

JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0612

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	MJDXL06.8302	4.5, 6.8	Diesel	8000						
SPECIAL	FEATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
Direct Inje Gas	Air Cooler, Oxidation C ection, Electronic Contr Recirculation, Periodic arger, Selective Catalys Ammonia Oxidation (ol Module, Exhaust Trap Oxidizer, st Reduction-Urea,	Crane, Tractor, Loaders, Dozer, Pump, Compressor, 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 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 (%)		
CLASS	POWER STANDARD CLASS CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
75 <u><</u> kW <u><</u> 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	N/A	N/A	N/A	N/A	0.01	N/A	N/A	N/A
		CERT	0.03	0.16		0.03	0.003			

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).

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 130 ≤ kW < 560 power category 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.



JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0612

New Off-Road Compression-Ignition Engines

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

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 9th day of December 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-004-0612 Family: MJDXL06.8302 Attachment Last Revised: 11/11/2020 Displacement -Peak Power -Peak Power -Peak Power -Peak Power Peak Torque -Peak Torque -Peak Torque -Peak Torque -Model Code Trim Config Displacement Units **Peak Power** Units **Fueling Fuel Units Peak Torque** Units Speed (rpm) Fuel Fuel Units OBD GHG Special Notes Speed (rpm) 4045 4045CI551A N/A 4.5 129 122.3 667 N-m 1500 142.2 N/A N/A N/A Liters kilowatt 2400 mm3/stroke mm3/stroke N/A 4045 4045CI551B N/A 4.5 Liters 116 kilowatt 2200 115.3 mm3/stroke 667 N-m 1500 141 7 mm3/stroke N/A N/A N/A N/A 4045 4045CI551C N/A L4 4.5 Liters 116 kilowatt 2400 27 mm3/stroke 616 N-m 1500 130.3 mm3/stroke N/A N/A N/A N/A 4045 4045CI551D N/A L4 4.5 Liters 129 kilowatt 2200 128 mm3/stroke 667 N-m 1500 142.9 mm3/stroke N/A N/A N/A N/A 4045 4045CI551E N/A L4 4.5 Liters 125 kilowatt 2200 125.1 mm3/stroke 616 N-m 1500 130.3 mm3/stroke N/A N/A N/A N/A 4045 4045CI551F N/A L4 4.5 125 kilowatt 2000 132.2 mm3/stroke 667 N-m 1500 141.7 mm3/stroke N/A N/A N/A N/A 4045 4045CI551G N/A L4 4.5 Liters 125 kilowatt 2000 132.2 mm3/stroke 667 N-m 1500 140.8 mm3/stroke N/A N/A N/A N/A 4045 4045HFC07A L4 4.5 95 2200 88.1 mm3/stroke 494 N-m 1500 104.3 mm3/stroke N/A N/A N/A N/A kilowatt N/A 4045 4045HFC07B 4.5 104 kilowatt 2400 98.9 mm3/stroke 540 N-m 1500 116.8 mm3/stroke N/A N/A N/A L4 Liters N/A N/A 4045 4045HFG09A N/A L4 4.5 Liters 124 kilowatt 1800 143.8 mm3/stroke 658 N-m 1800 143.8 mm3/stroke N/A N/A N/A N/A 4045 4045HFG09B N/A 4.5 Liters 105 kilowatt 1800 121.5 mm3/stroke 558 N-m 1800 121.5 mm3/stroke N/A N/A N/A N/A 14 4045 4045HL503 4.5 129 2100 132.4 mm3/stroke 730 N-m 1575 156.3 mm3/stroke N/A N/A N/A N/A N/A 14 Liters kilowatt 4045 4045HP076 4.5 104 2200 103.9 mm3/stroke 555 N-m 1500 119.6 mm3/stroke N/A N/A N/A N/A N/A 14 Liters kilowatt 4045 4045HRT09A 124 2000 117.3 660 138.4 N/A 14 4.5 Liters kilowatt mm3/stroke N-m 1500 mm3/stroke N/A N/A N/A N/A 4045 4045HRT09B 4.5 Liters 119 kilowatt 2000 108.2 mm3/stroke 612 N-m 1500 127.7 mm3/stroke N/A N/A N/A N/A N/A L4 4045 4045HRT090 N/A 4.5 103 kilowatt 2000 92.5 mm3/stroke 562 N-m 1500 120 mm3/stroke N/A N/A N/A N/A 14 Liters 4045 4045HT084 4.5 129 2200 128.9 mm3/stroke 730 N-m 1575 156.9 mm3/stroke N/A N/A N/A N/A L4 Liters kilowatt N/A 4045 4045HT091 104 103.9 555 1500 119.6 N/A 14 4.5 Liters kilowatt 2200 mm3/stroke N-m mm3/stroke N/A N/A Emergency N/A 4045 4045HT092 N/A L4 4.5 Liters 104 kilowatt 2200 103.9 mm3/stroke 555 N-m 1500 119.6 mm3/stroke N/A N/A Emergency N/A 4045 4045HT093 N/A L4 4.5 Liters 103 kilowatt 2000 110 mm3/stroke 555 N-m 1500 118.7 mm3/stroke N/A N/A N/A N/A 4045 4045HT098 N/A L4 4.5 Liters 104 kilowatt 2200 103.9 mm3/stroke 555 N-m 1500 119.6 mm3/stroke N/A N/A N/A N/A 4045 4045HT099 N/A L4 4.5 Liters 104 kilowatt 2200 103.9 mm3/stroke 555 N-m 1500 119.6 mm3/stroke N/A N/A N/A N/A 6068 6068HPRNT5 L6 6.8 Liters 237 kilowatt 2340 136.5 mm3/stroke 1309 N-m 1600 187.4 mm3/stroke N/A N/A N/A N/A N/A 6068 6068HRT08A N/A L6 6.8 Liters 151 kilowatt 2000 92.8 mm3/stroke 833 N-m 1500 123.5 mm3/stroke N/A N/A N/A N/A 6068 6068HRT08B 145 2000 84.9 mm3/stroke 745 N-m 1500 109.4 N/A L6 6.8 Liters kilowatt mm3/stroke N/A N/A N/A N/A mm3/stroke N-m 1500 102.8 mm3/stroke 6068 6068HRT08C N/A L6 6.8 Liters 131 kilowatt 2000 76.3 703 N/A N/A N/A N/A 6068 6068HRT08D N/A L6 6.8 Liters 116 kilowatt 2000 68.5 mm3/stroke 640 N-m 1500 93 mm3/stroke N/A N/A N/A N/A

112.7

mm3/stroke

842

N-m

1600

119.7

mm3/stroke

N/A

N/A

N/A

N/A

6068

6068HTJ63

N/A L6

6.8

Liters

163

kilowatt

2000