California Environmental Protection Agency Air Resources Board	JOHN DEERE POWER SYSTEMS	EXECUTIVE ORDER U-R-004-0469 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-02-003;

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)
2013	DJDXL06.8105	4.5, 6.5	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter	Generator Set

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
75 ≤ kW < 130	Interim Tier 4 / ALT 20% NOx and PM	STD	0.19	3.4	N/A	5.0	0.02	20	15	50
		FEL	--	3.8	--	--	0.30	--	--	--
		CERT	0.15	3.3	--	1.5	0.25	13	3	25

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 27 day of December 2012.

Annette Hebert, Chief
Mobile Source Operations Division

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R/C

6/25/2013

EO#: U-R-004-0469

Engine Model Summary Form

Manufacturer: **John Deere Power Systems**
Engine category: **Nonroad CI**
EPA Engine Family: **DJDXL06.8105**
Mfr Family Name: **350HAC**
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
6068HN054	6068H	129.0@2400	89.4@2400	32.83@2400	687@1500	104.5@1500	23.98@1500	SPL EM EC, DDI, TC, CAC
4045HF285A	4045H	109.0@2400	111.5@2400	27.3@2400	560.9@1600	131.8@1600	21.51@1600	SPL EM EC, DDI, TC, CAC
6068HT072	6068H	129 @ 2000	93.8 @ 2000	28.7 @ 2000	738 @ 2000	120.7 @ 2000	27.7 @ 2000	SPL EM EC, DDI, TC, CAC