

CATERPILLAR INC.

EXECUTIVE ORDER: U-R-001-0685-1 New Off-Road Compression-Ignition Engines Page 1 of 1

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The engines and emission control systems produced by the manufacturer as described below are certified 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	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation
2024	RCPXL27.0HXF	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1,2]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kW-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

			Crit	eria	Smoke Opacity			
Applicable Standard	NMHC	NOx	СО	PM	ACL	LUG	PEAK	
	STD	0.19	3.5	3.5	0.04	*	*	*
Tier 4 Final ELSE > 560 kW	FEL	*	*	*	*	*	*	*
ELGE > 300 KVV	NTE	0.24	4.4	4.4	0.06	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order hereby supersedes Executive Order U-R-001-0685 dated May 30, 2023.

Executed on this /4th, day of December 2023.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RCPXL27.0HXF EO Number: U-R-001-0685-1 Date Applicable: 12/12/2023

					Peak Power			Peak Torque					
Model	Code	Trim	Config	Displacement	Power	Speed	Fueling	Torque	Speed	Fueling	ECS Num	GHG	Notes
-	-	-	=	L	hp	rpm	lb/hr	lb-ft	rpm	lb/hr	-	-	-
27	Cert Test 1	NA	V12	27.02	1046	1800	372	3412	1200	263	1	N/A	
27	1	NA	V12	27.02	811	1800	283	3182	1200	254	1	N/A	
27	2	NA	V12	27.02	811	1800	281	2778	1200	216	1	N/A	
27	3	NA	V12	27.02	759	1800	266	2993	1200	235	1	N/A	
27	4	NA	V12	27.02	760	1800	266	2556	1200	205	1	N/A	
27	5	NA	V12	27.02	798	1800	275	2689	1200	212	1	N/A	
27	6	NA	V12	27.02	874	1800	307	2947	1200	234	1	N/A	
27	7	NA	V12	27.02	948	1800	330	3200	1200	252	1	N/A	
27	8	NA	V12	27.02	948	1800	330	3200	1200	252	1	N/A	
27	9	NA	V12	27.02	752	1800	259	2583	1200	211	1	N/A	
27	10	NA	V12	27.02	752	1800	259	2583	1200	211	1	N/A	
27	11	NA	V12	27.02	874	1800	307	2947	1200	232	1	N/A	
27	12	NA	V12	27.02	797	1800	284	2660	1200	206	1	N/A	
27	13	NA	V12	27.02	797	1800	284	2660	1200	206	1	N/A	
27	14	NA	V12	27.02	872	1800	307	2924	1200	225	1	N/A	
27	15	NA	V12	27.02	872	1800	307	2924	1200	225	1	N/A	
27	16	NA	V12	27.02	947	1800	333	3171	1200	244	2	N/A	
27	17	NA	V12	27.02	947	1800	333	3171	1200	244	2	N/A	
27	18	NA	V12	27.02	1046	1800	372	3412	1200	263	2	N/A	
27	19	NA	V12	27.02	1046	1800	372	3412	1200	263	2	N/A	
27	20	NA	V12	27.02	811	1800	281	2778	1200	216	1	N/A	
27	21	NA	V12	27.02	752	1800	257	2583	1200	203	1	N/A	
27	22	NA	V12	27.02	1047	1800	362	3418	1200	266	1	N/A	
27	23	NA	V12	27.02	872	1800	307	2924	1200	225	1	N/A	
27	24	NA	V12	27.02	811	1800	281	3207	1200	247	1	N/A	
27	25	NA	V12	27.02	755	1800	260	2590	1200	204	1	N/A	
27	26	NA	V12	27.02	752	1800	259	2583	1200	211	1	N/A	