

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	MCEXL08.9AAR	8.9	Diesel	8,000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Control Module, Electronic Direct Injection, Selective Catalytic Reduction-Urea, Turbocharger, Charge Air Cooler, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, Ammonia Oxidation Catalyst			Generator Set	

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
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	0.22	--	0.00	0.01	--	--	--

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 13th day of October 2020.



Allen Lyons, Chief
 Emissions Certification and Compliance Division

Engine Model Summary Template

Attachment page 1 of 1
EO#: U-R-002-0773
09/30/2020

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 diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
MCEXL08.9AAR	5540:FR96977	L9	405@1500	266.2	141.0	1421@1500	266.2	141.0	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC
MCEXL08.9AAR	5540:FR96977	L9	443@1800	253.2	165.0	1291@1800	253.2	165.0	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC
MCEXL08.9AAR	5540:FR97285	L9	384@1500	219	131	1343.6@1500	219	131	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC
MCEXL08.9AAR	5540:FR97285	L9	405@1800	198	141	1180.7@1800	198	141	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC
MCEXL08.9AAR	5540:FR97286	L9	351@1500	197	116	1227.8@1500	197	116	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC
MCEXL08.9AAR	5540:FR97286	L9	368@1800	178	126	1073.1@1800	178	126	ECM,SCR-U,DOC, PTOX,DDI,AMOX,TC, CAC