

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	RCEXL02.8AAC	Diesel	Dedicated	Diesel	Variable Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), 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 hydrocarbon plus oxides of nitrogen (NMHC+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 37 ≤ kW < 56	STD	4.7	5.0	0.03	*	*	*
	FEL	*	*	*	*	*	*
	NTE	5.9	6.2	0.04	*	*	*

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 12th day of June 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-002-0849Family: RCEXL02.8AACDate Applicable: 6/2/2023

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
QSF2.8	OF1		I4	2.8	Liters	74	horsepower	2500	55	mm3/stroke	221	lb-ft	1600	69	mm3/stroke	N/A	N/A	N/A	[2]	
QSF2.8	OF2		I4	2.8	Liters	65	horsepower	2500	53	mm3/stroke	170	lb-ft	1600	54	mm3/stroke	N/A	N/A	N/A	[1]	
QSF2.8	OF3		I4	2.8	Liters	65	horsepower	2200	53	mm3/stroke	170	lb-ft	1600	54	mm3/stroke	N/A	N/A	N/A	[1]	
QSF2.8	OF4		I4	2.8	Liters	49	horsepower	2500	41	mm3/stroke	140	lb-ft	1600	45	mm3/stroke	N/A	N/A	N/A	[1]	
QSF2.8	OF5		I4	2.8	Liters	49	horsepower	2200	44	mm3/stroke	140	lb-ft	1600	45	mm3/stroke	N/A	N/A	N/A	[1]	