EXECUTIVE ORDER U-R-004-0513 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		FUEL TYPE	USEFUL LIFE (hours)		
2016	GJDXL06.8312	6.8	Diesel	8000		
	FEATURES & EMISSION O		TYPICAL EQUIPMENT APPLICATION			
Injection Recirc	r Cooler, Oxidation Catal n, Electronic Control Moc culation, Turbocharger, Se ction-Urea, Ammonia Ox	lule, Exhaust Gas elective Catalytic	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	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	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
		CERT	0.02	0.06		0.01	0.02			

**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

## FO#: U-R-004-0513

4 Fuel Rate

## **Engine Model Summary Form**

Manufacturer:

John Deere Power Systems

Engine category:

Nonroad CI

EPA Engine Family: GJDXL06.8312 Mfr Family Name:

350HCF

Process Code:

**Running Change** 

Attachment: Page 10f1 PC 3/28/16

9 Emission Control

# 6068HFG05A 6068 192@1800 143.5@1800 39.5@1800 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG05B 6068 160@1800 119.4@1800 32.9@1800 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG05C 6068 165@1500 145.4@1500 33.4@1500 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG05D 6068 160@1500 142.3@1500 32.6@1500 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG06A 6068 241@1800 180.4@1800 49.7@1800 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG06B 6068 216@1800 159.8@1800 44.0@1800 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HFG06C 6068 197@1500 176.6@1500 40.5@1500 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HPRNT7 6068 248@1800 184.6@1800 50.8@1800 EGR OC SCRC NH3OC DFFTC CAC ECM 6068HPRNT7 6068 248@1800 184.6@1800 50.8@1800	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)@peak torque	Device Per SAE J1930
# 6068HFG05C 6068 165@1500 145.4@1500 33.4@1500 # 6068HFG05D 6068 160@1500 142.3@1500 32.6@1500 # 6068HFG06A 6068 241@1800 180.4@1800 49.7@1800 # 6068HFG06B 6068 216@1800 159.8@1800 44.0@1800 # 6068HFG06C 6068 197@1500 176.6@1500 40.5@1500 # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM # EGR OC SCRC NH3OC DFI TC CAC ECM	6068HFG05A	6068	192@1800	143,5@1800	39.5@1800	1 /	1	1 /	EGR OC SCRC NH3OC DFI TC CAC ECM
# 6068HFG05D 6068 160@1500 142.3@1500 32.6@1500 # 6068HFG06A 6068 241@1800 180.4@1800 49.7@1800 # 6068HFG06B 6068 216@1800 159.8@1800 44.0@1800 # 6068HFG06C 6068 197@1500 176.6@1500 40.5@1500	₩ 6068HFG05B	6068	160@1800	119.4@1800	32.9@1800	\ /	\ /		EGR OC SCRC NH3OC DFI TC CAC ECM
8068HF G06A 6088 241@1800 180.4@1800 49.7@1800 6068HF G06B 6068 216@1800 159.8@1800 44.0@1800 6068HF G06C 6068 197@1500 176.6@1500 40.5@1500 EGR OC SCRC NH3OC DFI TC CAC ECM EGR OC SCRC NH3OC DFI TC CAC ECM	6068HFG05C	6068	165@1500	145.4@1500	33.4@1500	\/	1/	\ /	EGR OC SCRC NH3OC DFI TC CAC ECM
6068HFG06B 6068 216@1800 159.8@1800 44.0@1800 EGR OC SCRC NH3OC DFI TC CAC ECM EGR OC SCRC NH3OC DFI TC CAC ECM	₩ 6068HFG05D	6068	160@1500	142.3@1500	32.6@1500	V	V		EGR OC SCRC NH3OC DFI TC CAC ECM
6068HFG06C 6068 197@1500 176.6@1500 40.5@1500 EGR OC SCRC NH3OC DFI TC CAC ECM	₩ 6068HFG06A	6068	241@1800	180.4@1800	49.7@1800	<b>\</b>	$\wedge$	$\wedge$	EGR OC SCRC NH3OC DFI TC CAC ECM
	€ 6068HFG06B	6068	216@1800	159.8@1800	44.0@1800				EGR OC SCRC NH3OC DFI TC CAC ECM
6068HPRNT7 6068 248@1800 184.6@1800 50.8@1800 /	6068HFG06C	6068	197@1500	176.6@1500	40.5@1500	/	/	1	EGR OC SCRC NH3OC DFI TC CAC ECM
	6068HPRNT7	6068	248@1800	184.6@1800	50.8@1800	/	,	,	EGR OC SCRC NH3OC DFI TC CAC ECM

5 Fuel Rate

\* New ratings added for running change

6 Tomus (Nm)