

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)
2017	HJDXL09.0308	9.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Charge Air Cooler, Oxidation Catalyst, Electronic Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer, Turbocharger, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst			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 STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	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.

Executed at El Monte, California on this 3rd day of January 2017.


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

R/c

8/7/2017

EO#: U-R-004-0541

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Engine Model Summary Form

Manufacturer: John Deere Power Systems
Engine category: Nonroad CI
EPA Engine Family: HJDXL09.0308
Mfr Family Name: 450HCC
Process Code: Running Change

Table with 9 columns: 1. Engine code, 2. Engine Model, 3. kW@RPM (SAE Gross), 4. Fuel Rate: mm/stroke@peak kW (for diesel only), 5. Fuel Rate: (kg/hr)@peak kW (for diesels only), 6. Torque (Nm) @RPM (SEA Gross), 7. Fuel Rate: mm/stroke@peak torque, 8. Fuel Rate: (kW/hr)@peak torque, 9. Emission Control Device Per SAE J1930. Rows list various engine models like 6090HDW29, 6090HFC09-A, etc.

* New ratings added for running change

R/c

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1. Engine code	2. Engine Model	3. kW@RPM (SAE Gross)	4. Fuel Rate: mm/stroke@peak kW (for diesel only)	5. Fuel Rate: (kg/hr)@peak kW (for diesels only)	6. Torque (Nm) @RPM (SEA Gross)	7. Fuel Rate: mm/stroke@peak torque	8. Fuel Rate: (kW/hr)@peak torque	9. Emission Control Device Per SAE J1930
6090HZ022A	6090	320@2200	208.1@2200	70@2200	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090HZ025	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
6090RW479	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
6090RW480	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
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
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	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW486	6090	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	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
6090RW488A	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
6090RW488B	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
6090RW489A	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
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	228.9@1500	52@1500	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC
6090RW493	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
6090RW494	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
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@2100	217.9@2100	70@2100	1749@1600	251.7@1600	61.6@1600	EGR PTOX OC SCRC NH3OC ECM DFI TC CAC