## JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0550 New Off-Road Compression-Ignition Engines Page 1 of 2

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-14-012;

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)			
2018	JJDXL06.8309	4.5, 6.8	Diesel	8000			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
Injection	Cooler, Oxidation Cata n, Electronic Control Mo ation, Periodic Trap Oxic Catalytic Reduction-Urea Catalyst	dule, Exhaust Gas lizer, Turbocharger,	Crane, Loaders, Tractor, Dozer, 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):

POWER CLASS	EMISSION STANDARD CATEGORY			E	XHAUST (g/kw-h	OPACITY (%)				
			NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 ≤ kW < 560	Tier 4 Final	OPTIONAL STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL			_		0.01		-	
		CERT	0.02	0.06		0.1	0.003	_		-

**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 New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part I-D" adopted October 20, 2005 and last amended October 25, 2012.

**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).

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

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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 \_\_\_\_\_25 #\_\_\_ day of August 2017.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

Attachment: Page 1 of 2 E0#: U-R-004-0550 8/11/17

## **Engine Model Summary Form**

John Deere Power Systems

Engine category: EPA Engine Family: JJDXL06.8309

Nonroad CI

Mfr Family Name:

350HCD

Process Code:

**New Submission** 

Process Code:	New Submission		4 5 - 4 5 - 4 - 4	5 5 1 D 1	0 T (01)	7 Cont Date:		O. Emission Control
			4. Fuel Rate:	5. Fuel Rate:	8. Torque (Nm)	7. Fuel Rate:	O. Fred Bates	9. Emission Control
		3. kW@RPM	mm/stroke@peak kW	(kg/hr)@peak kW	_	mm/stroke@peak	8. Fuel Rate:	Device Per
1. Engine code	2. Engine Model	(SAE Gross)	(for diesel only)	(for diesels only)	(BEA Greas)	torque	(xW/hr)@peak torque	SAE J1930
4045HE053	4045	125@2400	120@2400	29 3 (62400	750@1500	158@ 1500	24.1(01500)	EGR ECM PTOX OD BORD NH300 DFI TO CAL
4045HE054	4045	116@2200	98.6@2200	26@2200	667@1600	122.6@1600	23.5@1600	EGR ECM PTOX OC SCRC NH3OC DFITC CAC
4045HL505	4045	122@2100	125.1@2100	26.8@2100	670@1500	143.6@1500	21 lkg/1500	EGR ECM PTOX OC SCRC NH300 DFITC CACE
4045HL506	4045	135@2100	138.6@2100	29.7@2100	730@1500	157.8億 (600	24.1@1500	EGR ECM PTOX OC SCRC NH3OC DFITC CAC
4045HLC07A	(045)	75@2400	62,9002400	18.1@2400	3 420@1500 C	76,1001500	13.7@1500	EGRECM FTOXOGISCRE NH30C DELTE CAGS
