

DEERE & COMPANY

EXECUTIVE ORDER U-R-004-0645 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)					
2023	PJDXL04.5317	4.5	Diesel	8000					
SPECIAL	FEATURES & EMISSION O	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Redu Turbo	onic Control Module, Se ction-Urea, Electronic I ocharger, Charge Air Co talyst, Ammonia Oxida	Direct Injection, poler, Oxidation	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 CLASS	EMISSION			ı	EXHAUST (g/kw-ł		OPACITY (%)			
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
75 ≤ 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 18th day of October 2022.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

Jolin U. Kang

Attachment: Engine Models

EO #: U-R-004-0645 Family: PJDXL04.5317 Attachment Last Revised: 10/5/2022

					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	Speed (rpm)	Fueling	Fuel Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD	GHG	Special	Notes
4045	4045HI440A		I-4	4.5	Liters	110	kilowatt	2200	111.2	mm3/stroke	586	N-m	1550	125.2	mm3/stroke	N/A	N/A		
4045	4045HI440B		I-4	4.5	Liters	104	kilowatt	2200	107.6	mm3/stroke	540	N-m	1500	117.5	mm3/stroke	N/A	N/A		
4045	4045HL050		I-4	4.5	Liters	110	kilowatt	2200	111.2	mm3/stroke	586	N-m	1550	125.2	mm3/stroke	N/A	N/A		
4045	4045HL290		I-4	4.5	Liters	110	kilowatt	2100	116	mm3/stroke	586	N-m	1550	126.7	mm3/stroke	N/A	N/A		
4045	4045HLV82		I-4	4.5	Liters	110	kilowatt	2200	111.2	mm3/stroke	586	N-m	1550	125.2	mm3/stroke	N/A	N/A		
4045	4045HPRNT17		1-4	4.5	Liters	116	kilowatt	2400	114.4	mm3/stroke	633	N-m	1550	138.9	mm3/stroke	N/A	N/A		
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