California Environmental Protection Agency AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER U-R-002-0494 New Off-Road Compression-Ignition Engines

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 engine and emission control system 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)
2009	9CEXL050.AAD	50.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module	Generator

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
kW > 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	N/A	N/A	N/A
		CERT	--	--	6.1	1.2	0.08	--	--	--

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 23rd day of December 2008.

Raphael Susnowitz

for Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Template

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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
9CEXL050.AAD	1485:FR4446	QSK19-G	850@1500	569	288	N/A	N/A	N/A	DDI,ECM,TC, CAC
9CEXL050.AAD	1485:FR4446	QSK19-G	897@1800	517	331.6	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	1485:FR4451	QSK19-G	811@1500	556	281	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	1485:FR4451	QSK19-G	850@1800	500	304	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	1485:FR4452	QSK19-G	755@1500	522	264	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	1485:FR4452	QSK19-G	780@1800	457	277.1	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6606	QSK50-G	1980@1500	518	698.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6606	QSK50-G	2220@1800	480	777.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6621	QSK50-G	1878@1500	496	669.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6621	QSK50-G	2090@1800	447	723.9	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6667	QSK50-G	1689@1500	449	605.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6667	QSK50-G	1872@1800	406	657.8	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6692	QSK50-G	2220@1800	480	777.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2771:FR6692	QSK50-G	1980@1500	518	698.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	2912:FR6622	QSK50-DR	1480@1200	480	518	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3138:FR6641	QSK50-G	2220@1800	483	781.1	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3139:FR6642	QSK50-G	2346@1800	509	823.8	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3140:FR6643	QSK50-G	1980@1500	518	698.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3140:FR6643	QSK50-G	2220@1800	480	777.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3140:FR6653	QSK50-G	2120@1500	548	739.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3227:FR6692	QSK50-G	2220@1800	480	777.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3265:FR6697	QSK38-G4	1845@1800	381.98	618.3	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	8575:FR6552	QSK50-G	2650@1800	570	922.1	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3266:FR6698	QSK38-G3	1641@1500	552	558.6	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3267:FR6699	QSK38-G5	1716@1800	486	590.2	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3267:FR6699	QSK38-G5	1641@1500	555	561.6	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3268:FR6700	QSK38-G2	1473@1500	503	509.1	N/A	N/A	N/A	DDI,ECM,TC,
9CEXL050.AAD	3268:FR6701	QSK38-G2	1301@1500	442	448	N/A	N/A	N/A	DDI,ECM,TC,

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Engine Model Summary Template

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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
9CEXL050.AAD	2771:FR6726	QSK50-G4	2220@1800	497	805	N/A	N/A	N/A	DDI,ECM,TC, CAC
9CEXL050.AAD	2771:FR6726	QSK50-G4	1980@1500	517	698	N/A	N/A	N/A	DDI,ECM,TC,CAC