

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	DJDXL04.5211	4.5	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Charge Air Cooler, Diesel Oxidation Catalyst, Direct Diesel Injection, Electronic Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Smoke Puff Limiter, Turbocharger			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
56 ≤ kW < 130	Interim Tier 4 / ALT NOx	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		FEL	--	3.2	--	--	0.01	--	--	--
		CERT	0.01	2.6	--	0.1	0.001	--	--	--

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-C" adopted October 20, 2005.

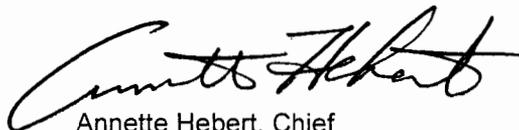
**BE IT FURTHER RESOLVED:** That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of 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 10 day of December 2012.

  
 Annette Hebert, Chief  
 Mobile Source Operations Division

R/c

6/25/2013

Attachment: Page 1 of 2

EO#: U-R-004-0471

Engine Model Summary Form

Manufacturer: John Deere Power Systems
Engine category: Nonroad CI
EPA Engine Family: DJDXL04.5211
Mfr Family Name: 350HBC
Process Code: Running Change

Table with 9 columns: 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

ECM, TC
CAC, DOC, DDI



R/c

6/25/2013

IO#: U-R-004-0471

Attachment: Page 2 of 2

ECM, TC, CAC, DOC  
ODI  
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4045HFC92F	4045	74.0@2200	80.7@2200	18.11@2200	427@1550	94.2@1550	14.89@1550	PTOX EGR EM SPL
4045HFC92W	4045	63.0@2200	69.1@2200	15.51@2200	363@1550	81.6@1550	12.9@1550	PTOX EGR EM SPL
4045HFC92N	4045	91.0@2200	95.4@2200	21.41@2200	480@1550	105.6@1550	16.7@1550	PTOX EGR EM SPL
4045HFC92K	4045	63.0@2200	69.5@2200	15.6@2200	363@1550	82.2@1550	13.0@1550	PTOX EGR EM SPL