

FPT INDUSTRIAL S.p.A.

EXECUTIVE ORDER U-R-015-0444 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	MFPXL03.6EH1	3.6	Diesel	8000				
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
Gas Turbocha	Direct Injection, Charged Recirculation, Electronic (Irger, Diesel Oxidation Ca Selective Catalytic Reduct Oxidation Cataly	Control Module, talyst, Periodic Trap ion - Urea, Ammonia	Loaders, Tractor, Doze	r				

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	EMISSION STANDARD CATEGORY			E	XHAUST (g/kW-l	OPACITY (%)				
POWER CLASS			NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.01	0.33		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).

BE IT FURTHER RESOLVED: That for the listed engine models which include engines from different power categories in the same engine family, the manufacturer is complying with the more stringent set of standards from the 56 ≤ kW < 130 power category in conformance with the incorporated Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

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>12th</u> day of November 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Peak Power - Units horsepower horsepower horsepower	Peak Power - Speed (rpm) 2300 2300	Peak Power- Fueling 102 88	Peak Power - Fuel Units mm3/stroke mm3/stroke	Peak Torque 443 373	Peak Torque - Units lb-ft	Peak Torque - Speed (rpm) 1500	Peak Torque - Fuel 133	Peak Torque - Fuel Units mm3/stroke mm3/stroke	OBD	GHG	Special	Notes DDI CAC EGR ECM TC DOC PTOX SC AMOX DDI CAC EGR ECM TC DOC
L horsepower horsepower	2300	102	mm3/stroke	443	lb-ft	1500	133	mm3/stroke			9,000	DDI CAC EGR ECM TC DOC PTOX SC AMOX DDI CAC EGR ECM
5 horsepower	2300	88										PTOX SO AMOX DDI CAC EGR ECM
			mm3/stroke	373	lb-ft	1300	113	mm3/stroke				EGR ECM
horsepower	2300	83										PTOX SO
			mm3/stroke	362	lb-ft	1300	110	mm3/stroke				DDI CAC EGR ECN TC DOC PTOX SC AMOX
horsepower	2300	76	mm3/stroke	332	lb-ft	1300	101	mm3/stroke				DDI CAC EGR ECM TC DOC PTOX SC AMOX
horsepower	2300	68	mm3/stroke	280	lb-ft	1300	85	mm3/stroke				DDI CAC EGR ECM TC DOC PTOX SC AMOX
horsepower	2300	61	mm3/stroke	244	lb-ft	1300	74	mm3/stroke				DDI CAC EGR ECM TC DOC PTOX SC AMOX
) horsepower	2200	102	mm3/stroke	340	lb-ft	1400	100	mm3/stroke				DDI CAC EGR ECN TC DOC PTOX SC AMOX
horsepower	2200	101	mm3/stroke	334	lb-ft	1400	95	mm3/stroke				DDI CAC EGR ECI TC DOC PTOX SC AMOX
110	horsepower horsepower horsepower	horsepower 2300 horsepower 2300 horsepower 2300 horsepower 2200	19 horsepower 2300 68 19 horsepower 2300 61 10 horsepower 2200 102	19 horsepower 2300 68 mm3/stroke 19 horsepower 2300 61 mm3/stroke 10 horsepower 2200 102 mm3/stroke	19 horsepower 2300 68 mm3/stroke 280 19 horsepower 2300 61 mm3/stroke 244 10 horsepower 2200 102 mm3/stroke 340	19 horsepower 2300 68 mm3/stroke 280 lb-ft 19 horsepower 2300 61 mm3/stroke 244 lb-ft 10 horsepower 2200 102 mm3/stroke 340 lb-ft	19 horsepower 2300 68 mm3/stroke 280 lb-ft 1300 19 horsepower 2300 61 mm3/stroke 244 lb-ft 1300 10 horsepower 2200 102 mm3/stroke 340 lb-ft 1400	horsepower 2300 68 mm3/stroke 280 lb-ft 1300 85 9 horsepower 2300 61 mm3/stroke 244 lb-ft 1300 74 10 horsepower 2200 102 mm3/stroke 340 lb-ft 1400 100	horsepower 2300 68 mm3/stroke 280 lb-ft 1300 85 mm3/stroke 9 horsepower 2300 61 mm3/stroke 244 lb-ft 1300 74 mm3/stroke 10 horsepower 2200 102 mm3/stroke 340 lb-ft 1400 100 mm3/stroke	horsepower 2300 68 mm3/stroke 280 lb-ft 1300 85 mm3/stroke 9 horsepower 2300 61 mm3/stroke 244 lb-ft 1300 74 mm3/stroke 10 horsepower 2200 102 mm3/stroke 340 lb-ft 1400 100 mm3/stroke	horsepower 2300 68 mm3/stroke 280 lb-ft 1300 85 mm3/stroke 9 horsepower 2300 61 mm3/stroke 244 lb-ft 1300 74 mm3/stroke 10 horsepower 2200 102 mm3/stroke 340 lb-ft 1400 100 mm3/stroke	horsepower 2300 68 mm3/stroke 280 lb-ft 1300 85 mm3/stroke horsepower 2300 61 mm3/stroke 244 lb-ft 1300 74 mm3/stroke horsepower 2200 102 mm3/stroke 340 lb-ft 1400 100 mm3/stroke