4045HN053	4045	129@2400	120@2400	29.4@2400	730@1500	158@1500	24.1@1500	EGR ECM PTOX OC SCRC NH3OC DFITC CAC
4045HT101	4045	104@2200	102.7 2200	25(22200		119,8@1500	18 30 1500	<b>୭</b> ଟ୍ର ମେପ୍ଟିଲ୍ଲ ହେଉଛି । ଅଟେ ଅବସ୍ଥାନ ହେଉଛି ।
4045HT103	4045	104@2200	102.7@2200	23/2/200	555@1500	119.8@1500	18.3@1500	EGR ECM PTOX OC SCRC NH3OC DFITC CAC
4045HTJ09	4045	134@2000	140.9@2000	28 7/(2000)	730@1500	155.8@1500	23.8@1500	Edite Marches et et les en en en en et
6068HDW95	6068	224@2100	142.4@2100	45.7@2100	1245@1600	174.1@1600	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
506BHDW96	6068	152002200	\$ (C. 1. 1220) 143	32.60/2200	Section Con			कें दुरी है कहा के कि कि है कि है है जिस है जिस के कि है के कि है कि
6068HDW97	6068	187@1800	137.8@1800	37.9/201800	1025@1600	145.2@1600	35 5(01500	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HDW98	6068	220@1800	151.7@1800	44 5@ 1800	1245(21500	174.1@1600	42.9(2/1600	EGR PTOX OC SCRO NHAGO OH TO CAG ECM
6068HE055	6068	190@2400	111.9@2400	41@2400	1000@1600	140.1@1600	34.3@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HE058	6008 E	***************************************	***************************************	TO THE OWNER OF THE OWNER OF THE OWNER				Terresion (consideration)
6068HFC08-A	6068	187@2400	111@2400	40.7@2400	1025@1600	140@1600	34.2@1600	EGR PTOX OC SCRC NH3OC DFITC CAC ECM
6068HFI208-AA	6068	0102200		A PART OF THE	20 KI (60)	42.NJ. NJ. NJ. O		PECKEROLECATION NECESTRATE CONTRACTOR
6068HFC08-B	6068		116@2200	39@2200	999.8 1600	140@1600	346 1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
The second of th		187@2200		37.2m2400	902@1600	125@1600	30.6/01600	EGR PTOX OC SCRC NH300 U-I TO CAC EDM
6068HFC0B-C	6066	168@2400	101@2400			125@1600	30 6/E 1800	EGR PTOX OC SCRC NH3GC DFITC CAC ECM
6068HFC08-D	6068	168@2400	101@2400	37.2@2400	902@1600	and the second s		EGR PTOX OC SCRC NHOOD DELTO DAC ECM
BOBBHFCOB-E	6066	\68g;2100	104@2200	35.1@2200	970(9)1600	136@1600	33.21500	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-F	6068	168/ <b>g</b> 2000	114@2000	35@2000	1003@1500	140@1500	34.1@1500	and the second s
6068HFD08-G	6068	149(32400	92世2400	33 6@2400	80 (20 1600	112@1600	27.4 @ 1600	EGR PTOX OC SCRO NHOOD DE TO GAD EGM
6068HFC08-H	6068	149(\$2400	92@2400	33.8@2400	801@1600	112@1600	27.4@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-1	6068	149@2200	メナナー かかいかんりょう キャン・ナ	Now COLD STREET, STREE	C. Dr. barder Sent, but W. Frank Street, Washington, Washington, Street, St.	<ul> <li>≥ 12(€)(€)(€);</li> </ul>		अन्त हेयाल इंग्लिस होता । इति वा सम्बद्धि । स्थान हो ह
