

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	RDZXL07.8051	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 5th day of September 2023.


Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RDZXL07.8051 EO Number: U-R-013-0735 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	-	-	-
TCD7.8L6	CFVI250		16	7.755	335.2	2200	117.3	1400	1450	95.7	1	N/A	
TCD7.8L6	CFVI250A		16	7.755	335.2	2100	117.5	1400	1450	95.7	1	N/A	
TCD7.8L6	CFVI245		16	7.755	328.5	2000	111.3	1400	1450	95.7	1	N/A	
TCD7.8L6	CFVI240		16	7.755	321.8	1900	105.7	1400	1450	95.7	1	N/A	
TCD7.8L6	CFVI230		16	7.755	308.4	1800	103.7	1400	1450	95.7	1	N/A	
TCD7.8L6	CFVI240A		16	7.755	321.8	2200	112.1	1330	1450	88.9	1	N/A	
TCD7.8L6	CFVI230A		16	7.755	308.4	2000	103.9	1330	1450	88.9	1	N/A	
TCD7.8L6	CFVI210		16	7.755	281.6	1800	90.5	1330	1450	88.9	1	N/A	
TCD7.8L6	CFVI225		16	7.755	301.7	2200	105.5	1260	1450	84.6	1	N/A	
TCD7.8L6	CFVI225A		16	7.755	301.7	2100	102.8	1260	1450	84.6	1	N/A	
TCD7.8L6	CFVI220		16	7.755	295	2000	99.3	1260	1450	84.6	1	N/A	
TCD7.8L6	CFVI215		16	7.755	288.3	1900	96.8	1260	1450	84.6	1	N/A	
TCD7.8L6	CFVI190		16	7.755	254.7	1800	84.5	1260	1450	84.6	1	N/A	
TCD7.8L6	CFVI200		16	7.755	268.2	2200	94.5	1050	1450	70.6	1	N/A	
TCD7.8L6	CFVI190A		16	7.755	254.7	2000	86.6	1050	1450	70.6	1	N/A	
TCD7.8L6	CFVI180		16	7.755	241.3	1900	81.6	1050	1450	70.6	1	N/A	
TCD7.8L6	CFVI170		16	7.755	227.9	1800	75.5	1050	1450	70.6	1	N/A	
TCD7.8L6	CFVI180A		16	7.755	241.3	2200	85.7	1000	1450	68.1	1	N/A	
TCD7.8L6	CFVI175		16	7.755	234.6	2100	81.8	1000	1450	68.1	1	N/A	
TCD7.8L6	CFVI170A		16	7.755	227.9	2000	77.9	1000	1450	68.1	1	N/A	
TCD7.8L6	CFVI165		16	7.755	221.2	1900	76.6	1000	1450	68.1	1	N/A	
TCD7.8L6	CFVI160		16	7.755	214.5	1800	71.9	1000	1450	68.1	1	N/A	
TCD7.8L6	CFVI260		16	7.755	348.6	2200	123.1	1390	1450	94.7	1	N/A	
TCD7.8L6	CFVI170S		16	7.755	227.9	2300	84.3	1304	1450	89.4	1	N/A	
TCD7.8L6	CFVI230C		16	7.755	308.4	1800	103.7	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI250		16	7.755	335.2	2200	117.3	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI250A		16	7.755	335.2	2100	117.5	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI245		16	7.755	328.5	2000	111.3	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI240		16	7.755	321.8	1900	105.7	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI230		16	7.755	308.4	1800	103.7	1400	1450	95.7	1	N/A	
TCD7.8L6	CSVI240A		16	7.755	321.8	2200	112.1	1330	1450	88.9	1	N/A	
TCD7.8L6	CSVI230A		16	7.755	308.4	2000	103.9	1330	1450	88.9	1	N/A	
TCD7.8L6	CSVI210		16	7.755	281.6	1800	90.5	1330	1450	88.9	1	N/A	
TCD7.8L6	CSVI225		16	7.755	301.7	2200	105.5	1260	1450	84.6	1	N/A	
TCD7.8L6	CSVI225A		16	7.755	301.7	2100	102.8	1260	1450	84.6	1	N/A	
TCD7.8L6	CSVI220		16	7.755	295	2000	99.3	1260	1450	84.6	1	N/A	
TCD7.8L6	CSVI215		16	7.755	288.3	1900	96.8	1260	1450	84.6	1	N/A	
TCD7.8L6	CSVI190		16	7.755	254.7	1800	84.5	1260	1450	84.6	1	N/A	
TCD7.8L6	CSVI200		16	7.755	268.2	2200	94.5	1050	1450	70.6	1	N/A	
TCD7.8L6	CSVI190A		16	7.755	254.7	2000	86.6	1050	1450	70.6	1	N/A	
TCD7.8L6	CSVI180		16	7.755	241.3	1900	81.6	1050	1450	70.6	1	N/A	
TCD7.8L6	CSVI170		16	7.755	227.9	1800	75.5	1050	1450	70.6	1	N/A	

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					Power	Speed	Fueling	Torque	Speed	Fueling			
-	-	-	-	Liters	horsepower	rpm	lb/hr	N-m	rpm	lb/hr	-	-	-
TCD7.8L6	CSV1180A		I6	7.755	241.3	2200	85.7	1000	1450	68.1	1	N/A	
TCD7.8L6	CSV1175		I6	7.755	234.6	2100	81.8	1000	1450	68.1	1	N/A	
TCD7.8L6	CSV1170A		I6	7.755	227.9	2000	77.9	1000	1450	68.1	1	N/A	
TCD7.8L6	CSV1165		I6	7.755	221.2	1900	76.6	1000	1450	68.1	1	N/A	
TCD7.8L6	CSV1160		I6	7.755	214.5	1800	71.9	1000	1450	68.1	1	N/A	
TCD7.8L6	CSV1260		I6	7.755	348.6	2200	123.1	1390	1450	94.7	1	N/A	
TCD7.8L6	CSV1170S		I6	7.755	227.9	2300	84.3	1304	1450	89.4	1	N/A	
TCD7.8L6	CSV1230C		I6	7.755	308.4	1800	103.7	1400	1450	95.7	1	N/A	