

## **DEERE & COMPANY**

EXECUTIVE ORDER U-R-004-0644 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	PJDXL04.5316	4.5	Diesel	8000				
SPECIAL	. FEATURES & EMISSION (	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
Recircular Electronic	ctronic Control Module, ation, Selective Catalys Direct Injection, Turbo Oxidation Catalyst, An Catalyst	st Reduction-Urea, charger, Charge Air	Crane, Loader, Tractor, Dozer, Pum Generator Set, Other Industrial					

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	CO	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	0.01	0.20		0.02	0.01			

**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. Lang

**Attachment: Engine Models** 

EO #: U-R-004-0644 Family: PJDXL04.5316

Attachment Last Revised: 10/5/2022

					Displacement -		Peak Power -	Peak Power -	Peak Power -	- Peak Power - Fuel Peak Torque -			Peak Torque -	k 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	4045CG440A		1-4	4.5	Liters	125	kilowatt	1800	148	mm3/stroke	665	N-m	1800	148	mm3/stroke	N/A	N/A			
4045	4045CG440B		1-4	4.5	Liters	107	kilowatt	1500	147.9	mm3/stroke	676	N-m	1500	147.9	mm3/stroke	N/A	N/A			
4045	4045HFC06A		1-4	4.5	Liters	129	kilowatt	2400	119	mm3/stroke	667	N-m	1600	139	mm3/stroke	N/A	N/A			
4045	4045HFC06B		1-4	4.5	Liters	129	kilowatt	2200	126.2	mm3/stroke	667	N-m	1600	140	mm3/stroke	N/A	N/A			
4045	4045HFC06C		1-4	4.5	Liters	116	kilowatt	2400	108	mm3/stroke	616	N-m	1600	127	mm3/stroke	N/A	N/A			
4045	4045HFC06D		1-4	4.5	Liters	104	kilowatt	2400	100	mm3/stroke	552	N-m	1600	116	mm3/stroke	N/A	N/A			
4045	4045HFC06E		1-4	4.5	Liters	104	kilowatt	2200	104	mm3/stroke	600	N-m	1600	125	mm3/stroke	N/A	N/A			
4045	4045HFC06F		1-4	4.5	Liters	93	kilowatt	2400	84	mm3/stroke	494	N-m	1600	104	mm3/stroke	N/A	N/A			
4045	4045HFC06G		1-4	4.5	Liters	93	kilowatt	2200	94	mm3/stroke	531	N-m	1600	112	mm3/stroke	N/A	N/A			
4045	4045HFC06H		1-4	4.5	Liters	129	kilowatt	2400	121	mm3/stroke	667	N-m	1600	138	mm3/stroke	N/A	N/A			
4045	4045HFC06I		1-4	4.5	Liters	129	kilowatt	2200	128	mm3/stroke	667	N-m	1600	144	mm3/stroke	N/A	N/A			
4045	4045HFC06J		1-4	4.5	Liters	116	kilowatt	2400	113	mm3/stroke	616	N-m	1600	131	mm3/stroke	N/A	N/A			
4045	4045HFC06K		I-4	4.5	Liters	104	kilowatt	2400	99	mm3/stroke	552	N-m	1600	116	mm3/stroke	N/A	N/A			
4045	4045HFC06L		I-4	4.5	Liters	104	kilowatt	2200	106	mm3/stroke	600	N-m	1600	130	mm3/stroke	N/A	N/A			
4045	4045HFC06M		I-4	4.5	Liters	93	kilowatt	2400	90	mm3/stroke	494	N-m	1600	102	mm3/stroke	N/A	N/A			
4045	4045HFC06N		I-4	4.5	Liters	93	kilowatt	2200	97	mm3/stroke	531	N-m	1600	115	mm3/stroke	N/A	N/A			
4045	4045HPRNT16		1-4	4.5	Liters	129	kilowatt	2400	118	mm3/stroke	694	N-m	1600	149	mm3/stroke	N/A	N/A			