CATERPILLAR INC.

EXECUTIVE ORDER U-R-001-0383 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)			
2010	ACPXL32.0ESP	32.0	Diesel	8000			
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
Direct Die	sel Injection, Turbocharg and Engine Control I	er, Charge Air Cooler Module	Pump, Industrial Equipment				

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			E	EXHAUST (g/kw-l	OPACITY (%)				
			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
KW > 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT			5.7	0.9	0.06	8	2	14

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 2009.

Annette Hebert, Chief

Mobile Source Operations Division

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Engine Model Summary Template

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ATTACHMENT 1 OF 1

9.Emission Control evice Per SAE J1930	EM, DI, TC, CAC, EC	EM, DI, TC,	EM, DI, TC, 😾							
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-	410.4	217.1	292	292	727	249	294	727	294	248
7.Fuel Rate: mm/stroke@peak torque	436	239	310	310	249	264	312	249	312	263
6.Torque @ RPN (SEA Gross)	4551@1400	2447@1350	3047@1400	3047@1400	2447@1350	2607@1400	3023@1400	2473@1350	3023@1400	2599@1400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	482.8	292.9	370	370	296	306	345	295	338	313
4.Fuel Rate: 5.Fuel Rate: mn/stroke @ peak HP (lbs/hr) @ peak HP 6.Torque @ RPM (for diesels only) (SEA Gross)	399	207	262	262	209	216	244	209	239	221
3.BHP@RPM (SAE Gross)	1350@1800	800@2100	1000@2100	1000@2100	800@2100	861@2100	920@2100	800@2100	920@2100	860@2100
2.Engine Model	C32	C32	C32	C32	C32	C32	C32	C32	C32	C32
Engine Family 1.Engine Code 2.Engine Model	Cert Test	1	2	3	4	5	9	7	8	6
Engine Family	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP	ACPXL32.0ESP