HFG05B		1-6	6.8	Liters	160	kilowatt	1800	119.4	mm3/stroke	849	N-m	1800	119.4	mm3/stroke	N/A	N/A		
6068HFG05C		1-6	6.8	Liters	165	kilowatt	1500	145.4	mm3/stroke	1050	N-m	1500	145.4	mm3/stroke	N/A	N/A		
6068HFG05D		1-6	6.8	Liters	160	kilowatt	1500	142.3	mm3/stroke	1019	N-m	1500	142.3	mm3/stroke	N/A	N/A		
6068HFG06A		1-6	6.8	Liters	241	kilowatt	1800	180.4	mm3/stroke	1279	N-m	1800	180.4	mm3/stroke	N/A	N/A		
6068HFG06B		I-6	6.8	Liters	216	kilowatt	1800	159.8	mm3/stroke	1146	N-m	1800	159.8	mm3/stroke	N/A	N/A		
6068HFG06C		I-6	6.8	Liters	197	kilowatt	1500	176.6	mm3/stroke	1254	N-m	1500	176.6	mm3/stroke	N/A	N/A		
6068HPRNT7		I-6	6.8	Liters	248	kilowatt	1800	184.6	mm3/stroke	1316	N-m	1800	184.6	mm3/stroke	N/A	N/A		
																		1
																		1
	6068HFG05D 6068HFG06A 6068HFG06B 6068HFG06C	6068HFG05D 6068HFG06A 6068HFG06B 6068HFG06C	6068HFG05D I-6 6068HFG06A I-6 6068HFG06B I-6 6068HFG06C I-6	6068HFG05D   I-6   6.8   6068HFG06A   I-6   6.8   6068HFG06B   I-6   6.8   6068HFG06C   I-6   6.8	6068HFG05D         I-6         6.8         Liters           6068HFG06A         I-6         6.8         Liters           6068HFG06B         I-6         6.8         Liters           6068HFG06C         I-6         6.8         Liters	6068HFG05D         I-6         6.8         Liters         160           6068HFG06A         I-6         6.8         Liters         241           6068HFG06B         I-6         6.8         Liters         216           6068HFG06C         I-6         6.8         Liters         197	6068HFG05D         I-6         6.8         Liters         160         kilowatt           6068HFG06A         I-6         6.8         Liters         241         kilowatt           6068HFG06B         I-6         6.8         Liters         216         kilowatt           6068HFG06C         I-6         6.8         Liters         197         kilowatt	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke         1019           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke         1279           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke         1146           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke         1254	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke         1019         N-m           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke         1279         N-m           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke         1146         N-m           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke         1254         N-m	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke         1019         N-m         1500           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke         1279         N-m         1800           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke         1146         N-m         1800           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke         1254         N-m         1500	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke         1019         N-m         1500         142.3           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke         1279         N-m         1800         180.4           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke         1146         N-m         1800         159.8           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke         1254         N-m         1500         176.6	6068HFG05D         I-6         6.8         Liters         160         kilowatt         1500         142.3         mm3/stroke         1019         N-m         1500         142.3         mm3/stroke           6068HFG06A         I-6         6.8         Liters         241         kilowatt         1800         180.4         mm3/stroke         1279         N-m         1800         180.4         mm3/stroke           6068HFG06B         I-6         6.8         Liters         216         kilowatt         1800         159.8         mm3/stroke         1146         N-m         1800         159.8         mm3/stroke           6068HFG06C         I-6         6.8         Liters         197         kilowatt         1500         176.6         mm3/stroke         1254         N-m         1500         176.6         mm3/stroke	6068HFG05D         I-6         6.8         Liters         160       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  1019   N-m   1500   142.3   mm3/stroke   N/A   N/A   6068HFG06A   I-6   6.8   Liters   241   kilowatt   1800   180.4   mm3/stroke   1279   N-m   1800   180.4   mm3/stroke   N/A   N/A   6068HFG06B   I-6   6.8   Liters   216   kilowatt   1800   159.8   mm3/stroke   1146   N-m   1800   159.8   mm3/stroke   N/A   N/A   6068HFG06C   I-6   6.8   Liters   197   kilowatt   1500   176.6   mm3/stroke   1254   N-m   1500   176.6   mm3/stroke   N/A   N/A