California Environmental Protection Agency AIR RESOURCES BOARD	Cummins Inc.	EXECUTIVE ORDER U-R-002-0247 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)
2004	4CEXL0540AAA	8.8	Diesel	8000

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

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 < 225	Tier 2	STD	N/A	N/A	6.6	3.5	0.20	20	15	50
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	--	--	5.7	1.7	0.14	13	12	21

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 25TH day of November 2003.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT Pg 1 of 1

U-R-002-0247

Manufacturer: **Cummins Inc.**

Engine category: **Nonroad CI**

EPA Engine Family: **4CEXL0540AAA**

Mfr Family Name: **A563**

Process Code: **New Submission**

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
8477;FR91106	QSL9-C	325@2000	164	110.6	1150@1400	214	101.0	PCM, TC, CAC
8478;FR91071	QSL9-C	325@2100	167	118.0	1097@1400	205	96.8	PCM, TC, CAC
8478;FR91072	QSL9-C	330@2100	172	121.8	1133@1400	210	99.0	PCM, TC, CAC
8478;FR91073	QSL9-C	300@2100	155	110.1	1075@1400	203	95.7	PCM, TC, CAC
8478;FR91074	QSL9-C	280@2100	147	104.2	1050@1400	198	93.5	PCM, TC, CAC
8478;FR91075	QSL9-C	325@2000	166	112.0	1130@1400	212	100.1	PCM, TC, CAC
8478;FR91076	QSL9-C	280@2000	150	100.9	1000@1400	191	90.2	PCM, TC, CAC
8478;FR91077	QSL9-C	330@1800	191	116.7	1075@1400	203	95.7	PCM, TC, CAC
8478;FR91078	QSL9-C	300@1800	172	104.7	1000@1400	191	90.2	PCM, TC, CAC
8478;FR91079	QSL9-C	280@1800	161	97.7	950@1400	182	85.8	PCM, TC, CAC
8478;FR91111	QSL9-C	342@1800	197	119.5	1130@1400	212	100.0	PCM, TC, CAC
8479;FR91080	QSL9-C	250@2200	121	89.3	775@1400	150	70.8	PCM, TC, CAC