

DEERE & COMPANY

EXECUTIVE ORDER U-R-004-0653

New Off-Road Compression-Ignition Engines Page 1 of 2

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	PJDXL06.8302	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, 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	EMISSION			I	EXHAUST (g/kw-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 ≤ kW ≤ 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 $130 \le kW \le 560$ 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.



DEERE & COMPANY

EXECUTIVE ORDER U-R-004-0653

New Off-Road Compression-Ignition Engines Page 2 of 2

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 12th day of December 2022.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-004-0653 Family: PJDXL06.8302 Attachment Last Revised: 12/1/2022

					Displacement -	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque - Fuel					
Model	Code	Trim	Config	Displacement	Units					Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fue	l Units	OBD	GHG Spec	Special	Notes
4045	4045CI551A		I-4	4.5	Liters	129	kilowatt	2400	122.3	mm3/stroke	667	N-m	1500	142.2	mm3/stroke	N/A	N/A		
4045	4045CI551B		1-4	4.5	Liters	116	kilowatt	2200	115.3	mm3/stroke	667	N-m	1500	141.7	mm3/stroke	N/A	N/A		
4045	4045CI551C		I-4	4.5	Liters	116	kilowatt	2400	27	mm3/stroke	616	N-m	1500	130.3	mm3/stroke	N/A	N/A		
4045	4045CI551D		I-4	4.5	Liters	129	kilowatt	2200	128	mm3/stroke	667	N-m	1500	142.9	mm3/stroke	N/A	N/A		
4045	4045CI551E		I-4	4.5	Liters	125	kilowatt	2200	125.1	mm3/stroke	616	N-m	1500	130.3	mm3/stroke	N/A	N/A		
4045	4045CI551F		I-4	4.5	Liters	125	kilowatt	2000	132.2	mm3/stroke	667	N-m	1500	141.7	mm3/stroke	N/A	N/A		
4045	4045CI551G		I-4	4.5	Liters	125	kilowatt	2000	132.2	mm3/stroke	667	N-m	1500	140.8	mm3/stroke	N/A	N/A		
4045	4045HFG09A		I-4	4.5	Liters	124	kilowatt	1800	143.8	mm3/stroke	658	N-m	1800	143.8	mm3/stroke	N/A	N/A		
4045	4045HFG09B		1-4	4.5	Liters	105	kilowatt	1800	121.5	mm3/stroke	558	N-m	1800	121.5	mm3/stroke	N/A	N/A		
4045	4045HL503		I-4	4.5	Liters	129	kilowatt	2100	132.4	mm3/stroke	730	N-m	1575	156.3	mm3/stroke	N/A	N/A		
4045	4045HP076		1-4	4.5	Liters	104	kilowatt	2200	103.9	mm3/stroke	555	N-m	1500	119.6	mm3/stroke	N/A	N/A		
4045	4045HT084		I-4	4.5	Liters	129	kilowatt	2200	128.9	mm3/stroke	730	N-m	1575	156.9	mm3/stroke	N/A	N/A		
4045	4045HT091		I-4	4.5	Liters	104	kilowatt	2200	103.9	mm3/stroke	555	N-m	1500	119.6	mm3/stroke	N/A	N/A		Emergency Vehicle
4045	4045HT092		I-4	4.5	Liters	104	kilowatt	2200	103.9	mm3/stroke	555	N-m	1500	119.6	mm3/stroke	N/A	N/A		Emergency Vehicle
4045	4045HT093		I-4	4.5	Liters	103	kilowatt	2000	110	mm3/stroke	555	N-m	1500	118.7	mm3/stroke	N/A	N/A		
4045	4045HT098		I-4	4.5	Liters	104	kilowatt	2200	103.9	mm3/stroke	555	N-m	1500	119.6	mm3/stroke	N/A	N/A		
4045	4045HT099		I-4	4.5	Liters	104	kilowatt	2200	103.9	mm3/stroke	555	N-m	1500	119.6	mm3/stroke	N/A	N/A		
6068	6068HPRNT5		I-6	6.8	Liters	237	kilowatt	2340	136.5	mm3/stroke	1309	N-m	1600	187.4	mm3/stroke	N/A	N/A		
6068	6068HTJ63		I-6	6.8	Liters	163	kilowatt	2000	112.7	mm3/stroke	842	N-m	1600	119.7	mm3/stroke	N/A	N/A		
																			T