California Environmental Protection Agency AIR RESOURCES BOARD	DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY	EXECUTIVE ORDER U-R-004-0111 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-45-9;

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)
2002	2JDXL08.1036	8.1	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler	Loader, Tractor, 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 (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ KW < 225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
		FEL	N/A	6.4	N/A	N/A	N/A	N/A	N/A	N/A
		CERT	0.3	6.0	--	0.8	0.14	8	3	16

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 27th day of December 2001.

Raphael Susnowitz

for R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model S. .t ary Form

Manufacturer: **Deere Power Systems Group of Deere and**

Engine category: **Nonroad CI**

EPA Engine Family: **2JDXL08.1036**

Mfr Family Name: **450HE**

Process Code: **New Submission**

Attachment

U-R-4-111

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: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6081HF070B	6081H	300.39@2200	142.00@2200	105.82@2200	1005.16@1400	196@1400	92.59@1400	EM EC CAC, TC, DDF
6081HZ008	6081H	265.52@2200	128.00@2200	94.80@2200	761.80@1600	152.2@1600	82.23@1600	EM EC CAC
6081HRW31B	6081H	230.66@2200	109.50@2200	79.37@2200	766.22@1400	152.8@1400	71.21@1400	EM EC CAC
6081HRW32B	6081H	230.66@2200	109.50@2200	79.37@2200	766.22@1400	152.8@1400	71.21@1400	EM EC CAC
6081HTJ02	6081H	214.56@2000	119.50@2000	79.37@2000	803.83@1400	160.1@1400	75.62@1400	EM EC CAC
6081HF070G	6081H	250.77@2200	121.90@2200	90.39@2200	810.10@1400	153.6@1400	72.53@1400	EM EC CAC
6081HF070F	6081H	300.39@2200	145.80@2200	108.02@2200	929.94@1600	185.2@1600	96.12@1600	EM EC CAC
6081HRW31A	6081H	207.86@2200	100.00@2200	72.75@2200	685.84@1400	135.9@1400	64.37@1400	EM EC CAC
6081HRW32A	6081H	207.86@2200	100.00@2200	72.75@2200	685.84@1400	135.9@1400	64.37@1400	EM EC CAC
6081HRW33	6081H	258.82@2200	125.30@2200	90.39@2200	865.04@1400	167.1@1400	77.82@1400	EM EC CAC
6081HT002	6081H	261.50@2000	140.40@2000	92.59@2000	998.53@1500	208.1@1500	105.38@1500	EM EC CAC
6081HF070H	6081H	300.39@2200	143.80@2200	108.02@2200	964.75@1400	179.5@1400	84.94@1400	EM EC CAC
6081HRW30	6081H	285.64@2100			1000.00@1400	@1400		EM EC CAC
6081HRW23A	6081H	207.86@2200	100.00@2200	72.75@2200	685.84@1400	135.9@1400	64.37@1400	EM EC CAC
6081HRW23B	6081H	230.66@2200	109.50@2200	79.37@2200	766.22@1400	152.8@1400	71.21@1400	EM EC CAC
6081HRW25	6081H	258.82@2200	125.30@2200	90.39@2200	865.04@1400	167.1@1400	77.82@1400	EM EC CAC
6081HRW27	6081H	282.95@2200	134.30@2200	97.00@2200	936.58@1400	182.9@1400	85.21@1400	EM EC CAC
6081HRW28	6081H	300.39@2200	146.00@2200	108.02@2200	1003.69@1400	199.3@1400	94.14@1400	EM EC CAC
6081HRW34	6081H	258.82@2200	125.30@2200	90.39@2200	865.04@1400	167.1@1400	77.82@1400	EM EC CAC
6081HRW35	6081H	282.95@2200	134.30@2200	97.00@2200	936.58@1400	182.9@1400	85.21@1400	EM EC CAC
6081HRW36	6081H	282.95@2200	134.30@2200	97.00@2200	936.58@1400	182.9@1400	85.21@1400	EM EC CAC
6081HRW37	6081H	300.39@2200	146.00@2200	108.02@2200	1003.69@1400	199.3@1400	94.14@1400	EM EC CAC
6081HRW38	6081H	300.39@2200	146.00@2200	108.02@2200	1003.69@1400	199.3@1400	94.14@1400	EM EC CAC
6081HTJ05	6081H	254.79@2000			921.83@1400	@1400		EM EC CAC
6081HTJ03	6081H	214.56@2000	111.40@2000	70.55@2000	803.83@1400	150.7@1400	65.92@1400	EM EC CAC
6081HTJ04	6081H	241.38@2000	122.50@2000	81.57@2000	907.08@1400	167.4@1400	79.37@1400	EM EC CAC

Engine Model Summary Form

Manufacturer: **Deere Power Systems Group of Deere and**

Engine category: **Nonroad CI**

EPA Engine Family: **2JDXL08.1036**

Mfr Family Name: **450HE**

Process Code: **Running Change**

EO#U-R-004-0111

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: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6081HF070I	6081H	199.81@2200	97.70@2200	72.51@2200	643.44@1400	123.8@1400	58.47@1400	EM EC CAC
6081HF070J	6081H	225.29@2200	110.70@2200	82.19@2200	725.52@1400	141.8@1400	66.93@1400	EM EC CAC
6081HF070K	6081H	250.77@2200	123.60@2200	91.73@2200	807.52@1400	154.5@1400	73.04@1400	EM EC CAC
6081HF070L	6081H	274.91@2200	133.00@2200	98.37@2200	884.96@1400	166.5@1400	78.75@1400	EM EC CAC
6081HF070M	6081H	300.39@2200	143.60@2200	106.53@2200	967.55@1400	178.7@1400	84.46@1400	EM EC CAC

Engine Model Su mary Form

Running Chance
EO#U-R-00-0111

Manufacturer: **Deere Power Systems Group of Deere and**

Engine category: **Nonroad CI**

EPA Engine Family: **2JDXL08.1036**

Mfr Family Name: **450HE**

Process Code: **Correction**

Attachment 1 of 1

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: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6081HRW30	6081H		141.70@2100	100.31@2100		189.1@1400	89.29@1400	ECM, CAC, TRA, DOF
6081HTJ05	6081H		131.60@2000	88.84@2000		173.2@1400	81.57@1400	↓