EXECUTIVE ORDER U-R-015-0356 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)		
2018	JFPXL03.4CDC	3.4	Diesel	8000		
	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION		
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer			Loader, Tractor, Dozer, and Other Industrial Equipmen			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) 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 STANDARD		EXHAUST (g/kw-hr)				OPACITY (%)			
CLASS	CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT			3.7	0.1	0.01			

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 September 2017.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

U-R-0356

Affective of 1/1 6/25/242

4. Fuel Rate: 5. Fuel Rate:

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 torque	9.Emission Control Device Per SAE J1930
JFPXL03.4CDC	F5DFL413A*E	F5DFL413A*E	74 @ 2300	58	N/A	236 @ 1500	72	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5HFL413A*E	F5HFL413A*E	74 @ 2300	58	N/A	236 @ 1500	72	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5HFL413B*E	F5HFL413B*E	74 @ 2300	57	N/A	229 @ 1500	68	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5DFL413B*E	F5DFL413B*E	74 @ 2300	57	N/A	229 @ 1500	68	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5HFL414A*E	F5HFL414A*E	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5DFL414A*E	F5DFL414A*E	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5HFL414A*E	854F-E34TA 4192/2200	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5HFL414A*E	C3.4B 4192/2200	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5DFL414A*E	854F-E34TA 4192/2200	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX
JFPXL03.4CDC	F5DFL414A*E	C3.4B 4192/2200	74@ 2200	57	N/A	314 @ 1200	97	N/A	DDI,ECM,TC,CAC,EGR, DOC,PTOX