

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	MKLXL50.0AAI	50.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Electronic Control Module, Turbocharger, Charge Air Cooler, Selective Catalyst Reduction-Urea, Ammonia Oxidation Catalyst			Crane, Loader, Tractor, Dozer, Pump, Compressor, Excavator	

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
ELSE > 560 kW	Tier 4 Final	STD	0.19	3.5	N/A	3.5	0.04	N/A	N/A	N/A
		CERT	0.02	3.2	--	0.1	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 21st day of September 2020.



Allen Lyons, Chief  
 Emissions Certification and Compliance Division

## Engine Model Summary Template

**ATTACHMENT 1 OF 1**

**U-R-005-0503  
07/24/20**

<b>Engine Family</b>	<b>1.Engine Code</b>	<b>2.Engine Model</b>	<b>3.BHP@RPM (SAE Gross)</b>	<b>4.Fuel Rate: mm/stroke @ peak HP (for diesel only)</b>	<b>5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)</b>	<b>6.Torque @ RPM (SEA Gross)</b>	<b>7.Fuel Rate: mm/stroke@peak torque</b>	<b>8.Fuel Rate: (lbs/hr)@peak torque</b>	<b>9.Emission Control Device Per SAE J1930</b>
MKLXL50.0AAI	4261:6740	QSK50	2500@1900	506	855	7081@1500	490	654	DDI, ECM, TC, CAC, SCR-U, AMOX
MKLXL50.0AAI	4261:60184	SSDA16V159E-3	2000@1900	405	684	5805@1500	400	533	DDI, ECM, TC, CAC, SCR-U, AMOX
MKLXL50.0AAI	4261:60216	SSDA16V159E-3	1675@1800	352	564	5590@1500	371	495	DDI, ECM, TC, CAC, SCR-U, AMOX
MKLXL50.0AAI	4749:60454	SDA16V159E-3	1575@1900	328	558	7389@1300	381	442	DDI, ECM, TC, CAC, SCR-U, AMOX
MKLXL50.0AAI	4340:60427	SDA16V159E-3	1600@1800	343	552	5044@1500	353	473	DDI, ECM, TC, CAC, SCR-U, AMOX