

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	RDZXL05.2124	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), Turbocharger (TC), Charge Air Cooler (CAC), Electronic Control Module (ECM), Continuous Trap Oxidizer (CTOX), 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/kW-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 130 ≤ kW ≤ 560	STD	0.19	0.40	3.5	0.02	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	0.60	4.4	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: That the manufacturer has elected to combine engines from the 75 ≤ kW < 560 power categories into a single engine family. The listed engine models comply with the more stringent set of standards of the 130 ≤ kW ≤ 560 power category in accordance with Section 1039.230(e) of 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 22nd day of March 2024.



Robin U. Lang, Chief
 Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RDZXL05.2124 EO Number: U-R-013-0738 Date Applicable: 3/15/2024

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	-	-	-
TCDS.2L4	CSN1170KM		I4	5.17	170	1800	201	950	1400	201	1	N/A	
TCDS.2L4	CSN1170DM		I4	5.17	170	2300	165	950	1400	201	1	N/A	
TCDS.2L4	CSN1170DU		I4	5.17	170	2300	164	950	1400	200	1	N/A	
TCDS.2L4	CSN1171EU		I4	5.17	170	2200	170	950	1400	200	1	N/A	
TCDS.2L4	CSN1170FU		I4	5.17	170	2100	175	950	1400	200	1	N/A	
TCDS.2L4	CSN1170GU		I4	5.17	170	2000	182	950	1400	200	1	N/A	
TCDS.2L4	CSN1170HU		I4	5.17	170	1900	190	950	1400	200	1	N/A	
TCDS.2L4	CSN1170KU		I4	5.17	170	1800	200	950	1400	200	1	N/A	
TCDS.2L4	CSN1150DU		I4	5.17	150	2300	142	950	1400	200	1	N/A	
TCDS.2L4	CSN1151EU		I4	5.17	150	2200	145	950	1400	200	1	N/A	
TCDS.2L4	CSN1150FU		I4	5.17	150	2100	150	950	1400	200	1	N/A	
TCDS.2L4	CSN1150GU		I4	5.17	150	2000	155	950	1400	200	1	N/A	
TCDS.2L4	CSN1150HU		I4	5.17	150	1900	162	950	1400	200	1	N/A	
TCDS.2L4	CSN1150KU		I4	5.17	150	1800	170	950	1400	200	1	N/A	
TCDS.2L4	CSN1130DU		I4	5.17	130	2300	123	950	1300	200	1	N/A	
TCDS.2L4	CSN1131EU		I4	5.17	130	2200	126	950	1300	200	1	N/A	
TCDS.2L4	CSN1130FU		I4	5.17	130	2100	130	950	1300	200	1	N/A	
TCDS.2L4	CSN1130GU		I4	5.17	130	2000	135	950	1300	200	1	N/A	
TCDS.2L4	CSN1130HU		I4	5.17	130	1900	140	950	1300	200	1	N/A	
TCDS.2L4	CSN1130KU		I4	5.17	130	1800	146	950	1300	200	1	N/A	
TCDS.2L4	CSN1115DU		I4	5.17	115	2300	110	883	1200	136	1	N/A	
TCDS.2L4	CSN1116EU		I4	5.17	115	2200	113	883	1200	151.7	1	N/A	
TCDS.2L4	CSN1115FU		I4	5.17	115	2100	115	883	1200	163	1	N/A	
TCDS.2L4	CSN1115GU		I4	5.17	115	2000	120	883	1200	162	1	N/A	
TCDS.2L4	CSN1115HU		I4	5.17	115	1900	124	883	1200	143.8	1	N/A	
TCDS.2L4	CSN1115KU		I4	5.17	115	1800	128	883	1200	151.7	1	N/A	
TCDS.2L4	CSN1100DU		I4	5.17	100	2300	105	817	1100	126	1	N/A	
TCDS.2L4	CSN1101EU		I4	5.17	100	2200	105	817	1100	104	1	N/A	
TCDS.2L4	CSN1100FU		I4	5.17	100	2100	105	817	1100	162	1	N/A	
TCDS.2L4	CSN1100GU		I4	5.17	100	2000	105	817	1100	151.7	1	N/A	
TCDS.2L4	CSN1100HU		I4	5.17	100	1900	108	817	1100	136	1	N/A	
TCDS.2L4	CSN1100KU		I4	5.17	100	1800	111	817	1100	126	1	N/A	