

JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0607

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)			
2021	MJDXL04.5317	4.5	Diesel	8000			
SPECIAL	FEATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
Redu Turbo	onic Control Module, Se action-Urea, Electronic I ocharger, Charge Air Co atalyst, Ammonia Oxida	Direct Injection, poler, Oxidation	Loaders, Tractor, Dozer, Pump, Compressor, Generator Set, Backhoes				

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	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 <u><</u> 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	0.24		0.03	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>25th</u> day of November 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-004-0607 Family: MJDXL04.5317 Attachment Last Revised: 11/11/2020 Displacement -Peak Power - Peak Power -Peak Power -Peak Power -Peak Torque -Peak Torque -Peak Torque -Peak Torque -Fueling Speed (rpm) Peak Torque Model Code Trim Config Displacement Units **Peak Power** Units **Fuel Units** Units Speed (rpm) Fuel Fuel Units OBD GHG Special Notes 4045 4045HL050 N/A L4 4.5 Liters 110 kilowatt 2200 111.2 mm3/stroke 586 N-m 1550 125.2 mm3/stroke N/A N/A N/A N/A 4045 4045HL290 N/A L4 4.5 Liters 110 kilowatt 2100 116 mm3/stroke 586 N-m 1550 126.7 mm3/stroke N/A N/A N/A N/A 4045HPRNT17 4.5 114.4 1550 4045 N/A L4 Liters 116 kilowatt 2400 mm3/stroke 633 N-m 138.9 mm3/stroke N/A N/A N/A N/A