

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	RDZXL06.1050	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Direct Diesel Injection (DDI), Turbocharger (TC), Charge Air Cooler (CAC), Electronic Control Module (ECM), Exhaust Gas Recirculation (EGR), Diesel Oxidation Catalyst (DOC), 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/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 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: 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 24th day of August 2023.



Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RDZXL06.1050 EO Number: U-R-013-0731 Date Applicable: 8/7/2023

Model	Code	Trim	Config	Displacement	Peak Power			Peak Torque			ECS Num	GHG	Notes
					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	Liters	horsepower	rpm	mm3/stroke	lb-ft	rpm	mm3/stroke	-	-	-
TCD6.1L6	CFVI180		L6	6.057	241.3	2300	121	737.5	1450	148	1	N/A	
TCD6.1L6	CFVI180A		L6	6.057	241.3	2200	123.5	737.5	1450	148	1	N/A	
TCD6.1L6	CFVI180B		L6	6.057	241.3	2100	127	737.5	1450	148	1	N/A	
TCD6.1L6	CFVI180C		L6	6.057	241.3	2000	133	737.5	1450	148	1	N/A	
TCD6.1L6	CFVI160E		L6	6.057	214.5	1900	120.5	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI160		L6	6.057	214.5	1800	126.5	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI160A		L6	6.057	214.5	2100	106.7	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI160B		L6	6.057	214.5	2300	110	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI160C		L6	6.057	214.5	2100	112.7	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI160D		L6	6.057	214.5	2000	116.5	663.8	1450	130	1	N/A	
TCD6.1L6	CFVI150		L6	6.057	201.1	2300	100	645.3	1450	126.5	1	N/A	
TCD6.1L6	CFVI150A		L6	6.057	201.1	2200	102.5	645.3	1450	126.5	1	N/A	
TCD6.1L6	CFVI150B		L6	6.057	201.1	2100	105.3	645.3	1450	126.5	1	N/A	
TCD6.1L6	CFVI140		L6	6.057	187.7	2100	98	608.4	1450	119.3	1	N/A	
TCD6.1L6	CFVI140A		L6	6.057	187.7	2000	101	608.4	1450	119.3	1	N/A	
TCD6.1L6	CFVI180F		L6	6.057	241.3	2000	133	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI180		L6	6.057	241.3	2300	121	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI180A		L6	6.057	241.3	2200	123.5	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI180B		L6	6.057	241.3	2100	127	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI180C		L6	6.057	241.3	2000	133	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI180F		L6	6.057	241.3	2000	133	737.5	1450	148	1	N/A	
TCD6.1L6	CSVI160A		L6	6.057	214.5	2100	106.7	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI160B		L6	6.057	214.5	2300	110	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI160C		L6	6.057	214.5	2100	112.7	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI160D		L6	6.057	214.5	2000	116.5	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI160E		L6	6.057	214.5	1900	120.5	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI160		L6	6.057	214.5	1800	126.5	663.8	1450	130	1	N/A	
TCD6.1L6	CSVI150		L6	6.057	201.1	2300	100	645.3	1450	126.5	1	N/A	
TCD6.1L6	CSVI150A		L6	6.057	201.1	2200	102.5	645.3	1450	126.5	1	N/A	
TCD6.1L6	CSVI150B		L6	6.057	201.1	2100	105.3	645.3	1450	126.5	1	N/A	
TCD6.1L6	CSVI140		L6	6.057	187.7	2100	98	608.4	1450	119.3	1	N/A	
TCD6.1L6	CSVI140A		L6	6.057	187.7	2000	101	608.4	1450	119.3	1	N/A	
TCD6.1L6	CSVI180ZU		L6	6.057	241.3	2000	133	737.5	1450	148	1	N/A	