CATERPILLAR INC.

EXECUTIVE ORDER: U-R-001-0681
New Off-Road Compression-Ignition Engines
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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	RCPXL15.2HTF	Diesel	Dedicated	Diesel	Variable Speed

Emission Control Systems							
[1]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC), Periodic Trap Oxidizer (PTOX), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX). [2]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC), Periodic Trap Oxidizer (PTOX), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX). [3]: Electronic Direct Injection (DDI), Charged Air Cooler (CAC), Exhaust Gas Recirculation (EGR), Electronic Control Module (ECM), Turbocharger (TC), Diesel Oxidation Catalyst (DOC), Periodic Trap Oxidizer (PTOX), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX).	None						

The certified engine models are attached.

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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/kWh-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	0.40	3.5	0.02	*	*	*
Tier 4 Final 130 ≤ kW ≤ 560	FEL	*	*	*	0.01	*	*	*
100 = RVV = 000	NTE	0.28	0.60	4.4	0.02	*	*	*

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.

Executed on this _____28th___ day of April 2023.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

EO #: U-R-001-0681 Attachment: Engine Models

Family: RCPXL15.2HTF

Date Applicable: 4/12/2023

					Displacement -		Peak Power -	Peak Power - Speed		Peak Power -		Peak Torque -	Peak Torque -		Peak Torque - Fuel					
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	(rpm)	Peak Power - Fueling	Fuel Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel	Units	OBD Status	OBD Fines (\$)	GHG	ECS#	Notes
C15	Cert Test 1	NA	16	15.19	Liters	578	horsepower	2100	214	lb/hr	1955	lb-ft	1400	175	lb/hr	N/A	N/A	N/A	3	
C15	1	NA	16	15.19	Liters	485	horsepower	1900	176.1	lb/hr	1891	lb-ft	1200	148.7	lb/hr	N/A	N/A	N/A	2	
C15	2	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	2A	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	3	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	3A	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	4	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	
C15	4A	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	
C15	5	NA	16	15.19	Liters	578	horsepower	2100	219.2	lb/hr	1955	lb-ft	1400	179	lb/hr	N/A	N/A	N/A	1	
C15	5A	NA	16	15.19	Liters	578	horsepower	2100	219.2	lb/hr	1955	lb-ft	1400	179	lb/hr	N/A	N/A	N/A	1	
C15	6	NA	16	15.19	Liters	485	horsepower	1700	167.2	lb/hr	1698	lb-ft	1350	148.7	lb/hr	N/A	N/A	N/A	2	
C15	7	NA	16	15.19	Liters	314	horsepower	2000	120.4	lb/hr	1438	lb-ft	1300	122	lb/hr	N/A	N/A	N/A	2	
C15	8	NA	16	15.19	Liters	426	horsepower	1800	148.4	lb/hr	1568	lb-ft	1300	133	lb/hr	N/A	N/A	N/A	1	
C15	9	NA	16	15.19	Liters	409	horsepower	2000	148.1	lb/hr	1693	lb-ft	1200	134.5	lb/hr	N/A	N/A	N/A	2	
C15	10	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.7	lb/hr	N/A	N/A	N/A	1	
C15	11	NA	16	15.19	Liters	314	horsepower	2000	120.4	lb/hr	1438	lb-ft	1300	122	lb/hr	N/A	N/A	N/A	2	
2506F	12	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	
2506J	12A	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	
2506F	13	NA	16	15.19	Liters	578	horsepower	2100	219.2	lb/hr	1955	lb-ft	1400	179	lb/hr	N/A	N/A	N/A	1	
2506J	13A	NA	16	15.19	Liters	578	horsepower	2100	219.2	lb/hr	1955	lb-ft	1400	179	lb/hr	N/A	N/A	N/A	1	
2506F	14	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
2506J	14A	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
2506F	15	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
2506J	15A	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	16	NA	16	15.19	Liters	416	horsepower	2000	153.4	lb/hr	1752	lb-ft	1200	140.6	lb/hr	N/A	N/A	N/A	2	
C15	17	NA	16	15.19	Liters	378	horsepower	2050	139.7	lb/hr	1578	lb-ft	1200	121.3	lb/hr	N/A	N/A	N/A	2	
C15	18	NA	16	15.19	Liters	409	horsepower	2000	148.1	lb/hr	1693	lb-ft	1200	134.5	lb/hr	N/A	N/A	N/A	2	
C15	19	NA	16	15.19	Liters	485	horsepower	1700	167.2	lb/hr	1698	lb-ft	1350	148.7	lb/hr	N/A	N/A	N/A	2	
C15	20	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	20A	NA	16	15.19	Liters	473	horsepower	2100	174.4	lb/hr	1600	lb-ft	1400	146.4	lb/hr	N/A	N/A	N/A	2	
C15	21	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	
C15	22	NA	16	15.19	Liters	378	horsepower	2050	139.7	lb/hr	1578	lb-ft	1200	125.5	lb/hr	N/A	N/A	N/A	2	
C15	23	NA	16	15.19	Liters	539	horsepower	2100	199.3	lb/hr	1820	lb-ft	1400	165.8	lb/hr	N/A	N/A	N/A	1	