



CUMMINS INC.

EXECUTIVE ORDER U-R-002-0800-1
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)
2022	NCEXL08.9AAQ	8.9	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Control Module, Periodic Trap Oxidizer, Diesel Oxidation Catalyst, Electronic Direct Injection, Turbocharger, Selective Catalytic Reduction - Urea, Charge Air Cooler, Ammonia Oxidation Catalyst			Crane, Loader, Tractor, Dozer, Pump, Compressor, Chipper, Snow Blower and Forklift	

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	0.03	0.21	--	0.00	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 hereby supersedes Executive Order U-R-002-0800 dated January 20, 2022.

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 11th day of May 2022.

Allen Lyons, Chief
Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-002-0800-1

Family: NCEXL08.9AAQ

Attachment Last Revised: 4/4/2022

Model	Code	Trim	Config	Displacement	Displacement -		Peak Power -		Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque - Fuel		OBD	GHG	Special	Notes
					Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel	Units					
L9	OL1	N/A	N/A	8.9	Liters	325	horsepower	2100	181	mm3/stroke	1207	lb-ft	1100	236	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL2	N/A	N/A	8.9	Liters	330	horsepower	2000	181	mm3/stroke	1207	lb-ft	1100	236	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL3	N/A	N/A	8.9	Liters	300	horsepower	2100	171	mm3/stroke	1125	lb-ft	1100	212	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL4	N/A	N/A	8.9	Liters	285	horsepower	2000	191	mm3/stroke	1207	lb-ft	1100	236	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL5	N/A	N/A	8.9	Liters	365	horsepower	2100	193	mm3/stroke	1151	lb-ft	1400	223	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL6	N/A	N/A	8.9	Liters	340	horsepower	2100	182	mm3/stroke	1126	lb-ft	1400	218	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL7	N/A	N/A	8.9	Liters	310	horsepower	2100	186	mm3/stroke	1126	lb-ft	1400	218	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL8	N/A	N/A	8.9	Liters	280	horsepower	2100	185	mm3/stroke	1086	lb-ft	1400	209	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL9	N/A	N/A	8.9	Liters	350	horsepower	1800	201	mm3/stroke	1151	lb-ft	1400	223	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL10	N/A	N/A	8.9	Liters	338	horsepower	1800	194	mm3/stroke	1126	lb-ft	1400	218	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL11	N/A	N/A	8.9	Liters	325	horsepower	1800	186	mm3/stroke	1126	lb-ft	1400	218	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL12	N/A	N/A	8.9	Liters	295	horsepower	1800	185	mm3/stroke	1086	lb-ft	1400	209	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL13	N/A	N/A	8.9	Liters	430	horsepower	2100	231	mm3/stroke	1362	lb-ft	1500	268	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL14	N/A	N/A	8.9	Liters	415	horsepower	2100	220	mm3/stroke	1324	lb-ft	1400	256	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL15	N/A	N/A	8.9	Liters	390	horsepower	2100	233	mm3/stroke	1324	lb-ft	1400	256	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL16	N/A	N/A	8.9	Liters	400	horsepower	1800	233	mm3/stroke	1324	lb-ft	1400	256	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL17	N/A	N/A	8.9	Liters	365	horsepower	2100	221	mm3/stroke	1324	lb-ft	1400	256	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL18	N/A	N/A	8.9	Liters	380	horsepower	1800	221	mm3/stroke	1324	lb-ft	1400	256	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL19	N/A	N/A	8.9	Liters	349	horsepower	1900	191	mm3/stroke	1151	lb-ft	1400	221	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL20	N/A	N/A	8.9	Liters	362	horsepower	1900	197	mm3/stroke	1151	lb-ft	1400	221	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL21	N/A	N/A	8.9	Liters	402	horsepower	1900	213	mm3/stroke	1291	lb-ft	1400	240	mm3/stroke	N/A	N/A	N/A	N/A	
L9	OL22	N/A	N/A	8.9	Liters	429	horsepower	1900	229	mm3/stroke	1362	lb-ft	1400	264	mm3/stroke	N/A	N/A	N/A	N/A	