California Environmental Protection Agency **Air Resources Board**	**JOHN DEERE POWER SYSTEMS**	**EXECUTIVE ORDER U-R-004-0505** 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)
2015	FJDXL06.8309	4.5, 6.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Charge Air Cooler, Oxidation Catalyst, Electronic Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Turbocharger, Selective Catalytic Reduction-Urea, Ammonia 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), or family emission limit(s) (FEL) as applicable, 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
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	--	--	--	--	0.01	--	--	--
		CERT	0.02	0.06	--	0.1	0.003	--	--	--

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 6th day of July 2015.

T Valencia for Annette Hebert

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

EO#: U-R-004-0505

12-21-2015

R/C

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Engine Model Summary Form

Manufacturer: **John Deere Power Systems**
Engine category: **Nonroad CI**
EPA Engine Family: **FJDXL06.8309**
Mfr Family Name: **350HCD**
Process Code: **Running Change**

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
* 6068HE053	6068	190@2400	111.9@2400	41.0@2400	1000@1600	140.1@1600	34.3@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
* 6068HE054	6068	224@2400	128.1@2400	47.0@2400	1245@1600	174.1@1600	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HPRNT6	6068	235@2400	137.6@2400	50.5@2400	1347@1600	188.8@1600	46.2@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW430	6068	224@2100	142.4@2100	45.7@2100	1245@1600	174.1@1600	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW431	6068	224@2100	142.4@2100	45.7@2100	1245@1600	174.1@1600	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW434	6068	190@2100	122.5@2100	39.3@2100	1025@1600	142.7@1600	34.9@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW435	6068	190@2100	122.5@2100	39.3@2100	1025@1600	142.7@1600	34.9@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM

* New ratings being added per R/C