CALIFORNIA AIR RESOURCES BOARD	JOHN DEERE POWER SYSTEMS	EXECUTIVE ORDER U-R-004-0568 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-14-012;

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)
2019	KJDXL02.9318	2.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Electronic Direct Injection, Periodic Trap Oxidizer, Turbocharger, Charge Air Cooler, Oxidation Catalyst	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 hydrocarbon (HC), 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 STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.2	0.1	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 at El Monte, California on this 15th day of October 2018.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

8-03-2018

Engine Model Summary Form

Manufacturer: **John Deere Power Systems**
Engine category: **Nonroad CI**
EPA Engine Family: **KJDXL02.9318**
Mfr Family Name: **320HCB**
Process Code: **New Submission**

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1. Engine code	2. Engine Model	3. kW@RPM (SAE Gross)	4. Fuel Rate: mm/stroke@peak kW (for diesel only)	5. Fuel Rate: (kg/hr)@peak kW (for diesels only)	6. Torque (Nm) @RPM (SEA Gross)	7. Fuel Rate: mm/stroke@peak torque	8. Fuel Rate: (kW/hr)@peak torque	9. Emission Control Device Per SAE J1930
3029HPRNT2	3029	55@2400	77.8@2400	14.3@2400	320@2400	105.5@2400	12.9@2400	PTOX OC TC DFI CAC ECM
3029HPY80	3029	55@2200	80.6@2200	13.6@2200	304@1550	95.7@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY81	3029	55@2200	80.6@2200	13.6@2200	304@1550	95.7@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY84	3029	55@2100	82.8@2100	13.3@2100	304@1550	95.3@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY85	3029	55@2100	82.8@2100	13.3@2100	304@1550	95.3@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY96	3029	55@2200	80.6@2200	13.6@2200	304@1550	95.7@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY97	3029	55@2200	80.6@2200	13.6@2200	304@1550	95.7@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY98	3029	55@2100	82.8@2100	13.3@2100	304@1550	95.3@1550	11.3@1550	PTOX OC TC DFI CAC ECM
3029HPY101	3029	55@2100	82.8@2100	13.3@2100	304@1550	95.3@1550	11.3@1550	PTOX OC TC DFI CAC ECM