

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	RCEXL60.0AAF	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (EDI), Electronic Control Module (ECM), Turbocharger (TC), Charged Air Cooler (CAC), 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 ELSE > 560 kW	STD	0.19	3.5	3.5	0.04	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	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.

Executed on this 6th day of July 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RCEXL60.0AAF EO Number: U-R-002-0861 Date Applicable: 12/22/2023

Model	Code	Trim	Config	Displacement	Peak Power			Peak Torque			ECS Num	GHG	Notes
					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	L	kW	rpm	mm3/stroke	N-m	rpm	mm3/stroke	-	-	-
QSK60	OK1	N/A	16	60	1864	1900	498	10049	1700	521	1	N/A	
QSK60	OK2	N/A	16	60	1398	1800	394	8364	1500	428	1	N/A	
QSK60	OK3	N/A	16	60	1715	1800	477	9309	1600	475	1	N/A	
QSK60	OK4	N/A	16	60	1491	1800	419	8908	1500	454	1	N/A	
QSK60	OK5	N/A	16	60	1450	1800	407	8364	1500	428	1	N/A	
QSK60	OK6	N/A	16	60	2125	1900	570	11831	1500	596	1	N/A	
QSK60	OK7	N/A	16	60	2013	1900	540	11209	1500	566	1	N/A	
QSK60	OK8	N/A	16	60	2013	1900	550	10814	1700	567	1	N/A	
QSK60	OK9	N/A	16	60	1411	1800	401	8506	1800	438	1	N/A	
SDA16V160E-3	OK11	N/A	16	60	1398	1800	394	8364	1500	433	1	N/A	
SDA16V160E-3	OK12	N/A	16	60	1715	1800	477	9309	1600	475	1	N/A	
SDA16V160E-3	OK13	N/A	16	60	1491	1800	419	8908	1500	454	1	N/A	
SDA16V160E-3	OK14	N/A	16	60	1450	1800	407	8364	1500	428	1	N/A	
SDA16V160E-3	OK15	N/A	16	60	2125	1900	570	11831	1500	596	1	N/A	
SDA16V160E-3	OK16	N/A	16	60	2013	1900	540	11209	1500	566	1	N/A	
SDA16V160E-3	OK17	N/A	16	60	2013	1900	550	10814	1700	567	1	N/A	
SDA16V160E-3	OK18	N/A	16	60	2125	1900	570	11831	1500	596	1	N/A	
QSK60	OK19	N/A	16	60	1678	1800	475	9839	1500	505	1	N/A	new child rating
SDA16V160E-3	OK20	N/A	16	60	1678	1800	475	9839	1500	505	1	N/A	new child rating