California Environmental Protection Agency AIR RESOURCES BOARD	JOHN DEERE POWER SYSTEMS	EXECUTIVE ORDER U-R-004-0433 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)
2011	BJDXL06.8117	4.5, 6.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler, Smoke Puff Limiter	Loaders, Tractor, Dozer, Pump, Generator Set, Compressor, 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 (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
		FEL	--	--	3.8	--	--	--	--	--
		CERT	--	--	3.5	1.6	0.20	6	2	12

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 22 day of December 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

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ufacturer: **John Deere Power Systems**

ine category: **Nonroad CI**

Engine Family: **BJDXL06.8117**

Family Name: **350HAH**

cess Code: **New Submission**

ngine 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: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
5HF285G	4045H	139.47@2400	102.10@2400	55.14@2400	387.17@1600	120.2@1600	43.33@1600	EM EC SPL
45HF285F	4045H	124.72@2400	91.80@2400	49.56@2400	354.72@1600	111.9@1600	40.33@1600	EM EC SPL
45HF285C	4045H	115.33@2400	84.80@2400	45.77@2400	317.11@1600	101.1@1600	36.45@1600	EM EC SPL
45HF285D	4045H	115.33@2200	90.40@2200	44.71@2200	354.72@1600	113.7@1600	40.97@1600	EM EC SPL
45HF285E	4045H	124.72@2200	97.00@2200	47.98@2200	387.17@1600	124.3@1600	44.78@1600	EM EC SPL
68HF285E	6068H	173.00@2400	82.40@2400	66.69@2400	491.89@1500	101.22@1500	51.22@1500	EM EC SPL
68HF285F	6068H	173.00@2200	86.60@2200	64.18@2200	526.55@1500	108.46@1500	54.83@1500	EM EC SPL
68HF285G	6068H	155.56@2400	75.70@2400	61.31@2400	441.01@1500	93.6@1500	47.43@1500	EM EC SPL
68HF285H	6068H	155.56@2200	79.20@2200	58.78@2200	491.89@1500	102.6@1500	52.01@1500	EM EC SPL
68HF285I	6068H	139.47@2400	68.90@2400	55.80@2400	396.76@1500	87.3@1500	44.23@1500	EM EC SPL
68HF285J	6068H	139.47@2200	72.30@2200	53.64@2200	441.01@1500	96.4@1500	48.88@1500	EM EC SPL
45HF285J	4045H	126.06@1800	115.80@1800	46.90@1800				EM EC SPL
45HF285I	4045H	158.25@1800	144.10@1800	58.32@1800				EM EC SPL
45HF285H	4045H	132.77@1800	121.70@1800	49.26@1800				EM EC SPL
68HT066	6068H	123.38@2100	68.20@2100	48.29@2100	401.18@1500	90.4@1500	45.84@1500	EM EC SPL
68HT069	6068H	173.00@2000	93.80@2000	63.28@2000	544.25@1500	120.7@1500	61.07@1500	EM EC SPL
45HT056	4045H	127.40@2200	85.60@2200	49.81@2200	387.17@1600	106.56@1600	45.11@1600	EM EC SPL
68HT063A	6068H	167.63@2100	87.50@2100	62.00@2100	550.89@1500	118.2@1500	59.79@1500	EM EC SPL
68HT063B	6068H	173.00@2100	90.00@2100	63.74@2100	573.75@1500	119.1@1500	60.26@1500	EM EC SPL
8HDW74A	6068H	152.88@2350	76.10@2350	60.37@2350	511.07@1600	107.3@1600	58.10@1600	EM EC SPL
68HT067	6068H	139.47@2200	72.30@2200	53.64@2200	441.01@1500	96.4@1500	48.88@1500	EM EC SPL
45HT057A	4045H	108.63@2200	89.20@2200	44.14@2200	337.03@1500	114.4@1500	38.61@1500	EM EC SPL
45HT057B	4045H	115.33@2200	93.50@2200	46.28@2200	370.95@1500	118.9@1500	40.11@1500	EM EC SPL
45HP052C	4045H	116.67@2100	96.90@2100	45.75@2100	353.84@1575	113.9@1575	40.33@1575	EM EC SPL
45HP052A	4045H	135.45@2100	111.50@2100	52.65@2100	383.93@1575	122.4@1575	43.35@1575	EM EC SPL
45HP052B	4045H	128.07@2100	105.50@2100	49.81@2100	386.73@1575	122.5@1575	43.39@1575	EM EC SPL
45HDW54	4045H	128.74@2200	100.90@2200	49.94@2200	389.39@1600	122.6@1600	44.21@1600	EM EC SPL
68HT072	6068H	173.00@2000	93.80@2000	63.28@2000	544.25@1500	120.7@1500	61.07@1500	EM EC SPL
5HPRNT6	4045H	146.18@2400	111.50@2400	60.17@2400	413.65@1600	131.8@1600	47.40@1600	EM EC SPL

DDI, TC

45HFG82I	4045H	158.25@1800	144.10@1800	58.32@1800	EM EC SPL	DDI, CAC, T
5HFG82H	4045H	132.77@1800	121.70@1800	49.26@1800	EM EC SPL	DDI, TC, C

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