California Environmental Protection Agency Con Air Resources Board

JOHN DEERE POWER SYSTEMS

EXECUTIVE ORDER U-R-004-0517 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-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)		
2016	GJDXL09.0202	9.0	9.0 Diesel			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Injection Recircu	r Cooler, Oxidation Cata n, Electronic Control Mo dation, Periodic Trap Ox Limiter, Turbocha	dule, Exhaust Gas idizer, Smoke Puff	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 non-methane hydrocarbon (NMHC), 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	EMISSION STANDARD CATEGORY Tier 4 Final / ALT 5% NOx	STD	EXHAUST (g/kw-hr)					OPACITY (%)		
CLASS			0.19	NOx 0.40	NMHC+NOx N/A	3.5	PM 0.02	ACCEL N/A	LUG N/A	PEAK N/A
130 ≤ kW ≤ 560										
,		FEL		2.00						
		CERT	0.02	1.74		0.04	0.01			

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

day of December 2015.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

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Engine Model Summary Form

Manufacturer: Engine category: Nonroad CI EPA Engine Family: GJDXL09.0202 Mfr Family Name:

John Deere Power Systems

450HBA

Process Code:	Running Change		4. Fuel Rate:	5. Fuel Rate:	6. Torque (Nm)	7. Fuel Rate:		0.5-1-1-0.4
1 Engine code	2. Engine Model	3. kW@RPM (SAE Gross)	mm/stroke@peak kW (for diesel only)	(kg/hr)@peak kW (for diesels only)	@RPM (SEA Gross)	mm/stroke@peak torque	8. Fuel Rate: (kW/hr)@pesk torque	9. Emission Control Device Per SAE J1930
6090HDW15	6090	213@2420	127.8@2420	47.3@2420	1125@1600	151.6@1600	37.1@1600	EGR EM EC SPL DFI TC CAC OC PTOX
6090HPRNT1	6090	332@2200	216.6@2200	72.9@2200	1771@1600	258.6@1600	63.3@1600	EGR EM EC SPL DFITC CAC OC PTOX
6090HTJ15	6090	220@2000	151.6@2000	46.4@2000	1430@1400	213.1@1400	45.6@1400	EGR EM EC SPL DFI TC CAC OC PTOX
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