

FPT INDUSTRIAL S.p.A.

EXECUTIVE ORDER U-R-015-0466

New Off-Road Compression-Ignition Engines

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-19-095;

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)			
2021	MFPXL12.9FR2	12.9	Diesel	8,000			
s	PECIAL FEATURES & EMIS	SION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
Charge A	ir Cooler, Diesel Oxidation	Control Module, Turbocharger, Catalyst, Periodic Trap Oxidizer, rea, Ammonia Oxidation Catalyst	Loader, Tractor, Generator Set, and Other Industrial Equipment				

The engine models and codes are attached.

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 POWER	EMISSION			ı	EXHAUST (g/kw-l		OPACITY (%)				
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	0.003	0.24		0.02	0.003		-		

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 on this <u>30th</u> day of December 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-015-0466 Family: MFPXL12.9FR2 Attachment Last Revised: 12/24/2020

Model					Displacement - Units	Peak Power	Peak Power - Units	Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque - Fuel					
	Code	Trim	Config	Displacement				Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel		OBD	GHG	Special	Notes
F3HGE613 A*V	F3HGE61 3A*V	1	16	12.9	Liters	590.94	horsepower	2100	285	mm3/stroke	1823.703704	lb-ft	1500	330	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 B*V	F3HGE61 3B*V	1	16	12.9	Liters	562.8	horsepower	2100	275	mm3/stroke	1740.740741	lb-ft	1500	320	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 D*V	F3HGE61 3D*V	1	16	12.9	Liters	495.8	horsepower	2100	248	mm3/stroke	1715.555556	lb-ft	1500	320	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 E*V	F3HGE61 3E*V	1	16	12.9	Liters	428.8	horsepower	2100	216	mm3/stroke	1483.703704	lb-ft	1500	278	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE615 A*V	F3HGE61 5A*V	1	16	12.9	Liters	603	horsepower	1800	338	mm3/stroke	1888.888889	lb-ft	1400	338	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE615 B*V	F3HGE61 5B*V	1	16	12.9	Liters	550.74	horsepower	1800	304	mm3/stroke	1778.518519	lb-ft	1400	304	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 L*V	F3HGE61 3L*V	1	16	12.9	Liters	545.38	horsepower	2100	277	mm3/stroke	1778.518519	lb-ft	1400	322	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 K*V	F3HGE61 3K*V	1	16	12.9	Liters	514.56	horsepower	2100	250	mm3/stroke	1672.592593	lb-ft	1400	298	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX
F3HGE613 J*V	F3HGE61 3J*V	1	16	12.9	Liters	463.64	horsepower	2100	231	mm3/stroke	1490.37037	lb-ft	1400	266	mm3/stroke				DDI ECM TC CAC DOC SCR+DPF AMOX