CATERPILLAR INC.

EXECUTIVE ORDER U-R-001-0409 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 engines and emission control systems 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)		
2011	BCPXL09.3HPA	9.3	Diesel	8000		
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION			
Direct Dies Engine	sel Injection, Turbocharge Control Module, Exhaust Periodic Trap Oxid	er, Charge Air Cooler, Gas Recirculation, dizer	Tractor			

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	со	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	N/A	2.0	N/A	N/A	0.02	N/A	N/A	N/A
		CERT	0.02	1.1		0.1	0.002			

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 November 2010.

Annette Hebert, Chief

Mobile Source Operations Division

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque (lb	8.Fuel Rates/hr)@peak	
BCPXL09.3HPA	Cert Test 1	C9.3	361@1900	193	123	1252@1400	249	117	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	Cert Test 2	C9.3	409@1900	226	144	1413@1400	305 ′	144	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	1A - 361/1900	C9.3	361@1900	193	123	1252@1400	249	117	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	2B - 204/2100	C9.3	202@2150	· 111	80	853@1000	175	59	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	3B - 224/2100	C9.3	220@2150	127	92	934@1000	175	59	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	4B - 244/2100	C9.3	239@2150	133	96	1013@1000	183	62	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	5B - 264/2100	C9.3	256@2150	138	100	1094@1000	228	77	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	6B - 302/1800	C9.3	272@1880	164	104	1049@1500	208	105	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	7B - 302/1800	C9.3	272@1880	164	104	1049@1500	203	102	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	8B - 255/2200	C9.3	215@2275	123	94	997@1400	199	94	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	9B - 200/2000	Ċ9.3	162@2080	93	65	994@1300	192	89	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	10B - 249/2150	C9.3	207@2250	115	87	887@1400	166	78	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	11B - 300/2200	C9.3	137@2400	86	69	1010@1400	192	91	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	12B - 325/2200	C9.3	149@2400	91	73	1094@1400	208	98	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	13A - 350/2200	C9.3	160@2400	93	75	1178@1400	216	102	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	14B - 300/2200	C9.3	137@2400	86	69	1010@1400	192	91	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	15B - 325/2200	C9.3	149@2400	91	73	1094@1400	208	98	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	16A - 350/2200	C9.3	160@2400	93	75	1178@1400	216	102	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	17A - 409/1900	C9.3	409@1900	226	144	1413@1400	305	144	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	18B - 321/1900	C9.3	321@1900	175	112	1111@1400	217	102	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	19B - 279/2200	C9.3	239@2300	134	103	1047@1600	208	112	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	20B - 279/2200	C9.3	239@2300	134	103	1047@1600	208	112	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	21B - 272/2200	C9.3	232@2275	134	103	1042@1400	203	97	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	22B - 300/2200	C9.3	135@2400	86	69	1006@1400	192	90	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	23A - 409/1900	C9.3	409@1900	226	144	1410@1400	305	144	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	24B - 204/2100	C9.3	202@2150	111	80	853@1000	175	59	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	25B - 224/2100	C9.3	220@2150	127	92	934@1000	175	59	DFI,TC,ECM,CAC,EGR,PTOX,OC
BCPXL09.3HPA	26B - 350/1880	C9.3	345@1800	199	121	1162@1400	216	102	DFI,TC,ECM,CAC,EGR,PTOX,OC