

JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0637

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	PJDXL04.5337	4.5	Diesel	8000					
SPECIAL	FEATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Redu Turbo	onic Control Module, Se ction-Urea, Electronic I ocharger, Charge Air Co Ammonia Oxidation Ca Oxidizer	Direct Injection, poler, Oxidation	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 POWER	EMISSION			ı	EXHAUST (g/kw-l	OPACITY (%)				
CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.05	0.27		0.1	0.002			

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 56 ≤ kW < 130 power categories 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-004-0637

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

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 8th day of April 2022.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-004-0637 Family: PJDXL04.5337 Attachment Last Revised: 6/14/2022

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque - Fuel					
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel	Units	OBD	GHG	Special	Notes
4045	4045HI551A		1-4	4.5	Liters	104	kilowatt	2100	106	mm3/stroke	575	N-m	1550	126	mm3/stroke	N/A	N/A		
4045	4045HI551B		1-4	4.5	Liters	86	kilowatt	2100	90	mm3/stroke	554	N-m	1550	120	mm3/stroke	N/A	N/A		
4045	4045HI551C		1-4	4.5	Liters	115	kilowatt	2000	120.3	mm3/stroke	593	N-m	1600	129.9	mm3/stroke	N/A	N/A		New Mode
4045	4045HI551D		1-4	4.5	Liters	107	kilowatt	1900	115.7	mm3/stroke	577	N-m	1600	127	mm3/stroke	N/A	N/A		New Mode
4045	4045HI551E		1-4	4.5	Liters	96	kilowatt	1800	109	mm3/stroke	554	N-m	1600	121	mm3/stroke	N/A	N/A		New Mode
4045	4045HL291		1-4	4.5	Liters	110	kilowatt	2100	121.6	mm3/stroke	586	N-m	1550	132.8	mm3/stroke	N/A	N/A		
4045	4045HL292		1-4	4.5	Liters	110	kilowatt	2100	121.6	mm3/stroke	586	N-m	1550	132.8	mm3/stroke	N/A	N/A		
4045	4045HN057A		1-4	4.5	Liters	104	kilowatt	2100	106	mm3/stroke	575	N-m	1550	126	mm3/stroke	N/A	N/A		
4045	4045HN057B		1-4	4.5	Liters	86	kilowatt	2100	90	mm3/stroke	554	N-m	1550	120	mm3/stroke	N/A	N/A		
4045	4045HPRNT18A		1-4	4.5	Liters	116	kilowatt	2400	111.9	mm3/stroke	675	N-m	1550	148.3	mm3/stroke	N/A	N/A		
4045	4045WG501A		1-4	4.5	Liters	86	kilowatt	2100	93.9	mm3/stroke	561	N-m	1550	123.9	mm3/stroke	N/A	N/A		
4045	4045WG501B		1-4	4.5	Liters	66	kilowatt	2100	76.3	mm3/stroke	421	N-m	1550	95.2	mm3/stroke	N/A	N/A		
4045	4045WG502		1-4	4.5	Liters	85	kilowatt	2000	94.6	mm3/stroke	495	N-m	1600	109.7	mm3/stroke	N/A	N/A		