

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-02-003;

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)
2013	DCEXL04.5AAE	4.5	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			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):

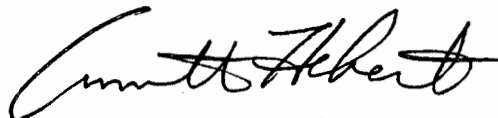
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Interim Tier 4 /ALT NOx	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.02	3.1	--	0.02	0.02	--	--	--

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 at El Monte, California on this 2 day of August 2012.



Annette Hebert, Chief
 Mobile Source Operations Division

U-12-002-0586

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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
EXL04.5AAE	3670:FR93376	QSB4.5	163@2500	102	86	466@1500	130	66	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93377	QSB4.5	130@2500	86	73	457@1500	129	65	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93457	QSB4.5	115@2500	75	63	360@1500	102	52	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93458	QSB4.5	160@2300	111	86	460@1500	129	65	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93459	QSB4.5	130@2300	92	72	377@1500	107	54	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93460	QSB4.5	160@2200	114	84	460@1500	129	65	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93461	QSB4.5	130@2200	96	71	457@1500	129	65	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93462	QSB4.5	121@2200	89	66	347@1500	102	51	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93463	QSB4.5	110@2200	82	61	360@1500	105	53	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93464	QSB4.5	155@2000	115	77	460@1500	129	65	DDI,ECM,TC,CAC,EGR,OC
EXL04.5AAE	3670:FR93465	QSB4.5	140@2000	104	70	457@1500	129	65	DDI,ECM,TC,CAC,EGR,OC