California Environmental Protection Agency Air Resources Board	JOHN DEERE POWER SYSTEMS	EXECUTIVE ORDER U-R-004-0509 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the 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)
2016	GJDXL04.5304	4.5	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Electronic Direct Injection, Turbocharger, Oxidation Catalyst, Periodic Trap Oxidizer	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
		FEL	--	--	--	--	0.01	--	--	--
		CERT	--	--	4.4	0.1	0.001	--	--	--

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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 7th day of October 2015.

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

9-25-15

Attachment: Page 1 of 1

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Engine Model Summary Form

Manufacturer: John Deere Power Systems
Engine category: Nonroad CI
EPA Engine Family: GJDXL04.5304
Mfr Family Name: 350TCA
Process Code: New Submission

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
4045TFC03A	4045	55@2400	63.2@2400	15.5@2400	304@1550	74.9@1550	11.8@1550	~~EC EM~~ PTOX OC TC DFI, ECM
4045TFC03B	4045	55@2200	67.3@2200	15.1@2200	304@1550	74.8@1550	11.8@1550	EC EM PTOX OC TC DFI, ECM
4045TFG03A	4045	55@1800	72.8@1800	13.4@1800	~~X~~	~~X~~	~~X~~	~~EC EM~~ PTOX OC TC DFI, ECM
4045TPRNT3	4045	55@2400	60.2@2400	14.7@2400	311@1600	75.2@1600	12.3@1600	~~EC EM~~ PTOX OC TC DFI, ECM