CATERPILLAR, INC.

EXECUTIVE ORDER U-R-001-0227 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 USE			
2003	3CPXL04.4MRW	4.4	Diesel	(hours) 8000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Direct Diesel Injection, Turbocharger and Smoke Puff Limiter			Loader and Industrial Equipment			

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):

		EXHAUST (g/kw-hr)				OPACITY (%)			
CATEGORY		HÇ	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
Tier 2	STD	N/A	N/A	6.6	5.0	0.30	 		
	FEL	N/A	N/A	9.2			 		50
	CERT			8.6			 	7	N/A 26
		STANDARD CATEGORY Tier 2 STD FEL	STANDARD CATEGORY HC Tier 2 STD N/A FEL N/A	STANDARD HC NOx	STANDARD HC NOx NMHC+NOx	STANDARD HC NOx NMHC+NOx CO	STANDARD HC NOx NMHC+NOx CO PM	STANDARD CATEGORY	STANDARD CATEGORY

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 ______ day of August 2003.

Allen Lyons, Chief

Mobile Source Operations Division

ATT ACHMENT 1 OF 1

Engine Model Summary Form

Manufacturer: CATERPILLAR INC.

Engine category: Nonroad Over 50 Hp

EPA Engine Family 3CPXL04.4MRW

Mfr Family Name: N/A

Process Code: New Submission

4-8-001-0227

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	EM, DI, TC, SPL EM, DI, TC, SPL
8.Fuel Rate: (lbs/hr)@peak torque	may change. 33.7 33.7
7.Fuel Rate: mm/stroke@peak torque	these fuel rates 107 107
6.Torque @ RPM (SEA Gross)	ion engine avgs. 335 @ 1400 335 @ 1400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Due to product- i 44.8 44.0
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	alues.
3.BHP@RPM (SAE Gross)	fuel rates are nominal va 110 @ 2200 \$ 2 KW 91 110 @ 2200 89
1.Engine Code 2.Engine Model	Note: Peak HP and Peak torque 1 - Cert Engine 3114 2 3114
1.Engine Code	Note: Peak HP 1 - Cert Engine 2