

JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0606 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	MJDXL04.5316	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, Loaders, 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		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 <u><</u> 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 24th day of November 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-004-0606 Family: MJDXL04.5316 Attachment Last Revised: 11/11/2020 Displacement -Peak Power -Peak Power -Peak Power -Peak Power -Peak Torque -Peak Torque -Peak Torque -Peak Torque -Speed (rpm) Model Code Trim Config Displacement Units **Peak Power** Units Fueling **Fuel Units** Peak Torque Units Speed (rpm) Fuel **Fuel Units** OBD GHG Special Notes 4045 4045HFC06A N/A L4 129 2400 119 mm3/stroke 667 1600 139 mm3/stroke N/A N/A N/A N/A Liters kilowatt N-m 4045 4045HFC06B N/A L4 129 126.2 1600 140 N/A 4.5 Liters kilowatt 2200 mm3/stroke 667 N-m mm3/stroke N/A N/A N/A 4045 4045HFC06C 4.5 116 108 1600 127 N/A L4 Liters kilowatt 2400 mm3/stroke 616 N-m mm3/stroke N/A N/A N/A N/A 4045 4045HFC06D N/A L4 4.5 Liters 104 kilowatt 2400 100 mm3/stroke 552 N-m 1600 116 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06E N/A L4 4.5 Liters 104 kilowatt 2200 104 mm3/stroke 600 N-m 1600 125 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06F N/A L4 4.5 93 kilowatt 2400 84 mm3/stroke 494 N-m 1600 104 mm3/stroke N/A N/A N/A 4045 4045HFC06G N/A L4 4.5 Liters 93 kilowatt 2200 94.1 mm3/stroke 531 N-m 1600 112 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06H N/A L4 4.5 129 2400 121 mm3/stroke 667 N-m 1600 138 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06I N/A L4 4.5 129 kilowatt 2200 128 mm3/stroke 667 N-m 1600 144 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06J N/A L4 4.5 Liters 116 kilowatt 2400 113 mm3/stroke 616 N-m 1600 131 mm3/stroke N/A N/A N/A N/A 4045 99 1600 4045HFC06K N/A L4 4.5 Liters 104 kilowatt 2400 mm3/stroke 552 N-m 116 mm3/stroke N/A N/A N/A N/A 4045 4045HFC06L N/A L4 4.5 104 kilowatt 2200 106 mm3/stroke 600 1600 130 mm3/stroke N/A N/A N/A N/A Liters N-m 4045 4045HFC06M N/A 4.5 93 2400 90 494 1600 102 mm3/stroke N/A N/A N/A N/A L4 Liters kilowatt mm3/stroke N-m 4045 4045HFC06N 4.5 93 kilowatt 2200 97 mm3/stroke 531 1600 115 mm3/stroke N/A N/A N/A N/A 14 Liters N-m N/A 4045HPRNT16 4045 N/A L4 4.5 Liters 129 kilowatt 2400 118 mm3/stroke 694 N-m 1600 149 mm3/stroke N/A N/A N/A N/A