## JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0455 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)			
2012	CJDXL06.8115	6.8	Diesel				
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION				
Charge / Control	Air Cooler, Direct Diesel Module, Smoke Puff Lin Exhaust Gas Recirc	Injection, Electronic liter, 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	со	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 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 January 2012.

Annette Hebert, Chief

Mobile Source Operations Division

**Engine Model Summary Form** C Date: 2/15/2012 FO#: U-R-004-0455

Att cechment: Page laf 1 Manufacturer: John Deere Power Systems Engine category: Nonroad Cl CJDXL06.8115 EPA Engine Family: Mfr Family Name: 350HAF Process Code: Running Change 3. kW@RPM mm/stroke@peak kW (kg/hr)@peak kW @RPM mm/stroke@peak 8. Fuel Rate: Device Per (SAE Gross) (for diesel only) (for diesels only) (SEA Gross) torque (kW/hr)@peak torque **SAE J1930** 1. Engine code 2. Engine Model 6068HT077 184.0@1900 136@1900 39,54@1900 1025@1400 147@1400 31.49@1400 EM SPL EC EGR 6068H 6068HRW83 29.6@1600 **EM SPL EC EGR** 6068H 159.0@2100 104.1@2100 33.45@2100 845.5@1600 120.9@1600 6068HDW66 6068H 93,3@2200 31.41@2200 933@1400 138.7@1400 29.71@1400 **EM SPL EC EGR** 149.0@2200 6068HPRNT2 6068H 208.0@2400 126.8@2400 46.56@2400 1159@1400 170.1@1400 36.44@1400 EM SPL EC EGR **EM SPL EC EGR** 6068HDW71 6068H 149.0@2200 93,3@2200 31.41@2200 933@1400 138.7@1400 29.71@1400 6068HDW65 6068H 767@1400 113.4@1400 24.29@1400 **EM SPL EC EGR** 128.0@2200 82.3@2200 27.7@2200 6068HDW64 6068H 138.0@2200 87@2200 29.28@2200 838@1400 124.1@1400 26.58@1400 **EM SPL EC EGR**