California Environmental Protection Agency AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER U-R-002-0477 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	9CEXL0409AAC	6.7	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Modules	Loader, Tractor, Dozer, Pump and Compressor

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	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
		CERT	--	--	3.4	1.8	0.14	6	2	10

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 27th day of November 2008.

Annette Hebert, Chief
Mobile Source Operations Division

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Engine Model Summary Template

U-R-0002-0477

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
[illegible]	0426,FR91850	QSB6.7	173@1800	105	64	644@1300	136	59.6	DOC, ECM TC CAC
[illegible]	0426,FR91436	QSB6.7	173@2200	89	66	590@1400	122	57.5	ECM TC CAC
[illegible]	0426,FR91645	QSB6.7	170@2000	94	63.5	485@1500	104	52.6	ECM TC CAC
[illegible]	0426,FR91426	QSB6.7	160@2500	85	71.5	540@1500	118	59.5	ECM TC CAC
[illegible]	0426,FR91437	QSB6.7	160@2200	83	61.6	540@1400	117	55.2	ECM TC CAC
[illegible]	0426,FR91994	QSB6.7	167@2000	77	51.7	548@1500	118	59.6	ECM TC CAC
[illegible]	0426,FR91432	QSB6.7	160@2300	83	64.2	540@1500	119	60.3	ECM TC CAC
[illegible]	0426,FR91447	QSB6.7	160@1800	103	62.3	540@1300	117	51.3	ECM TC CAC
[illegible]	0426,FR92219	QSB6.7	155@2300	80	61.8	448@1500	100	50.4	ECM TC CAC
[illegible]	0426,FR92220	QSB6.7	155@2500	77	64.9	449@1500	97	49.3	ECM TC CAC
[illegible]	0426,FR92339	QSB6.7	173@2200	89	66	550@1500	120	56.5	ECM TC CAC
[illegible]	0426,FR92131	QSB6.7	173@1800	103	64	644@1300	136	59.6	ECM TC CAC
[illegible]	0426,FR92324	QSB6.7	150@2200	78	57.9	548@1400	119	56.2	ECM TC CAC
[illegible]	0426,FR92211	QSB6.7	167@2200	88	65.6	485@1400	104	49.3	ECM TC CAC
[illegible]	0426,FR92493	QSB6.7	160@2200	85	63.3	473@1500	97	50.4	ECM TC CAC
[illegible]	0426,FR92376	QSB6.7	170@2200	85	63.3	498@1400	107	50.4	ECM TC CAC
[illegible]	0427,FR91893	QSB6.7	171@2200	88	65.7	563@1400	113	53.3	ECM TC CAC
[illegible]	0427,FR91425	QSB6.7	173@2500	92	77.6	590@1500	132	66.7	ECM TC CAC
[illegible]	0427,FR92374	QSB6.7	173@2200	89	66	590@1400	122	57.5	ECM TC CAC
[illegible]	0427,FR92375	QSB6.7	160@2200	83	61.6	540@1400	117	55.2	ECM TC CAC
[illegible]	0427,FR92124	QSB6.7	173@2100	101	71.4	582@1400	125	59	ECM TC CAC
[illegible]	0427,FR92125	QSB6.7	145@2100	85	60.1	492@1400	105	49.7	ECM TC CAC
[illegible]	8733,FR91626	QSB6.7	155@2000	85	57.2	455@1500	102	51.4	ECM TC CAC
[illegible]	8733,FR91636	QSB6.7	133@2200	71	52.8	430@1450	92	45.1	ECM TC CAC
[illegible]	8733,FR91993	QSB6.7	140@2000	80	53.7	463@1400	98	46.5	ECM TC CAC
[illegible]	0426,FR92970	QSB6.7	145@2200	93	63	432@1400	93	43.7	ECM TC CAC