

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-14-012;

**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)
2019	KCEXL08.9AAQ	8.9	Diesel	8,000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Periodic Trap Oxidizer, Diesel Oxidation Catalyst, Selective Catalytic Reduction-Urea			Crane, Loader, Tractor, Dozer	

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	0.04	0.21	--	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 at El Monte, California on this 4<sup>th</sup> day of April 2018.

  
 Annette Hebert, Chief  
 Emissions Compliance, Automotive Regulations and Science Division

EO#: U-R-002-0684

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**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: (lb/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lb/hr)@peak torque	9.Emission Control Device Per SAE J1930
CEXL08.9AAQ	4845:FR95382	QSL8.9	325@2100	181	122	1207@1100	236	87	ECM,SCR,DDI,TC, CAC <i>Doc P107</i>
CEXL08.9AAQ	4845:FR95758	QSL8.9	330@2000	181	122	1207@1100	236	87	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4845:FR95759	QSL8.9	300@2100	171	115	1125@1100	212	79	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4845:FR95760	QSL8.9	285@2000	191	110	1207@1100	236	87	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR96115	QSL8.9	385@2100	193	137	1151@1400	223	106	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR95763	QSL8.9	340@2100	182	129	1126@1400	218	103	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR95764	QSL8.9	310@2100	186	113	1126@1400	218	103	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR95765	QSL8.9	280@2100	185	100	1086@1400	209	99	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR96116	QSL8.9	350@1800	201	122	1151@1400	223	106	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR95768	QSL8.9	338@1800	194	118	1126@1400	218	103	ECM,SCR,DDI,TC, CAC
CEXL08.9AAQ	4908:FR95769	QSL8.9	325@1800	186	113	1126@1400	218	103	ECM,SCR,DDI,TC, CAC

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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
KCEXL08.9AAQ	4908:FR95770	QSL8.9	295@1800	185	100	1086@1400	209	99	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95381	QSL8.9	430@2100	231	164	1362@1500	268	135	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95663	QSL8.9	415@2100	220	156	1324@1400	256	121	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95761	QSL8.9	390@2100	233	142	1324@1400	256	121	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95766	QSL8.9	400@1800	233	142	1324@1400	256	121	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95762	QSL8.9	365@2100	221	134	1324@1400	256	121	ECM,SCR,DDI,TC, CAC
KCEXL08.9AAQ	4844:FR95767	QSL8.9	390@1800	221	134	1324@1400	256	121	ECM,SCR,DDI,TC, CAC