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)		
2010	AJDXL06.8106	4.5	Diesel	8000		
	FEATURES & EMISSION (TYPICAL EQUIPMENT APPLICATION			
Direct Diesel Injection, Turbo Charger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter			Loaders, 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	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		НС	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		FEL		-	-		0.30			
		CERT			4.1	1.4	0.20	1	2	2

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 December 2009.

Annette Hebert, Chief

Mobile Source Operations Division

Date: 12/10/09 FO#: 4-2-004-0382 Attachment lof 1

Engine Model Summary Form

Manufacturer:

John Deere Power Systems

Nonroad Cl

EPA Engine Family: AJDXL06.8106

Mfr Family Name: 350HAD Process Code:

New Submission

4045HL280 4045H 95.22@2300 74.30@2300 38.43@2300 288.35@1600 93.6@1600 33.67@1600 EM EC SPL 4045HL282A 4045H 99.24@2300 80.80@2300 40.13@2300 303.84@1600 105.8@1600 35.50@1600 EM EC SPL 4045HL282B 4045H 99.24@2250 67.60@2250 34.33@2250 258.85@1600 85.7@1600 30.83@1600 EM EC SPL 4045HT054 4045H 99.24@2250 67.60@2250 31.22@2200 233.34@1500 78.3@1500 26.42@1500 EM EC SPL 4045HT059A 4045H 80.47@2200 65.90@2200 31.22@2200 233.34@1500 78.3@1500 26.42@1500 EM EC SPL 4045HT059B 4045H 80.47@2200 66.90@2200 34.57@2200 262.22@1500 84.3@1500 29.50@1500 EM EC SPL 4045HT059C 4045H 84.49@2200 66.90@2200 34.57@2200 260.33@1500 87.4@1500 29.50@1500 EM EC SPL 4045HT059D 4045H 88.51@2200 72.40@2200 35.81@2200 274.34@1500 99.2@1500 30.85@1500 EM EC SPL 4045HT059E 4045H 99.24@2200 79.80@2200 39.49@2200 308.28@1500 99.2@1500 33.45@1500 EM EC SPL 4045HT061 4045H 99.24@2200 79.80@2200 39.49@2200 308.28@1500 99.2@1500 33.45@1500 EM EC SPL 4045HT061 4045H 99.24@2200 79.80@2200 39.49@2200 308.28@1500 99.2@1500 33.45@1500 EM EC SPL 4045HT061 4045H 99.24@2200 79.60@2200 38.14@2000 30.83.44@1500 1018@1500 35.50@1600 EM EC SPL 4045HL284 4045H 99.24@2200 79.60@2200 38.94@2200 308.28@1500 1018@1500 35.50@1600 EM EC SPL 4045HL284 4045H 99.24@2300 79.60@2300 39.47@2300 314.16@1600 105.5@1600 36.88@1600 EM EC SPL 4045HL284 4045H 99.24@2300 79.60@2300 39.47@2300 314.16@1600 105.5@1600 36.88@1600 EM EC SPL 4045HL284 4045H 99.24@2300 80.80@2300 40.13@2300 303.84@1600 105.5@1600 36.88@1600 EM EC SPL 4045HL284 4045H 99.24@2300 80.80@2300 40.13@2300 303.84@1600 105.5@1600 36.88@1600 EM EC SPL 4045HT064 4045H 99.24@2300 85.50@2000 37.44@2300 317.85@1650 100.7@1650 37.26@1650 EM EC SPL 4045HT064 4045H 99.24@2300 85.50@2000 37.44@2000 30.88@1600 100.7@1650 37.26@1650 EM EC SPL 4045HT064 4045H 99.24@2300 85.50@2000 37.44@2000 30.88@1600 100.7@1650 37.26@1650 EM EC SPL 4045HT064 4045H 99.24@2300 85.50@2000 37.44@2000 30.88@1600 100.7@1650 37.26@1650 EM EC SPL 4045HT064 4045H 99.24@2300 85.50@2000 37.44@2000 30.88.80@1500 103.84@1500 34.18@1600 EM EC SPL 404	1.Engine Code	2.Engine Model	3.BHP@RPM ((SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP ((for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lba/hr)@peak torque	9.Emission Control Device Per SAE J1930
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