

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	MDZXL02.2110	2.193	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION		
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst		Loader, Tractor, Dozer, Material Handler, Other Industrial Equipment		

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 STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.1	0.2	0.03	--	--	--

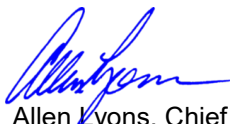
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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 37 ≤ kW < 56 power category 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 22nd day of October 2020.



Allen Lyons, Chief
 Emissions Certification and Compliance Division

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for Diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesel only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm/stroke @ peak torque	8.Fuel Rate: (lbs/hr) @ peak torque	9.Emission Control Device Per SAE J1930
MDZXL02.2110	CFDI55B	TCD2.2L3	74.2@2200	79.2	29.0	206.5@1600	84.5	22.5	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI55A	TCD2.2L3	74.2@2300	77	29.5	221.2@1600	84.5	22.5	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI55	TCD2.2L3	74.2@2600	74.5	32.2	221.2@1600	84.5	22.5	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI50B	TCD2.2L3	67.0@2200	71.4	26.1	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI50A	TCD2.2L3	67.0@2300	69.7	26.7	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI50	TCD2.2L3	67.0@2600	67.6	29.2	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI45B	TCD2.2L3	60.3@2200	64.7	23.7	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI45A	TCD2.2L3	60.3@2300	63.2	24.2	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI45	TCD2.2L3	60.3@2600	61.5	26.6	184.3@1600	75.8	20.2	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI36B	TCD2.2L3	48.8@2200	54.2	19.8	154.8@1600	64	17.0	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI36A	TCD2.2L3	48.8@2300	53	20.3	154.8@1600	64	17.0	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI36	TCD2.2L3	48.8@2600	51.5	22.3	154.8@1600	64	17.0	DDI,TC,CAC,ECM,EGR,DOC
MDZXL02.2110	CFDI45AL	TCD2.2L3	60.3@2300	63.2	24.2	154.8@1550	65	16.7	DDI,TC,CAC,ECM,EGR,DOC