EXECUTIVE ORDER: U-R-001-0678 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	RCPXL09.3NTF	Diesel	Dedicated	Diesel	Variable and Constant 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). [4]: 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 (DOC), Periodic Trap Oxidizer (PTOX), Selective Catalytic Reduction – Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX).	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/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 2 KVV 2 000	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** 

Attachment: Engine Models EO #: UR-001-0678 Family: RCPXL09.3NTF Date Applicable: 4/12/2023

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fuel		Peak Torque -	Peak Torque -	Peak Torque -	Peak Torque -		OBD Fines			
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD Status	(\$)	GHG	ECS#	Notes
C9.3B	Cert Test 1	NA	16	9.28	Liters	456	horsepower	2000	160	lb/hr	1536	lb-ft	1400	135	lb/hr	N/A	N/A	N/A	1	
C9.3B	Cert Test 2	NA	16	9.28	Liters	408	horsepower	1500	137	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
C9.3B	01	NA	16	9.28	Liters	335	horsepower	2200	121	lb/hr	1130	lb-ft	1400	97	lb/hr	N/A	N/A	N/A	1	
1706J	1A	NA	16	9.28	Liters	335	horsepower	2200	121	lb/hr	1130	lb-ft	1400	97	lb/hr	N/A	N/A	N/A	1	
C9.3B	02	NA	16	9.28	Liters	375	horsepower	2200	134	lb/hr	1265	lb-ft	1400	108	lb/hr	N/A	N/A	N/A	1	
1706J	2A	NA	16	9.28	Liters	375	horsepower	2200	134	lb/hr	1265	lb-ft	1400	108	lb/hr	N/A	N/A	N/A	1	
C9.3B	03	NA	16	9.28	Liters	416	horsepower	2200	150	lb/hr	1401	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
1706J	3A	NA	16	9.28	Liters	416	horsepower	2200	150	lb/hr	1401	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
C9.3B	04	NA	16	9.28	Liters	456	horsepower	2000	160	lb/hr	1536	lb-ft	1400	135	lb/hr	N/A	N/A	N/A	1	
1706J	4A	NA	16	9.28	Liters	456	horsepower	2000	160	lb/hr	1536	lb-ft	1400	135	lb/hr	N/A	N/A	N/A	1	
C9.3B	05	NA	16	9.28	Liters	314	horsepower	1800	104	lb/hr	1154	lb-ft	1300	93	lb/hr	N/A	N/A	N/A	2	
C9.3B	06	NA	16	9.28	Liters	221	horsepower	2200	84	lb/hr	1100	lb-ft	1200	83	lb/hr	N/A	N/A	N/A	4	
C9.3B	6A	NA	16	9.28	Liters	221	horsepower	2200	84	lb/hr	1100	lb-ft	1200	83	lb/hr	N/A	N/A	N/A	4	
C9.3B	07	NA	16	9.28	Liters	274	horsepower	2200	95	lb/hr	1263	lb-ft	1100	86	lb/hr	N/A	N/A	N/A	3	
C9.3B	08	NA	16	9.28	Liters	314	horsepower	1800	106	lb/hr	1154	lb-ft	1300	95	lb/hr	N/A	N/A	N/A	3	
C9.3B	09	NA	16	9.28	Liters	408	horsepower	1500	137	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
1706J	9A	NA	16	9.28	Liters	408	horsepower	1500	137	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
C9.3B	10	NA	16	9.28	Liters	456	horsepower	1800	157	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
1706J	10A	NA	16	9.28	Liters	456	horsepower	1800	157	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
C9.3B	11	NA	16	9.28	Liters	343	horsepower	1500	114	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
1706J	11A	NA	16	9.28	Liters	343	horsepower	1500	114	lb/hr	NA	lb-ft	NA	NA	lb/hr	N/A	N/A	N/A	1	
C9.3B	12	NA	16	9.28	Liters	314	horsepower	1800	106	lb/hr	1154	lb-ft	1300	95	lb/hr	N/A	N/A	N/A	3	
C9.3B	13	NA	16	9.28	Liters	416	horsepower	2200	150	lb/hr	1401	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
1706J	13A	NA	16	9.28	Liters	416	horsepower	2200	150	lb/hr	1401	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
C9.3B	14	NA	16	9.28	Liters	416	horsepower	2200	150	lb/hr	1401	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
C9.3B	15	NA	16	9.28	Liters	294	horsepower	2200	105	lb/hr	1314	lb-ft	1200	99	lb/hr	N/A	N/A	N/A	1	
C9.3B	15A	NA	16	9.28	Liters	294	horsepower	2200	105	lb/hr	1314	lb-ft	1200	99	lb/hr	N/A	N/A	N/A	1	
C9.3B	16	NA	16	9.28	Liters	296	horsepower	2200	106	lb/hr	1375	lb-ft	1200	104	lb/hr	N/A	N/A	N/A	1	
C9.3B	16A	NA	16	9.28	Liters	296	horsepower	2200	106	lb/hr	1375	lb-ft	1200	104	lb/hr	N/A	N/A	N/A	1	
C9.3B	17	NA	16	9.28	Liters	347	horsepower	1900	118	lb/hr	1171	lb-ft	1400	102	lb/hr	N/A	N/A	N/A	2	
C9.3B	18	NA	16	9.28	Liters	294	horsepower	2200	105	lb/hr	1314	lb-ft	1200	99	lb/hr	N/A	N/A	N/A	1	
C9.3B	19	NA	16	9.28	Liters	296	horsepower	2200	106	lb/hr	1375	lb-ft	1200	104	lb/hr	N/A	N/A	N/A	1	
C9.3B	20	NA	16	9.28	Liters	414	horsepower	1800	139	lb/hr	1396	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	1	
C9.3B	21	NA	16	9.28	Liters	414	horsepower	1800	139	lb/hr	1396	lb-ft	1400	121	lb/hr	N/A	N/A	N/A	2	
C9.3B	22	NA	16	9.28	Liters	294	horsepower	2200	105	lb/hr	1314	lb-ft	1200	99	lb/hr	N/A	N/A	N/A	1	