EXECUTIVE ORDER U-R-004-0464 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	DJDXL06.8115	6.8	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Charge / Control	Air Cooler, Direct Diesel I Module, Smoke Puff Limi Exhaust Gas Recircu	njection, Electronic iter, Turbocharger, ulation	Loaders, Tractor, Dozer, Pump, 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	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS			NMHC	NOx	NMHC+NOx	co	PM	ACCE L	LUG	PEAK
130 ≤ kW < 560	Interim Tier 4 / ALT 20% NOx and PM	STD	0.19	2.0	N/A	3.5	0.02	20	15	50
		FEL		3.6			0.18			
		CERT	0.07	3.3		0.6	0.12	7	2	14

**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 the listed engines are conditionally certified to the Interim Tier 4 ALT NOx standards based on the amendments to 13 CCR Section 2423, table 1b adopted by the Board on December 16, 2011. This determination is conditional on the amendments being approved by the Office of Administrative Law. If the amendments do not become effective, the manufacturer shall be required to certify this engine family pursuant to table 1b of 13 CCR Section 2423, as that table existed on December 16, 2011 within 45 days after notification by ARB or this Executive Order may be revoked and voided ab initio.

**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 day of November 2012.

Annette Hebert, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer:

John Deere Power Systems

Engine category:

Nonroad CI

EPA Engine Family: DJDXL06.8115

350HAF

Mfr Family Name: Process Code:

**New Submission** 

Fo#: U-R-004-0464

1. Engine code 6068HT077 6068HRW83 6068HDW66 6068HPRNT2 6068HDW71 6068HDW65 6068HDW64	2. Engine Model 6068H 6068H 6068H 6068H 6068H 6068H 6068H	3. kW@RPM (SAE Gross) 184.0@1900 159.0@2100 149.0@2200 208.0@2400 149.0@2200 128.0@2200 138.0@2200	4. Fuel Rate: mm/stroke@peak kW (for diesel only) 136@1900 104.1@2100 93.3@2200 126.8@2400 93.3@2200 82.3@2200 87@2200	5. Fuel Rate: (kg/hr)@peak kW (for diesels only) 39.54@1900 33.45@2100 31.41@2200 46.56@2400 31.41@2200 27.7@2200 29.28@2200	6. Torque (Nm) @RPM (SEA Gross) 1025@1400 845.5@1600 933@1400 1159@1400 933@1400 767@1400 838@1400	7. Fuel Rate: mm/stroke@peak torque 147@1400 120.9@1600 138.7@1400 170.1@1400 138.7@1400 113.4@1400 124.1@1400	8. Fuel Rate: (kW/hr)@peak torque 31.49@1400 29.6@1600 29.71@1400 36.44@1400 29.71@1400 24.29@1400 26.58@1400	9 Emission Control Device Per SAE J1930 EC EGR EM SPL	T,TC,CAC
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