EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET





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 4.66 Bore: (118 mm) Model: 6090HFG06 Stroke: 5.35 in. (136 mm) Type: 4-Cycle, In-Line, 6-Cylinder, Diesel Displacement: 549 (9.0 liters) cid

Aspiration: **Compression Ratio:** 16.0:1

Turbocharger, ECM, EGR, DOC, SCR Electronic Direct

Injection, Charge Air Cooler

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz) Rated 437 Load Fuel Consumption (gal/Hr) Rated 16.7 Load Exhaust Gas Flow (cfm) Rated Load 1448 Exhaust Gas Temperature (°F) 831

> United States EPA - Mobile Off-Highway Tier 4 174 ≤ ~ < 751 BHP Limits -

Criteria Pollutant	Emis	sion Requirements	NTE En	gine Emissions
NOx (Oxides of Nitrogen as NO2)	0.298	gr/bhp-hr	0.447	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	3.28	gr/bhp-hr
PM (Particulate Matter)	0.014	gr/bhp-hr	0.022	gr/bhp-hr
NMHC (Non-Methane Hydrocarbons)	0.141	gr/bhp-hr	0.208	gr/bhp-hr
NMHC + NOx	N/A	gr/bhp-hr	N/A	gr/bhp-hr

EPA Engine Family: RJDXL09.0313 **EPA Certificate of Conformance:** RJDXL09.0313-016 ARB Executive Order: U-R-004-0666 Model Year 2024 **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.

Date: 5/28/2024 Data And Specifications Subject To Change Without Notice



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2024 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: RJDXL09.0313-016

Effective Date: 09/29/2023

Expiration Date: 12/31/2024

Issue Date: 09/29/2023

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

Model Year: 2024

Manufacturer Type: Original Engine Manufacturer

Engine Family: RJDXL09.0313

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-004-0666 New Off-Road Compression-Ignition Engines Page 1 of 1

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The engines and emission control systems produced by the manufacturer as described below are certified 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	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation			
2024	RJDXL09.0313	Diesel	Dedicated	Diesel	Constant Speed			

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kWh-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

		Crit	eria	Smoke Opacity				
Applicable Standard	NMHC	NOx	СО	PM	ACL	LUG	PEAK	
	STD	0.19	0.40	3.5	0.02	*	*	*
Tier 4 Final 130 ≤ kW ≤ 560	FEL	*	*	*	*	*	*	*
100 = KVV = 000	NTE	0.28	0.60	4.4	0.03	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed on this 2/st day of August 2023.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

Polin U. Lang

ATTACHMENT: ENGINE MODELS

Family: RJDXL09.0313 EO Number: U-R-004-0666 Date Applicable: 07/28/2023

					Peak Power			Peak Torque					
Model	Code	Trim	Config	Displacement	Power	Speed	Fueling	Torque	Speed	Fueling	ECS Num	GHG	Notes
-	-	-	-	Liters	kilowatt	rpm	mm3/stroke	N-m	rpm	mm3/stroke	-	-	-
6090	6090HFG06A		I-6	9	345	1800	263.2	1830	1800	263.2	1	N/A	
6090	6090HFG06B		I-6	9	300	1500	269.8	1910	1500	269.8	1	N/A	
6090	6090HFG06C		I-6	9	326	1800	247.5	1731	1800	247.5	1	N/A	
6090	6090HFG06D		I-6	9	300	1500	269.5	1910	1500	269.5	1	N/A	
6090	6090HFG06E		I-6	9	273	1800	201.3	1448	1800	201.3	1	N/A	
6090	6090HFG06F		I-6	9	273	1500	243	1737	1500	243	1	N/A	
6090	6090HPRNT7		I-6	9	364	1800	277.6	1934	1800	277.6	1	N/A	