California Environmental Protection Agency

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) 8000			
2018	JJDXL09.0308	9.0	Diesel				
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION				
Injection Recircula	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):

RATED POWER CLASS	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
130 < kW < 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL					0.01			
		CERT	0.001	0.07		0.1	0.003			

**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.

Emissions Compliance, Automotive Regulations and Science Division

## 8/14/2017 Attachment: Page lof 2 E0#: U-R-004-0554

## **Engine Model Summary Form**

Manufacturer: Engine category: EPA Engine Family: Mfr Family Name: Process Code: John Deers Power Systems

Nonroad Cl

450HCC

JJDXL09.0308

New Submission

Process Code:	New Submission		4. Fuel Rate:	5. Fuel Rate:	A Territo (blm)	7. Fuel Rate:		9. Emission Control
		2 114/00 0044	4. Fuel Rate: mm/stroke@peak kW		8. Torque (Nm) @RPM	mm/stroke@peak	6. Fuel Rate:	9. Emission Control Device Per
4. Encine cede	2 Ecolo Madel	3. KW@RPM	(for diesel only)	(for diesels only)	(SEA Gross)			SAE J1930
1. Engine code	2. Engine Model 6090	(SAE Gross)	181.7021003	58,3@2100	1653@1500	torque	(kW/hr)@peak torque	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
nee. We made a far mail.		287@2100		it readily a to putting C. C	al de la companya de	226.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DFITC CAC
6090HDW31	6090	286@1600	207@1800	57@1800	1655@1500	226.9@1500	52@1500	and the second
6090HDV/33	6090	287@2100	181 702100.	56.3@2100	1655@1500	226.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DELTC CAC
6090HFC09-A	6090	317@2200	202.4@2200	68.1@2200	1685@1600	239.9@1600	58.7@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-B	6090	29802200	188.4 32200	63.402200	1685@16001	while water is a start for, the structure internet	The second stands and have a second a second	્રાંગુ ( ગાળ પ્રયુ મુખ્યત્વે છે. છે. આ ગાળ કેલા ગાળ જે છે.
6090HFC09-C	6090	298@2200	187.8@2200	63.2@2200	1885@1600	240.1@1600	58.7@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-D	6090	Tags may a me a street we have	205.302000		1685@1600	on 3. This at as "one," handles while the one		EGRIPICATORSPRCARBOCKES/ADEMORACE
6090HFC09-E	6090	280@2200	174.8@2200	55.8@2200	1671@1600	235.6@1800	57.6@1800	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-F	6090	280@2200	174.7@2200	58.7@2200	1671@1600	235.0@1600	57.5@1800	EGRIPTOX OC SCRC NH3OC ECM DELTC CAC
6090HFC09-G	6090	280@2000	188.9@2000	57.8@2000	1685@1600	237.4@1600	58.1@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-H	6090	261@2200	160,5@2200	54@2200 2	1563@ 1600	215.8@1600	2.5270 CO	ૼૻૡૼૺૢૡૺૺૢૻ૱૱ૼ૱ૼૡ૽ૻ૽ૢૡૼૡૡૼૺૣૺૡઙૡૢૡૻૡૼ૾ૡ૾૾૱૽ૻૡ૽ૻૡૡ૽ૼૡ૾૾૾ૡ <del>ૡ</del>
6090HFC09-1	6090	261@2200	160.5@2200	54@2200	1563@1600	216.2@1600	52.9@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-J	6090	261 02000	173.6@2000	53.102000	16850 1600	238.40 1800	Sec. 57.8(0)1000	SECTOR ALLONG SERVICE OF SECTOR SECTOR
6090HFC09-K	6090	242@2200	154 3@2200	51.9@2200	1450@1500	204.3@1500	46.9@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-L-	6090	- 24202200	154.4@2200	51,902200				ECTATION CONTRACTOR STATES
6090HFC09-M	6090	242@2200	165@2200	50.4@2200	1595@1500	224.8@1500	51.6@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-N	8090	224@2200	142.1@2200	47 802200			THE A REAL PROPERTY AND AND A REAL PROPERTY AS A RE	
6090HFC09-0	6090	224@2200	142@2200	47.8@2200	1341@1500	187.2@1500	42.9@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-P		224@2000	152,502000	48.7 02000	14770 1500		47.5001500	HEGRETO, COORCE HAD STOLEN A
agent the set of the first the	6090			44.1@2200	1228@1500	170.8@1500	39.2@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-Q	6090	205@2200	131.1@2200	44.102200		170.80 1500		
6090HFC09-R		20502200	1	and the state of an alt where show				The second se
6090HFC09-S	6090	205@2000	139@2000	42.5@2000	1351@1500	188.7@1500	43.3@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-T	6090	187@2200		10.02200	112001500	WEAR A MAY A PARA APART	Provide Andreaders & Alle Mail & Alle	STORE FROM STORES IN THE CONTRACT OF STORES
6090HFC09-U	6090	187@2200	119.8@2200	40.3@2200	1120@1500	155.4@1500	35.6@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFC09-V	6090	187@2000	129.1@2000	39.502000	1232@1500	. 171.4@1500	39.3@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFG09-A	6090	326@1800	247.4@1800	68.1@1600				EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFG09-B	6090	297@1800	220.3@1800	60.6@1600				EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFG09-C	6090	273@1600	201.8@1600	55.5@1800	Y	X	X	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFG09-D	6090	237@1600	172.8@1800	47.6@1900			Lan a	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HFG09-E	6090	345@1800	264@1800	72.7@1800		1		EGR PTOX OC SCRC NH3OC DFI TC CAC ECM
6090HH025	6090	320@2200	208 102200	70@2200	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HH028	6090	335@2200	204.4@2200	68.7@2200	1817@1600	220.0@1600	65@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HN009	6090	28302200	177.102200	59.502200**	16550 1500	233.90 1500	53.7@1500	FEGRIPTOX OC BORD NINCO ECM DELTOCAGE
6090HN010	6090	320@2200	209.6@2200	70.5@2200	1749@1600	252.7@1600	61.8@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HN015	6090	28002200	174 7 02200	58.7@2200	\$ 16710 1600			EGRIPTO COOLERCINIS OF ECHIDERIC ACT
6090HN017	6090	224@2200	142@2200	47.8@2200	1341@1500	187.2@1500	42.9@1500	EGR PTOX OC SCRC NH3OC ECM DFITC CAC
6090HPRNT6	6090	34102200	216.5@2200	72.8@2200	18860 1600		65.3@ 1600	EGR PTOX OC SCRC NH3OC ECM DELTC CACT
6090HT013	6090	289@2000	195.9@2000	59.9@2000	1854@1500	233.5@1500	53.6@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HT013A	6090	283@2200	179.8@2200	60.5@2200	16550 1500			EGR PTOX OG SCRC NESOG ECM DELTC CACE
\$ 15, 1 weet	6090	289@1900	206.4@1900	and the second s	1654@1500	233.5@1500	53.6@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HT014A		and the second sec		59,9@1900	and the second se			EGR FTOX OC SCRC NH3OC ECM DFTTC CAC
6090HT018	8090	289@1900	206.4@1900	59.9@1900	1654@1500	and the start of the second states of the	ALTERNATION PROCESSION AND AND AND AND AND AND AND AND AND AN	
6090HT808	6090	320@2200	208.1@2200	70@2200	1749@1600	251.7@1600	81.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HTJ25	6090	289@2000	195.0@2000	59.9@2000	16540 1500	Deletate visit set to a - to (visition and on our with the 283	Tot 950 Control of	SEGRIPTOX OCISCRGINES DOJECHIDE INCOACT
6090HTJ28	6090	289@2000	194@2000	59.3@2000	1655@1500	229.6@1500	52.6@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC

