Pursuant to the authority vested in the 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)
2016	GCEXL08.9AAK	8.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Selective Catalytic Reduction – Urea, Ammonia Oxidation Catalyst	Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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	0.11	--	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.

This Executive Order hereby supersedes Executive Order U-R-002-0632 dated October 7, 2015.

Executed at El Monte, California on this 24th day of December 2015.

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

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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: (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
GCEXL08.9AAK	3888:FR93875	QSL8.9	380@2100	191	134	1200@1500	231	116	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93756	QSL8.9	380@2100	196	137	1200@1500	230	115	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93993	QSL8.9	350@2100	179	125	1200@1500	230	115	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93994	QSL8.9	340@1800	192	115	1100@1400	206	96	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93996	QSL8.9	333@2100	167	117	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93997	QSL8.9	310@2100	156	109	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93757	QSL8.9	320@2200	155	114	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93995	QSL8.9	300@2200	146	107	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93758	QSL8.9	300@2000	156	104	1050@1400	201	94	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93998	QSL8.9	320@1800	185	111	1050@1400	201	94	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR93999	QSL8.9	275@2200	136	100	895@1500	167	83	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94000	QSL8.9	260@2200	130	95	835@1500	156	78	DDI,ECM,TC, CAC, EGR , DOC

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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: (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
GCEXL08.9AAK	3823:FR93759	QSL8.9	250@2200	125	92	800@1500	149	75	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94001	QSL8.9	230@2200	120	88	675@1500	127	64	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94002	QSL8.9	300@2000	157	105	1160@1400	222	104	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94003	QSL8.9	285@2000	150	100	1070@1400	205	96	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94004	QSL8.9	265@2000	141	94	825@1400	154	72	DDI,ECM,TC, CAC, EGR , DOC
GCEXL08.9AAK	3823:FR94987	QSL8.9	300@2000	191	102	787@1400	105	104	DDI,ECM,TC, CAC, EGR , DOC
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