CATERPILLAR, INC.

EXECUTIVE ORDER U-R-001-0312 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 December 15, 1998 Settlement Agreement between the Air Resources Board and the manufacturer, and any modifications thereof to the Settlement Agreement;

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)		
2007	7CPXL18.1ESL	18.1	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Direct Die	sel Injection, Turbocharg and Engine Control	er, Charge Air Cooler Module	Generator			

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	EMISSION		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS			HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
KW > 560	Tier 2	STD	N/A	N/A N/A 6.4 3.5 0.20					N/A	N/A
		CERT			5.8	0.8	0.08			

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 October 2006.

Annette Hebert, Chief

Mobile Source Operations Division

ATTACHMENT 1 OF 1

CATERPILLAR INC. Manufacturer:

Engine category:

EPA Engine Family: 7CPXL18.1ESL

u-R-001-0312

Mfr Family Name: NA

New Submission Process Code:

7.Fuel Rate: 9.Emission Control mm/stroke@peak 8.Fuel Rate: Device Per SAE J1930 torque (lbs/hr)@peak torque	NA EM,DI,TC,ECM,CA	AN S	4	227.9 EM,DI,TC,ECM,CA 503 236.9 EM,DI,TC,ECM,CA
6.Torque @ RPM (SEA Gross)	4 Z	\ <u>\</u>	<u> </u>	2578@1400 2696@1400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Y Z	Z Z	₹ Z	264.7 274.5
4.Fuel Rate: mm/stroke @ peak HP	517	510	479	375
3.BHP@RPM (SAE Gross)	923@1800	923@1800 923@1800	861@1800	765@2100
Fnoine Code 2.Engine Model	C18	C18 C18	C18	2 2 3
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Engine Model Summary Form

Manufacturer: CATERPILLAR INC.

Engine category:

EPA Engine Family: 7CPXL18,1ESL

Mfr Family Name:

Process Code: Running Change - 1

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930						EM, DI, TC, ECM,
8.Fuel Rate: (lbs/hr)@peak torq						N A
7.Fuel Rate: mm/stroke@peak torque						Y V
6.Torque @ RPM (SEA Gross)						ΑN
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	313.1	309.0	309.0	289.7	289.7	309.0
4.Fuel Rate: 5.Fuel Rate: mm/stroke @ peak HP (lbs/hr) @ peak HP (for diesel only) (for diesels only)						510
3.BHP@RPM (SAE Gross)						923@1800
Engine Code 2.Engine Model						C18
1.Engine Code	-	2	က	4	2	ω

Engine Model Summary Form

Manufacturer: CATERPILLAR INC.

Engine category:

EPA Engine Family: 7CPXL18.1ESL

Mfr Family Name:

Process Code: Running Change - 2

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque_Device Per SAE J1930	EM, DI, TC, ECM, EM, DI, TC, ECM, EM, DI, TC, ECM, EM, DI, TC, ECM
8.Fuel Rate: (lbs/hr)@peak torque	4 4 4 4 4 4 4 4
7.Fuel Rate: mm/stroke@peak torque	A A A A
6.Torque @ RPM (SEA Gross)	A A A A
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	289.7 309.0 289.7 309.0
4.Fuel Rate: mm/stroke @ peak HP (((for diesel only)	479 510 479 510
3.BHP@RPM (SAE Gross)	861@1800 923@1800 861@1800 923@1800
1.Engine Code 2.Engine Model	018 018 018
1.Engine Code	e 11 12 27