6068HFC08-J	6068	149億2000	101@2000	31@2000	960@1500	135@1500	33@1500	EGR PTOX OG SCRC NH3DC DFITC CAC ECM
6068HFC08-K	8069	138@2400	B7/B2400	32(52400	741@1600	100@1500	25;1@1600	EGR PTOX OC SCRC NH3OC DFITO CAC ECM
6068HFC08-L	6068	138@2400	87@2400	32@2400	741@1600	103@1600	25.1@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-M	6068	38@2200	The state of the s	= NS0@2200	00.00		27.8@ 800	ાં કે તાલું કે કરાયા કે લાં કરે છે. (છો.) કરોયા અને કરોયા કિસ્તુ (છે કરોયા કે કે ક્લામાં કોઈ કે
6068HFC08-N	6068	138@2000	96@2000	29@2000	890@1500	119@1500	27@1500	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6058HFD36-0	5058	187@2000	25@2000	8 / 02002	FEED TECH	CONTROL TEN	#3/8/MOEU	े देवीर है। <b>बेट कर्</b> डियांचे अपने के मिल्लिक <b>रिकेट क</b> े रू
6068HFC08-P	6068	129@2400	81@2400	29 6億2400	687@1600	99/8/1500	23.9(2)1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-Q	9069	129@2400	51(0)2400	20 6@2400	687@1600	98/0 (000)	23.9@1600	EGIK PTOX OC SCRC NH30G DFITC CAC ECM
6068HFC08-R	6068	129@2200	86@2200	28.9@2200	758/0 1600	105@1500	26.4(0)1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6058HFIZ06-5	9065	129(\$2200	85202200	28 9(02200	756(01600	106/0/1600	26 4(0)1600	EGR PTOX OC SCRC NH3OC OF TO CAC ECM
6068HFC08-T	6068	116@2400	73.8(02400	27@2400	619@1600	87.8@1600	21.4@1800	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
BOSEHFC06-U	5065	116@2400	73.8@2400	27@2400	619001600		21.40 1800	EGR PTOX OC SCRC NH3OC DELTC CAC ECM
6068HFC08-V	5086	118@2200	77.7@2200	26.1@2200	874@1600	96.1@1600	23.5@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-W	8066	116/82200	77.7@2200	26.1@2200	67/0/600		+ + 23.5@1600 1	EGRIPTOX OC SCRC NH3QC DE TO CAO ECM
6068HFC08-X	6068		68.2@2400	25(0)2400	555@1600	79.3@1000	19.4@1800	EGR PTOX OC SCRC NH3OC DFITC CAC ECM
	6068	104@2400	68.202400		555@1600	79.3@ (600	19.4@1600	EGR PTOX OC SCRC NH3OC DELTC CAC ECM
6068HFC08-Y	* 62	104@2400		25@2400	137150011	174 CAC 411	21.2@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC08-Z	6068	104@2200	70,3@2200	23.5@2200	613@1600	80,5@1600	36.7@1600	EGR PTOX OC SCRC NH3OC DELTC CAC ECM
6068HFC09-A	5008	224@2400	127002400	45.4@2400	1141@1600	180@1800	11 12 May 2 my 14 20 mg	A PERSON NEW AND PROPERTY OF ANY NEW YORK STREET, PROPERTY AND ADDRESS OF THE PERSON NAMED AND
6068HFC09-B	6068	224@2200	138@2200	46.3@2200	1141@1600	161@1600	39.3@1600	EGR PTOX OC SCRC NH3OC DFITC CAC ECM

