

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	RDZXL04.1056	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 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 October 2023.



Robin U. Lang, Chief
 Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RDZXL04.1056 EO Number: U-R-013-0726 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	lb/hr	N-m	rpm	lb/hr	-	-	-
TCD4.1L4	CFVI115A		I4	4.038	154.2	2300	59.4	609	1600	48.7	1	N/A	
TCD4.1L4	CFVI115B		I4	4.038	154.2	2200	58.1	609	1600	48.7	1	N/A	
TCD4.1L4	CFVI115C		I4	4.038	154.2	2100	57.3	609	1600	48.7	1	N/A	
TCD4.1L4	CFVI115D		I4	4.038	154.2	2000	55.5	609	1600	48.7	1	N/A	
TCD4.1L4	CFVI105A		I4	4.038	140.8	2300	54.6	550	1600	43.2	1	N/A	
TCD4.1L4	CFVI105B		I4	4.038	140.8	2200	53.2	550	1600	43.2	1	N/A	
TCD4.1L4	CFVI105D		I4	4.038	140.8	2100	52.7	550	1600	43.2	1	N/A	
TCD4.1L4	CFVI105C		I4	4.038	140.8	2000	51.1	550	1600	43.2	1	N/A	
TCD4.1L4	CFVI95A		I4	4.038	127.3	2200	48.1	530	1600	42.1	1	N/A	
TCD4.1L4	CFVI95B		I4	4.038	127.3	2100	47.1	530	1600	42.1	1	N/A	
TCD4.1L4	CFVI95C		I4	4.038	127.3	2000	46.2	530	1600	42.1	1	N/A	
TCD4.1L4	CFVI90		I4	4.038	120.6	2300	46.5	500	1600	39.5	1	N/A	
TCD4.1L4	CFVI90A		I4	4.038	120.6	2200	45.4	500	1600	39.5	1	N/A	
TCD4.1L4	CFVI85L		I4	4.038	113.9	2200	43.9	500	1600	39.5	1	N/A	
TCD4.1L4	CFVI80S		I4	4.038	107.2	2400	43.7	440	1600	35.5	1	N/A	
TCD4.1L4	CFVI80A		I4	4.038	107.2	2300	42.4	440	1600	35.5	1	N/A	
TCD4.1L4	CFVI80B		I4	4.038	107.2	2200	41.3	440	1600	35.5	1	N/A	
TCD4.1L4	CFVI80C		I4	4.038	107.2	2100	40.1	440	1600	35.5	1	N/A	
TCD4.1L4	CFVI80D		I4	4.038	107.2	2000	39.1	440	1600	35.5	1	N/A	
TCD4.1L4	CFVT91U		I4	4.038	122	2100	46.4	564	1500	41.9	1	N/A	
TCD4.1L4	CFVT98U		I4	4.038	131.4	2100	50.1	604	1500	45.3	1	N/A	
TCD4.1L4	CFVT110U		I4	4.038	146.8	2100	55.9	663	1500	50.5	1	N/A	
TCD4.1L4	CFVT120U		I4	4.038	160.9	2100	61.4	699	1500	54.3	1	N/A	
TCD4.1L4	CFVT121U		I4	4.038	160.9	2100	61.4	699	1500	53.9	1	N/A	
TCD4.1L4	CFVT109U		I4	4.038	147.2	2100	55.9	639	1500	47.9	1	N/A	
TCD4.1L4	CFVT111U		I4	4.038	146.8	2100	55.9	663	1500	50.5	1	N/A	
TCD4.1L4	CFVT96U		I4	4.038	129.8	2100	48.7	564	1500	41.9	1	N/A	
TCD4.1L4	CFVT89U		I4	4.038	120	2100	46.1	522	1500	34.6	1	N/A	
TCD4.1L4	CFVT119U		I4	4.038	160.9	2100	61.4	699	1500	53.9	1	N/A	
TCD4.1L4	CFVT108U		I4	4.038	146.8	2100	55.9	663	1500	50.5	1	N/A	
TCD4.1L4	CFVT98UB		I4	4.038	131.4	2100	50.1	604	1500	45.3	1	N/A	
TCD4.1L4	CFVT91UB		I4	4.038	122	2100	46.4	564	1500	41.9	1	N/A	
TCD4.1L4	CSVI115A		I4	4.038	154.2	2300	59.4	609	1600	48.7	1	N/A	
TCD4.1L4	CSVI115B		I4	4.038	154.2	2200	58.1	609	1600	48.7	1	N/A	
TCD4.1L4	CSVI115C		I4	4.038	154.2	2100	57.3	609	1600	48.7	1	N/A	
TCD4.1L4	CSVI115D		I4	4.038	154.2	2000	55.5	609	1600	48.7	1	N/A	
TCD4.1L4	CSVI105A		I4	4.038	140.8	2300	54.6	550	1600	43.2	1	N/A	
TCD4.1L4	CSVI105B		I4	4.038	140.8	2200	53.2	550	1600	43.2	1	N/A	
TCD4.1L4	CSVI105D		I4	4.038	140.8	2100	52.7	550	1600	43.2	1	N/A	
TCD4.1L4	CSVI105C		I4	4.038	140.8	2000	51.1	550	1600	43.2	1	N/A	
TCD4.1L4	CSVI95A		I4	4.038	127.3	2200	48.1	530	1600	42.1	1	N/A	
TCD4.1L4	CSVI95B		I4	4.038	127.3	2100	47.1	530	1600	42.1	1	N/A	

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					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	Liters	horsepower	rpm	lb/hr	N-m	rpm	lb/hr	-	-	-
TCD4.1L4	C5V195C		I4	4.038	127.3	2000	46.2	530	1600	42.1	1	N/A	
TCD4.1L4	C5V190		I4	4.038	120.6	2300	46.5	500	1600	39.5	1	N/A	
TCD4.1L4	C5V190A		I4	4.038	120.6	2200	45.4	500	1600	39.5	1	N/A	
TCD4.1L4	C5V185L		I4	4.038	113.9	2200	43.9	500	1600	39.5	1	N/A	
TCD4.1L4	C5V180S		I4	4.038	107.2	2400	43.7	440	1600	35.5	1	N/A	
TCD4.1L4	C5V180A		I4	4.038	107.2	2300	42.4	440	1600	35.5	1	N/A	
TCD4.1L4	C5V180B		I4	4.038	107.2	2200	41.3	440	1600	35.5	1	N/A	
TCD4.1L4	C5V180C		I4	4.038	107.2	2100	40.1	440	1600	35.5	1	N/A	
TCD4.1L4	C5V180D		I4	4.038	107.2	2000	39.1	440	1600	35.5	1	N/A	