

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	DJDXL04.5111	4.5	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Smoke Puff Limiter, Charge Air Cooler			Tractor, 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
56 ≤ kW < 75	Interim Tier 4 / ALT 20% NOx + NMHC and ALT 20% PM	STD	N/A	N/A	3.5	5.0	0.02	20	15	50
		FEL	--	--	4.7	--	0.35	--	--	--
		CERT	--	--	4.0	0.9	0.30	19	4	35

**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.

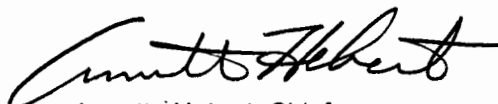
**BE IT FURTHER RESOLVED:** That the listed engines are conditionally certified to the Interim Tier 4 ALT NOx+NMHC standards based on the amendments to 13 CCR Section 2423, table 1b adopted by the Board on December 16, 2011. This determination is conditional on the amendments being approved by the Office 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 20 day of November 2012.

  
 Annette Hebert, Chief  
 Mobile Source Operations Division

EO#: U-R-004-0462

11-8-2012

Engine Model Summary Form

Manufacturer: John Deere Power Systems  
Engine category: Nonroad CI  
EPA Engine Family: DJDXL04.5111  
Mfr Family Name: 350HAE  
Process Code: New Submission

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
4045HLV56	4045H	62.0@2400	62.5@2400	15.3@2400	313@1600	73.5@1600	12.0@1600	TC CAC DFI SPL EM
4045HLV60	4045H	69.0@2400	69.9@2400	17.11@2400	353@1600	82.7@1600	13.5@1600	TC CAC DFI SPL EM
4045HLV58	4045H	62.0@2400	62.5@2400	15.3@2400	313@1600	73.5@1600	12.0@1600	TC CAC DFI SPL EM
4045HLV62	4045H	69.0@2400	69.9@2400	17.11@2400	353@1600	82.7@1600	13.5@1600	TC CAC DFI SPL EM
4045HLV66	4045H	74.0@2400	73.9@2400	18.09@2400	372@1600	87@1600	14.2@1600	TC CAC DFI SPL EM
4045HLV64	4045H	74.0@2400	73.9@2400	18.09@2400	372@1600	87@1600	14.2@1600	TC CAC DFI SPL EM
4045HF280A	4045H	74.0@2200	76.8@2200	17.23@2200	400@1600	91.8@1600	14.98@1600	TC CAC DFI SPL EM

Attachment:

Page 1 of 1