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			4. Fuel Rate:	5. Fuel Rate:	6. Torque (Nm)	7. Fuel Rate:		9. Emission Control
		3. kW@RPM	mm/stroke@peak kW	(kg/hr)@peak kW	@RPM	mm/stroke@peak	8. Fuel Rate:	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
6090H2019	6090	327@2100	217.902100	R. R. Met	A MARCOLOGIC	A PART COR	ALC: NO.	કે રેલે <b>દેવા છે</b> હતે <del>છે</del> છે. ભારત બાદની દેવ રાજ્ય છે.
6090HZ022A	6090	320(02200	208.1@2200	70@2200	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HZ0228	6090	283@2200	173.7@2200	and the second of the		A PROVINCE AND A	wars store of	
6090HZ025	6090	335@2200	204.4@2200	68.7 2200	1817@1600	220.0@1600	65(2) 1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HZ026	6090	28302200	173.7@2200	58.4(2200	1655@1500	228.9@1500	52(0)1500	EGR PTOX OC SCRC NH3OC ECM DFI TO CÁC
6090RW479	6090	335@2100	212.7@2100	68.3(2100	1817@1600	244.9@1600	59.9(2) 1600	EGR PTDX OC SCRC NH3OC ECM DFI TC CAC
6090RW480	6090	335(22100	212/7@2100	68.302100	1817@1600	244.9@1600	59.9(0 1600	EGR PTOX OC SCRC NH3OC ECM DEI TC CAC
6090RW481	6090	335@2100	212,7@2100	68.3@2100	1817@1600	244.9@1600	59.9@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW482	eóa l	335@2100	212.7@2100	68.3(2100	1817@1800	214.9@1600.4	59.901600	SECTATION CONCERNENCES STORES
6090RW484	6090	335@2100	212.7@2100	68.3@2100	1817@1600	244.9@1600	59.9@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW485	6090	287@2100	185 5@2100	59.6@2100	1655@ 1500	233.9@1500	53,7@1500 2	EGRIPIO (OCISERICA) ISO O SEVIE FOR OCO
6090RW486	8090	287@2100	185.5@2100	59.6@2100	1655@1500	233.9@1500	53.7@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW487	0000	327@2100	217.9@2103	70@2100	1749@1600	251,7@1600	61.5@1600	EG LAD CONSELECTION CONSELECTION
6090RW488A	6090	327@2100	217.9@2100	70@2100	1749@1800	251.7@1600	61,6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW4888	6090	287@2100	181.7@2100	58,3(22100	1655@1500	226:9@1500	52億1500	EGRIPTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW489A	6090	327@2100	217.9@2100	70@2100	1749@1600	251.7@1800	61.5@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW489B	6090	287@2100	181,7@2100	58.3(2100	1655@1500	226.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DELTC CAC
6090RW490	6090	287@2100	181.7@2100	58.3@2100	1655@1500	228.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW491	6090	287 2100	181.7@2100	58.3@2100	1655@1500	226.9@1500	52@ 1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW493	6090	287@2100	181.7@2100	58.3@2100	1855@1500	226.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW494	6090	327@2100	217.9@2100	70@2100	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DELTC CAC
6090RW495	6090	327@2100	217.9@2100	70@2100	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW497	6090	- 327 02100	217.9@2100	Sec. West	1212 D1600	22517(0)6005	4	# = e : # : # e ( # ; # ; ( . ; ] e e !! . # ! + ( )

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