

## CATERPILLAR INC.

## **EXECUTIVE ORDER U-R-001-0645**

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)					
2022	NCPXL106.NVF	106, 84.7	Diesel	8000					
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
	Direct Injection, Turbo Engine Control Module, Reduction - Ure	Selective Catalytic	Pump, Loader, Tractor, Compressor, Industrial Equipment, Commercial 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	EMISSION			ı	EXHAUST (g/kw-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
ELSE>560kW	Tier 4 Final	STD	0.19	3.5	N/A	3.5	0.04	N/A	N/A	N/A
		CERT	0.06	3.0		1.9	0.03			

**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 5th day of November 2021.

Allen Lyons, Chief

**Emissions Certification and Compliance Division** 

Attachment: Engine Models EO #: U-R-001-0645 Family: NCPXL106.NVF Attachment Last Revised: 11/17/2022

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fue	ŀ	Peak Torque -	Peak Torque -	Peak Torque -	Peak Torque -				
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD	GHG	Special	Notes
C175	Cert 1 - 16 Cyl	N/A	V16	84.66	Liters	2690	horsepower	1750	898	lb/hr	10124	lb-ft	1300	799	lb/hr	N/A	N/A	N/A	N/A
C175	Cert 2 - 20 Cyl	N/A	V20	106	Liters	4000	horsepower	1750	1323	lb/hr	14526	lb-ft	1300	1125	lb/hr	N/A	N/A	N/A	N/A
C175	1 - 16 Cyl	N/A	V16	84.66	Liters	2690	horsepower	1750	898	lb/hr	10124	lb-ft	1300	799	lb/hr	N/A	N/A	N/A	N/A
C175	2 - 16 Cyl	N/A	V16	84.66	Liters	2650	horsepower	1750	889	lb/hr	9499	lb-ft	1300	750	lb/hr	N/A	N/A	N/A	N/A
C175	3 - 16 Cyl	N/A	V16	84.66	Liters	2270	horsepower	1750	769	lb/hr	8128	lb-ft	1300	642	lb/hr	N/A	N/A	N/A	N/A
C175	4 - 16 Cyl	N/A	V16	84.66	Liters	3500	horsepower	1800	1114	lb/hr	10821	lb-ft	1650	1066	lb/hr	N/A	N/A	N/A	N/A
C175	5 - 16 Cyl	N/A	V16	84.66	Liters	2628	horsepower	1750	870	lb/hr	9433	lb-ft	1300	735	lb/hr	N/A	N/A	N/A	N/A
C175	6 - 16 Cyl	N/A	V16	84.66	Liters	2628	horsepower	1750	884	lb/hr	10060	lb-ft	1300	781	lb/hr	N/A	N/A	New Model Added	N/A