



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 engine and emission control system 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)
2020	LMBXL12.8RJD	12.8	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Diesel Oxidation Catalyst, Exhaust Gas Recirculation, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst, Periodic Trap Oxidizer			Crane, Tractor, Dozer, Loader, Pump, Compressor, Generator	

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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	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	0.20	--	0.3	0.001	--	--	--

**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 31<sup>st</sup> day of December 2019.

*Kim Pryor*  
for Allen Lyons, Chief  
Emissions Certification and Compliance Division

ATTACHMENT 10F1

**Engine Model Summary Template**  
**Engine Family LMBXL12.8RJD**

U-R-016-0144  
12/19/2019

Engine Code	Engine Model	KW@RPM	Fuel Rate @ peak KW (mm3/stroke)	Fuel Rate @ peak KW (lbs/hr)	Peak torque NM @ RPM	Fuel Rate @ peak torque (mm3/stroke)	Fuel Rate @ peak torque (lbs/hr)	Emission Control Device
471LA.E5-1	OM471	390 @ 1600	323.0	166.3	2600 @ 1300	355.1	148.6	ECM, TC, CAC, EGR,
471LA.E5-2	OM471	360 @ 1600	294.9	151.8	2400 @ 1300	320.8	134.2	DPF, DDI, DOC AMOX,
471LA.E5-3	OM471	340 @ 1600	277.3	142.8	2300 @ 1300	304.3	127.4	SCR
471LA.E5-4	OM471	320 @ 1600	259.5	133.6	2200 @ 1300	291.4	122.0	(all ratings)