

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	RCEXL04.5AAK	Diesel	Dedicated	Diesel	Variable Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (EDI), Electronic Control Module (ECM), Turbocharger (TC), Charged Air Cooler (CAC), 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.

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 (*).

Applicable Standard		Criteria				Smoke Opacity		
		NMHC	NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final 75 ≤ kW < 130	STD	0.19	0.40	5.0	0.02	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	0.60	6.2	0.03	*	*	*

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 13th day of June 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-002-0847

Family: RCEXL04.5AAK

Date Applicable: 5/18/2023

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	Peak Torque - Fuel	Peak Torque - Fuel Units	OBD Status	OBD Fines (\$)	GHG	ECS #	Notes
B4.5	OB1		I4	4.5	Liters	173	horsepower	2000	130	mm3/stroke	575	lb-ft	1500	53	lb/hr	N/A	N/A	N/A	1	
B4.5	OB2		I4	4.5	Liters	173	horsepower	2500	138	mm3/stroke	575	lb-ft	1500	54	lb/hr	N/A	N/A	N/A	1	
B4.5	OB3		I4	4.5	Liters	162	horsepower	2500	125	mm3/stroke	520	lb-ft	1500	50	lb/hr	N/A	N/A	N/A	1	
B4.5	OB4		I4	4.5	Liters	130	horsepower	2500	115	mm3/stroke	480	lb-ft	1500	44	lb/hr	N/A	N/A	N/A	1	
B4.5	OB5		I4	4.5	Liters	173	horsepower	2200	138	mm3/stroke	575	lb-ft	1500	54	lb/hr	N/A	N/A	N/A	1	
B4.5	OB6		I4	4.5	Liters	165	horsepower	2200	125	mm3/stroke	563	lb-ft	1500	43	lb/hr	N/A	N/A	N/A	1	
B4.5	OB7		I4	4.5	Liters	154	horsepower	2200	115	mm3/stroke	525	lb-ft	1500	40	lb/hr	N/A	N/A	N/A	1	
B4.5	OB8		I4	4.5	Liters	133	horsepower	2200	94	mm3/stroke	467	lb-ft	1500	34	lb/hr	N/A	N/A	N/A	1	
B4.5	OB9		I4	4.5	Liters	121	horsepower	2200	86	mm3/stroke	369	lb-ft	1500	34	lb/hr	N/A	N/A	N/A	1	
B4.5	OB10		I4	4.5	Liters	173	horsepower	2000	138	mm3/stroke	575	lb-ft	1500	54	lb/hr	N/A	N/A	N/A	1	
B4.5	OB11		I4	4.5	Liters	165	horsepower	2000	126	mm3/stroke	563	lb-ft	1500	43	lb/hr	N/A	N/A	N/A	1	
B4.5	OB12		I4	4.5	Liters	154	horsepower	2000	115	mm3/stroke	525	lb-ft	1500	40	lb/hr	N/A	N/A	N/A	1	