## **CUMMINS INC.**

EXECUTIVE ORDER U-R-002-0465 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	9CEXL03.3ACB	3.3	Diesel	8000
	FEATURES & EMISSION (		TYPICAL EQUIPMENT APPLIC	ATION
	sel Injection, Turbocharge Engine Control Mo		Loader and Other Industrial Ed	· ·

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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	EMISSION			E	XHAUST (g/kw-ł	nr)		OF	PACITY (%	6)
POWER CLASS	STANDARD CATEGORY		НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		FEL	N/A	N/A	N/A	N/A	0.32	N/A	N/A	N/A
		CERT			4.3	1.3	0.23	4	1	8

**BE IT FURTHER RESOLVED:** That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

**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 270th day of November 2008.

Annette Hebert, Chief

Mobile Source Operations Division

9102-2-9

## Attachment l = 1

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930	EM,TC,CAC,DFI,ECM	EM,TC,CAC,DFI,ECM	EM,TC,CAC,DFI,ECM	EM,TC,CAC,DFI,ECM	EM,TC,CAC,DFI,ECM
	36	34	27	29	34
7.Fuel Rate: mm/stroke@peak torque	86	96	88	93	96
6.Torque @ RPM (SEA Gross)	304@1600	304@1600	275@1400	275@1400	304@1600
ate: 5.Fuel Rate: peak HP (lbs/hr) @ peak HP 6.Torque @ RPM only) (for diesels only) (SEA Gross)	40	36	31	34	36
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	69	74	64	09	74
3.BHP@RPM (SAE Gross)	99@2600	99@2200	80@2200	85@2600	99@2200
2.Engine Model	QSB3.3	QSB3.3	QSB3.3	QSB3.3	QSB3.3
Engine Family 1.Engine Code 2.Engine Model	FR30231	FR30232	FR92055	FR92056	FR93226
Engine Family	9CEXL03.3ACB	9CEXL03.3ACB	9CEXL03.3ACB	9CEXL03.3ACB	9CEXL03.3ACB