

EXECUTIVE ORDER U-R-013-0645-1

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

CALIFORNIA AIR RESOURCES BOARD

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)					
2021	MDZXL03.6123	3.621	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 st, Continuous Trap Ox Catalytic Reduction	as Recirculation, liesel Oxidation didizer, Selective	Off-Road Crane, Loader, Tractor, Dozer, Pump, Compressor, Material Handler, Small Cranes						

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 POWER CLASS	EMISSION			I	EXHAUST (g/kw-l	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	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	0.001	0.12	-	0.03	0.002			

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 hereby supersedes Executive Order U-R-013-0645 dated February 02, 2021.

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 18th day of June 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-013-0645-1

Family: MDZXL03.6123 Attachment Last Revised: 5/19/2021

					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fuel Peak Torque -			Peak Torque - Peak Torque - Fuel						
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel	Units	OBD	GHG	Special	Notes
TCD3.6L4	C5VI105DU		14	3.621	Liters	140.8	horsepower	2300	110	mm3/stroke	550	N-m	1600	127.0	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI105EU		14	3.621	Liters	140.8	horsepower	2200	113.5	mm3/stroke	550	N-m	1600	127	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI105GU		14	3.621	Liters	140.8	horsepower	2000	121	mm3/stroke	550	N-m	1600	127	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI100DU		14	3.621	Liters	134.1	horsepower	2300	104.5	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI100EU		14	3.621	Liters	134.1	horsepower	2200	107	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI100GU		14	3.621	Liters	134.1	horsepower	2000	115	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI95DU		14	3.621	Liters	127.3	horsepower	2300	99.5	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI95EU		14	3.621	Liters	127.3	horsepower	2200	102.5	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI95GU		14	3.621	Liters	127.3	horsepower	2000	109.5	mm3/stroke	500	N-m	1600	113.8	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI90DU		14	3.621	Liters	120.6	horsepower	2300	94	mm3/stroke	480	N-m	1600	110	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI90EU		14	3.621	Liters	120.6	horsepower	2200	97	mm3/stroke	480	N-m	1600	110	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI90GU		14	3.621	Liters	120.6	horsepower	2000	103	mm3/stroke	480	N-m	1600	110	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85DU		14	3.621	Liters	113.9	horsepower	2300	89	mm3/stroke	460	N-m	1600	104.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85EU		14	3.621	Liters	113.9	horsepower	2200	92	mm3/stroke	460	N-m	1600	104.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85GU		14	3.621	Liters	113.9	horsepower	2000	98	mm3/stroke	460	N-m	1600	104.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85DV		14	3.621	Liters	113.9	horsepower	2300	83.5	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85EV		14	3.621	Liters	113.9	horsepower	2200	86	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI85GV		14	3.621	Liters	113.9	horsepower	2000	92	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI80DU		14	3.621	Liters	107.2	horsepower	2000	84	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI80EU		14	3.621	Liters	107.2	horsepower	2200	86	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI80GU		14	3.621	Liters	107.2	horsepower	2000	92	mm3/stroke	430	N-m	1600	96	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI74DU		14	3.621	Liters	99.7	horsepower	2300	78	mm3/stroke	410	N-m	1600	91.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI74EU		14	3.621	Liters	99.7	horsepower	2200	80	mm3/stroke	410	N-m	1600	91.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI74GU		14	3.621	Liters	99.7	horsepower	2000	85.5	mm3/stroke	410	N-m	1600	91.5	mm3/stroke	N/A	N/A	N/A	N/A
TCD3.6L4	C5VI70EU		14	3.621	Liters	93.8	horsepower	2200	75	mm3/stroke	390	N-m	1600	87	mm3/stroke	N/A	N/A	N/A	N/A