Pursuant to the authority vested in California 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)				
2019	KFPXL15.9T4D	15.9	Diesel	8000		
SPECIAL	FEATURES & EMISSION		TYPICAL EQUIPMENT	APPLICATION		
Electronic Direct Injection, Engine Control Module, Turbocharger, Charge Air Cooler, Diesel Oxidation Catalyst, Selective Catalytic Reduction - Urea, Ammonia Oxidation Catalyst			Loader, Tractor, Generator Set, and Other Industrial Equipment			

The engine models and codes are attached.

CALIFORNIA

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The following are the exhaust certification standards (STD) 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	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS			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	0.01	0.33		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

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

day of December 2018.

Engine Model Summary Template Eo#: U-R-015-0388 Attachment: PgY1 Date: 11/2/18

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torqu	9.Emission Control Control Per SAE J1930
KFPXL15.9T4D	F3JFE613C*B	F3JFE613C*B	690 @ 2100	348	N/A	2215 @ 1500	410	N/A	DDI ECM TC CAC DOC SCR-u AMOX
KFPXL15.9T4D	F3JFE613A*B	F3JFE613A*B	643 @ 2100	322	N/A	2037 @ 1500	376	N/A	DDI ECM TC CAC DOC SCR-u AMOX
KFPXL15.9T4D	F3JFE613E*B	F3JFE613E*B	556 @ 2100	277	N/A	2037 @ 1500	367	. N/A	DDI ECM TC CAC DOC SCR-u AMOX
KFPXL15.9T4D	F3JFE613D*B	F3JFE613D*B	643 @ 2100	316	N/A	2037@ 1500	367	N/A	DDI ECM TC CAC DOC SCR-u AMOX