FO#: U-R-004-0550 8/11/17

## Attachwent: Page 20f2

		3. kW@RPM	4. Fuel Rate:	5. Fuel Rate: (kg/hr)@peak kW	6. Torque (Nm)  @RPM	7. Fuel Rate: mm/stroke@peak	8. Fuel Rate:	Emission Control     Device Per
1. Engine code	2. Engine Model	(SAE Gross)	(for diesel only)	(for diesels only)	(SEA Gross)	torque	(kW/hr)@peak torque	SAE J1930
6068HFC09-C	6068	205@2400	116@12400	42.7@2400	1057@1600	147@1600	36@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC09-D	6068	205@2200	125@2200	42.1@2200	1057@1600	147(51600	36@1600	EGR FTOX OC SCRC NH3OC DFITE CAC ECM
6068HFC09-E	8068	187@2400	106@2400	38.8@2400	1026@1600	143@1600	34.9@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC09-F	6068	187(22200	117@2200	39.3@2200	1023@1600	547@1600	35.9@1600	EGRIPTOX OC SCRO NH30C DFI TO CAC ECM
6068HFC09-G	6068	168@2400	101億2400	36.9@2400	995@1600	142@1600	34.7@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFC09-H	6008	168@2200	106/5/2200	35.6(m2200	999@1600	145@1600	35,4@1600	EGR PTOX OC SCRC NH3OC OF TO CAC ECM
5058HFQ08-A	6068	180@1600	155億1800	42.8@1600	1	1	1	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFG08-B	6068	150@1800	112@1800	30.9@1800	//			EGR PTOX OC SCRC NH3OC DELTC CAC ECM
6068HFG09-A	6068	241@1800	183.6@1600	50.5@1800	- X	X	X	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HFG09-B	6068	216@1800	160.4@1600	44.1@1600	- / - /-			EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HL503	6068	190億2100	122.5@2100	39.3(52100	1025@1800	142.7@1600	34.9@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6063HL505	6068	155@2100	104.6802100	33.6@2100	842@1600	121,5@1800	29.7@1600	EGR ECM PTOX OC SCRC NH30C DELTC CAD
6068HL506	6068	190@2100	122,5@2100	39.3@2100	1025@1600	142.7@1600	34.9@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HN068	6008	224@2400	128.1 02400	47(02400	1245@1600			EGR PTOX OC SCRONHBOO DE TO CAC ECM
6068HPRNT6	6068	235@2400	137.6@2400	50.5@2400	1347@1600	188.8@1600	46.2@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6088HT103	8068	190@2100	122.6(0)2100	39.402100	1000@1700			EGRETOX COSSORONINO CONTROL P. COLEO I
6068HT118	6068	190@2100	122@2100	39.2@2100	1025@1600	145.2@1600	35.5@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HT119	6058	190/02100	122.6(02100)	39,402100	- 1000@1700	THE P. P. LEWIS CO. LANSING MICH. LANSING MICH.		EGR PJOX OCHRENIEN ED PLUS ANDER IN
6068HT120	6068	224@1900	156.5@1900	45.5@1900	1245@1600	174.1億1500	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HTJ08	6088	190@2000	129.1@2000	39.702000	1025@1500	143.1(0)1500	32.90 1500	
6068HTJ61	6066	190@2200	117.9@2200	39.6m2200	1025@1600	145.2(0)1600	35.5@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068HTJ82	6068	224002200	137/02200	46.1億2200	1245@1600	174 (@1500	42,6@1600	EGRETOXO ESPRENTINO CONTROL POR CONTROL
6068HTJ98	6068	190@2000	129.1@2000	39.7@2000	1025@1500	143.1@1500	32.9@1500	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW436	8068	190@2100	122.5@2100	39.3億2100	1025016003	E		HECKERO CONSTRUCTION CONTRACTOR CONTRACTOR
6068RW438	6068	224(32100	142.4@2100	45.7@2100	1245@1600	174.1@1600	42.8@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW439	6068	224@2100	142.4@2100	45.7(02100	1245@1600	174.1@1600	42,6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW440	6068	190@2100	122.5@2100	39.3@2100	1025@1600	142.7@1500	34.9@1600	EGR PTOX OC SCRC NH3QC DFI TC CAC ECM
6068RW441	5068	156@2100	104.6@2100	33.6@2100	842@1800	121.5@1600	29.7億1600	EGR ECM PTOX OC SCRC NH30C DFITC CAC
6068RW445	6068	190@2100	122@2100	39.3@2100	1025@1600	142@1600	34.8@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6068RW446A	8068	21402100	13802100	45.802100	120000 1600		**************************************	ATRIBUTED CONTRACTOR OF THE PROPERTY OF
6066RW446B	6068	224@2100	142 4@2100	45.7@2100	1245@1600	174.1@1500	42.6@1600	EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
000011414400	0000	224852100	142.4082.00	40.7882.100	18.40(8) 1000	114.1981000	42.038.1000	ESTATION OF STATE OF
Emergency Vehicles								
4045HT102	4045	104@2200	102.7億2200	23@2200	555@1500	119 8@1500	18.3(2)1500	EGR ECM PTOX OC SCRO NH300 DFI TO CAC
4045HT104	4045	104@2200	102.7@2200	23@2200	555@1500	119.8@1500	18.3@1500	EGR ECM PTOX OC SCRC NH3OC DFI TC CAC
6068HT124	6068	19002100	122@2100	39.202100	10250 1600	14520 E00	5-2-3-5 (Marie 1986)	(बद्राद्वीयक्) कुरुक्ष कि (स्र) ए किस्स व्हार्डिक (स्रोदिती)