

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	MCEXL08.9AAQ	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			Crane, Loaders, Tractor, Dozer, Pump, Compressor, Chipper, Snow Blower and Forklift	

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	0.03	0.19	--	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 2nd day of September 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 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
MCEXL08.9AAQ	4845:FR95382	L9	325@2100	181	122	1207@1100	236	87	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4845:FR95758	L9	330@2000	181	122	1207@1100	236	87	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4845:FR95759	L9	300@2100	171	115	1125@1100	212	79	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4845:FR95760	L9	285@2000	191	110	1207@1100	236	87	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR96115	L9	365@2100	193	137	1151@1400	223	106	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR95763	L9	340@2100	182	129	1126@1400	218	103	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR95764	L9	310@2100	186	113	1126@1400	218	103	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR95765	L9	280@2100	185	100	1086@1400	209	99	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR96116	L9	350@1800	201	122	1151@1400	223	106	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR95768	L9	338@1800	194	118	1126@1400	218	103	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4908:FR95769	L9	325@1800	186	113	1126@1400	218	103	ECM,SCR,DDI,TC, CAC,DOC,PTOX

AMOX - apply to all engine models

Engine Model Summary Template

EO#: U-R-002-0771

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Date: 07/29/2020

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
MCEXL08.9AAQ	4908:FR95770	L9	295@1800	185	100	1086@1400	209	99	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95381	L9	430@2100	231	164	1362@1500	268	135	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95663	L9	415@2100	220	156	1324@1400	256	121	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95761	L9	390@2100	233	142	1324@1400	256	121	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95766	L9	400@1800	233	142	1324@1400	256	121	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95762	L9	365@2100	221	134	1324@1400	256	121	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	4844:FR95767	L9	380@1800	221	134	1324@1400	256	121	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	5573:FR97024	L9	349@1900	191	122.3	1151@1400	221	104.3	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	5573:FR97025	L9	362@1900	197	126.1	1151@1400	221	104.3	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	5573:FR97026	L9	402@1900	213	136.4	1291@1400	240	113.2	ECM,SCR,DDI,TC, CAC,DOC,PTOX
MCEXL08.9AAQ	5573:FR97027	L9	429@1900	229	146.6	1362@1400	264	133.4	ECM,SCR,DDI,TC, CAC,DOC,PTOX

**AMOX - apply to all
engine models**