

FPT INDUSTRIAL S.p.A.

EXECUTIVE ORDER U-R-015-0459

New Off-Road Compression-Ignition Engines Page 1 of 1

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	MFPXL08.7T4V	8.7	Diesel	8,000					
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Turboc	nic Direct Injection, Engin harger, Charge Air Cooler Selective Catalytic Reduct Oxidation Cataly	, Diesel Oxidation ion - Urea, Ammonia	Loader, Tractor, Generator Set, and 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	EMISSION			I	EXHAUST (g/kw-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final / ALT 5% NOx	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	N/A	0.25	N/A	N/A	N/A	N/A	N/A	N/A
		CERT	0.002	0.23		0.02	0.02	-		

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

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-015-0459 Family: MFPXL08.7T4V Attachment Last Revised: 12/17/2020

Model				Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel		Peak Torque -	Peak Torque -		el				
	Code	Trim	Config							Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fu	el Units	OBD	GHG	Special	Notes
	F2CFE61	L	16	8.7	Liters	408.7	horsepower	2000	200	mm3/stroke	1370.37037	lb-ft	1400	248	mm3/stroke				DDI ECN TC CAC DOC
*B	4A*B																		SCR-u AMOX
F2CFE614		L	16	8.7	Liters	408.7	horsepower	2100	193	mm3/stroke	1321.481481	lb-ft	1400	239	mm3/stroke				DDI ECN TC CAC DOC
8*B	4B*B									.,					.,				SCR-u AMOX
F2CFE614 C*B	F2CFE61 4C*B	L	16	8.7	Liters	369.84	horsepower	2000	182	mm3/stroke	1333.333333	lb-ft	1400	243	mm3/stroke				DDI ECN TC CAC DOC
	40 8																		SCR-u AMOX DDI ECN
F2CFE614 D*B	F2CFE61 4D*B		16	8.7	Liters	341.7	horsepower	2000	165	mm3/stroke	1265.185185	lb-ft	1400	231	mm3/stroke				TC CAC DOC SCR-u
2CFE614 E*B	F2CFE61 4E*B	L	16	8.7	Liters	340.36	horsepower	2100	153	mm3/stroke	1185.925926	lb-ft	1400	216	mm3/stroke				DDI ECN TC CAC DOC SCR-u
2005504.4	F205504																		AMOX DDI ECN TC CAC
**B	F2CFE61 4F*B	<u>.</u>	16	8.7	Liters	314.9	horsepower	2100	143	mm3/stroke	1188.148148	lb-ft	1400	219	mm3/stroke				DOC SCR-u AMOX
2CFE614 6*B	F2CFE61 4G*B	L	16	8.7	Liters	310.88	horsepower	2000	147	mm3/stroke	1154.074074	lb-ft	1400	211	mm3/stroke				DDI ECN TC CAC DOC SCR-u
																			AMOX DDI ECN TC CAC
2CFE614 I*B	F2CFE61 4H*B		16	8.7	Liters	289.44	horsepower	2100	131	mm3/stroke	1095.555556	lb-ft	1400	201	mm3/stroke				DOC SCR-u
F2CFE614 S*B			16	8.7	Liters	389.94	horsepower	2000	192	mm3/stroke	1370.37037	lb-ft	1400	248	mm3/stroke				DDI ECN TC CAC DOC
	4S*B		10	6.7	Liters	303.34	norsepower	2000	152	illilia/su oke	13/0.3/03/	10-10	1400	240	iiiii3/su oke				SCR-u AMOX