

EXECUTIVE ORDER U-R-013-0646

New Off-Road Compression-Ignition Engines Page 1 of 1



Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below 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	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)				
2022	NDZXL02.9120	2.925	Diesel	8000				
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
Charge Electr	non Rail Direct Injection e Air Cooler, Exhaust G ronic Control Module, D est, Continuous Trap Ox Catalytic Reduction	as Recirculation, Diesel Oxidation Kidizer, Selective	Tractor, Material Hand	er				

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION STANDARD CATEGORY			I	EXHAUST (g/kw-l	OPACITY (%)				
POWER CLASS			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.02	0.15	1	0.10	0.004			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: That for the listed engine models which include engines from different power categories in the same engine family, the manufacturer is complying with the more stringent set of standards from the 56 ≤ kW < 130 power categories in conformance with the incorporated Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed on this 17th day of June 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-013-0646 Family: NDZXL02.9120 Attachment Last Revised: 2/9/2022

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fu	el	Peak Torque -	Peak Torque -	Peak Torque -	Peak Torque -				
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD	GHG	Special	Notes
TCD2.9L4	C5VT75E		14	2.925	Liters	100.6	horsepower	2200	39.1	lb/hr	295	lb-ft	1600	33.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT70E		14	2.925	Liters	93.9	horsepower	2200	36.6	lb/hr	295	lb-ft	1600	33.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT65E		14	2.925	Liters	87.2	horsepower	2200	34.2	lb/hr	265.5	lb-ft	1600	28.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT75EU		14	2.925	Liters	100.6	horsepower	2200	39.1	lb/hr	295	lb-ft	1600	33.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT70EU		14	2.925	Liters	93.9	horsepower	2200	36.6	lb/hr	295	lb-ft	1600	33.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT65EU		14	2.925	Liters	87.2	horsepower	2200	34.2	lb/hr	265.5	lb-ft	1600	28.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT77EU		14	2.925	Liters	103.2	horsepower	2200	39.7	lb/hr	309.7	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT70EUA		14	2.925	Liters	93.9	horsepower	2200	36.6	lb/hr	302.4	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT63EU		14	2.925	Liters	84.4	horsepower	2200	33.2	lb/hr	295	lb-ft	1600	33.7	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VT58EU		14	2.925	Liters	77.7	horsepower	2200	30.5	lb/hr	278.7	lb-ft	1600	31.2	lb/hr	N/A	N/A	N/A	N/A
TCD2.9L4	C5VI77EV		14	2.925	Liters	103.2	horsepower	2200	39.7	lb/hr	309.7	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
TCD2.9L4	C5VI75EV		14	2.925	Liters	100.6	horsepower	2200	39.1	lb/hr	309.7	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
TCD2.9L4	C5VI70EV		14	2.925	Liters	93.9	horsepower	2200	36.6	lb/hr	302.4	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
TCD2.9L4	C5VI77EU		14	2.925	Liters	103.2	horsepower	2200	39.7	lb/hr	309.7	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
TCD2.9L4	C5VI75EU		14	2.925	Liters	100.6	horsepower	2200	39.1	lb/hr	309.7	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
TCD2.9L4	C5VI70EU		14	2.925	Liters	93.9	horsepower	2200	36.6	lb/hr	302.4	lb-ft	1600	33.9	lb/hr	N/A	N/A	N/A	New code
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