

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	DCEXL11.9AAA	11.9	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, and Periodic Trap Oxidizer			Loader, Tractor, Pump	

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
130 ≤ kW < 560	Interim Tier 4 /ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.03	1.7	--	0.02	0.002	--	--	--

**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-12-002-0593

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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
EXL11.9AAA	3597FR:20323	QSX12	460@2100	252	178	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20324	QSX12	430@2100	240	170	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20325	QSX12	400@2100	221	157	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20326	QSX12	400@2100	221	157	1500@1400	297	140	DDI,ECM,TC,
EXL11.9AAA	3597:FR20320	QSX12	375@2100	205	145	1450@1400	288	136	DDI,ECM,TC,
EXL11.9AAA	3597:FR20327	QSX12	350@2100	189	134	1350@1400	269	127	DDI,ECM,TC,
EXL11.9AAA	3597:FR20328	QSX12	335@2100	182	129	1250@1400	252	119	DDI,ECM,TC,
EXL11.9AAA	3597:FR20343	QSX12	290@2100	164	116	1090@1400	218	103	DDI,ECM,TC,
EXL11.9AAA	3597:FR20337	QSX12	355@2000	195	132	1250@1400	252	119	DDI,ECM,TC,
EXL11.9AAA	3597:FR20344	QSX12	434@1900	252	162	1600@1400	317	149	DDI,ECM,TC,
EXL11.9AAA	3597:FR20336	QSX12	375@1900	213	136	1350@1400	269	127	DDI,ECM,TC,
EXL11.9AAA	3597:FR20329	QSX12	500@1800	299	181	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20330	QSX12	475@1800	285	173	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20331	QSX12	451@1800	268	163	1600@1400	318	150	DDI,ECM,TC,
EXL11.9AAA	3597:FR20332	QSX12	430@1800	256	156	1500@1400	297	140	DDI,ECM,TC,
EXL11.9AAA	3597:FR20333	QSX12	400@1800	237	144	1450@1400	288	136	DDI,ECM,TC,
EXL11.9AAA	3597:FR20334	QSX12	375@1800	220	134	1350@1400	269	127	DDI,ECM,TC,
EXL11.9AAA	3597:FR20335	QSX12	350@1800	206	125	1275@1400	257	121	DDI,ECM,TC,
EXL11.9AAA	3597:FR20386	QSX12	490@1900	293	188	1600@1400	318	150	DDI,ECM,TC,

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Ecm, EGR, VC, PEX