CUMMINS INC.

EXECUTIVE ORDER U-R-002-0268-1 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)	
2005	5CEXL0275AAB	4.5	Diesel	8000	
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION	
Direct Diesel Injection, Turbocharger, Engine Control Module			Loader, Tractor, Dozer, Pump, Compressor		

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		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
75 < kW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
		FEL	N/A	N/A	6.2	N/A	0.23	N/A	N/A	N/A
		CERT			5.5	1.0	0.17	7	2	17

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.

This Executive Order hereby cancels and replaces Executive Order U-R-002-0268 dated October 13, 2004.

Executed at El Monte, California on this _____/ day of May 2005.

Allen Lyons, Chief

Mobile Source Operations Division

Engine Model Summary Form

ATHACIMENT (31041

U-18-02-0268-1

New Submission Process Code:

Mfr Family Name: B852

EPA Engine Family. 5CEXL0275AAB

Engine category:

Cummins Inc. Nonroad Cl

Manufacturer:

8.Fuel Rate: 9.Emission Control tbs/hr)@peak torque Device Per SAE J1930	33.4 DDI,TC,EC * 33.0 DDI,TC,EC	33.4 DDI,TC,EC
7.Fuel Rate: mm/stroke@peak 8 torque (tbs/h	86	66
6.Torque @ RPM (SEA Gross)	305@1500 305@1500	305@1500
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	46.1 44.0	46.1
4.Fuel Rate: mwstroke @ peak HP (for diesel only)	82	82
3.BHP@RPM (SAE Gross)		17.00000
1.Engine Code 2.Engine Model	8401;FR91221 QSB4.5 8402;FR91222 QSB4.5	8653;FR91530 OSB4.5
1.Engine Code	8401;FR91221 8402;FR91222	8653;FR91530