

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	MDZXL02.9020	2.925	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Exhaust Gas Recirculation, Electronic Control Module, Diesel Oxidation Catalyst			Loader, Tractor, Dozer, Material Handler	

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
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	3.7	0.03	0.02	--	--	--

**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).

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 15th 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
MDZXL02.9020	C4DI55C	TD2.9L4	74.2@2300	58.3	29.7	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55,4	TD2.9L4	74.2@2600	56.1	32.4	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55A	TD2.9L4	74.2@2500	56.5	31.4	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55B	TD2.9L4	74.2@2400	57.0	30.3	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI54	TD2.9L4	72.4@2200	58.0	28.3	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50	TD2.9L4	67.0@2600	53.5	30.9	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50A	TD2.9L4	67.0@2500	52.0	28.8	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50C	TD2.9L4	67.0@2300	53.9	27.5	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI49	TD2.9L4	65.7@2200	53.9	26.3	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45	TD2.9L4	60.3@2600	51.0	29.4	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45A	TD2.9L4	60.3@2500	48.0	26.6	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45B	TD2.9L4	60.3@2200	50.7	24.7	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DT54	TD2.9L4	72.4@2200	58.5	28.5	191.7@1600	61	21.6	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DT50	TD2.9L4	67.0@2200	54.5	26.6	191.7@1600	60.5	21.5	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DT45	TD2.9L4	60.3@2200	49.5	24.1	179.9@1800	57	22.7	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45F	TD2.9L4	60.3@2200	50.7	24.7	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45E	TD2.9L4	60.3@2500	48.0	26.6	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI45D	TD2.9L4	60.3@2600	51.0	29.4	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI49A	TD2.9L4	65.7@2200	53.9	26.3	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50G	TD2.9L4	67.0@2300	53.9	27.5	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50E	TD2.9L4	67.0@2500	52.0	28.8	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI50D	TD2.9L4	67.0@2600	53.5	30.9	172.5@1800	56.2	22.4	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI54A	TD2.9L4	72.4@2200	58.0	28.3	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55G	TD2.9L4	74.2@2300	58.3	29.7	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55F	TD2.9L4	74.2@2400	57.0	30.3	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55E	TD2.9L4	74.2@2500	56.5	31.4	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55D	TD2.9L4	74.2@2600	56.1	32.4	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI55K	TD2.9L4	74.2@2600	56.1	32.4	191.7@1800	62.5	24.9	DDI,TC,EGR,ECM,DOC
MDZXL02.9020	C4DI36EU	TD2.9L4	48.8@2200	42.0	20.5	183.6@1350	61.5	18.4	DDI,TC,EGR,ECM,DOC