

CATERPILLAR, INC.

EXECUTIVE ORDER U-R-001-0283 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	5CPXL10.5MRW	10.5	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Direct Die	sel Injection, Turbocharge and Smoke Puff Lir	er, Charge Air Cooler niter	Tractor, Excavator, Motor Grader, Scraper, Pipe Layer, Dump Truck			

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 STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS			нс	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
		FEL	N/A	N/A	9.4	N/A	0.25	N/A	N/A	N/A
		CERT			7.6	2.3	0.19	18	4	32

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 2005.

Mobile Source Operations Division

ATTACHMENT 1 OF 1

CATERPILLAR INC. Manufacturer:

U-R-001-0383

Engine category: Nonroad Over 50 Hp EPA Engine Family. 5CPXL10.5MRW

Mfr Family Name: NA

New Submission Process Code:

8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930	may change. 107.0 87.3 EM, DI, TC, SPL, CAC
1	Due to product- ion engine avgs. these fuel rates 133.0 1328 @ 1200 266 107.9 912 @ 1400 185
6.Torque @ RPM (SEA Gross)	ion engine avgs. 1328 @ 1200 912 @ 1400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Due to product- 133.0 107.9
4.Fuel Rate: mm/stroke @ peak HP ((for diesel only)	nominal values. 220 146
3.BHP@RPM (SAE Gross)	fuel rates are 362 @ 1800 275 @ 2200
4 Engine Code 2 Engine Model	Note: Peak HP and Peak Torque fuel rates are 1 - Cert Engine 3306 362 @ 1800 275 @ 2200
4 Code	Note: Peak HP 1 - Cert Engine