CATERPILLAR, INC.

EXECUTIVE ORDER U-R-001-0206 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)						
2003	3CPXL07.2HSK	7.2	Diesel	8000						
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
Direct Dies	el Injection, Turbocharg and Engine Control I	er, Charge Air Cooler Module	Tractor, Dozer and 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	EMISSION STANDARD				EXHAUST (g/kw-l	······	OPACITY (%)				
CLASS	CATEGORY		HC N/A	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
75 <u><</u> KW<130	Tier 2	STD		N/A	6.6	5.0	0.30	20	15	50	
		CERT			5.8	2.3	0.24	10	2	16	

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 2002.

Allen Lyons, Chief

Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: CATERPILLAR INC.

Engine category: Nonroad Over 50 Hp

EPA Engine Family: 3CPXL07.2HSK

W-R-001-0206

Mfr Family Name: NA

Process Code: New Submission

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9.Emission Control Device Per SAE J1930		EM, DI, TC, ECM, A	•	EM, DI, TC, ECM,	EM, DI, TC, ECM,	EM, DI, TC, ECM,	EM, DI, TC, ECM	EM, DI, TC, ECM	EM, DI, TC, ECM,	EM, DI, TC, ECN	EM, DI, TC, ECM,	EM, DI, TC, ECM.	DI, TC,	EM, DI, TC, ECM,	EM, DI, TC, ECM,	EM, DI, TC, ECM,	EM, DI, TC, ECM	EM, DI, TC, ECM,	DI, TC,	EM, DI, TC, ECM,
8.Fuel Rate: (lbs/hr)@peak torque	may change.	80.6	•	41.8	46.6	45.5	51.1	64.9	64.9	38.8	40.2	39.7	49.6	58.0	61.2	63.4	51.6	57.5	58.0	39.0
7.Fuel Rate: mm/stroke@peak torque	these fuel rates	178		104	115	113	126	138	138	82	85	91	113	124	130	157	139	122	124	89
6.Torque @ RPM (SEA Gross)	ion engine avgs.	888 @ 1350	•	504 @ 1200	562 @ 1200	543 @ 1200	620 @ 1200	677 @ 1400	677 @ 1400	391 @ 1400	408 @ 1400	433 @ 1300	561 @ 1300	628 @ 1400	656 @ 1400	802 @ 1200	774 @ 1100	624 @ 1400	629 @ 1400	432 @ 1300
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Due to product-	97.6		49.9	55.6	52.9	58.5	65.7	66.3	47.5	48.4	48.9	61.8	55.0	64.6	75.4	59.7	63.1	62.0	51.0
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	nominal values.	131	•	74	83	79	87	68	06	29	89	73	95	81	107	124	118	104	84	73
3.BHP@RPM (SAE Gross)	fuel rates are	260 @ 2100		125 @ 2000	140 @ 2000	135 @ 2000	155@ 2000	153 @ 2200	160 @ 2200	110 @ 2100	115@2100	164 @ 2000	158 @ 2000	140 @ 2000	172 @ 1800	148 @ 1800	123 @ 1500	165 @ 1800	155 @ 2200	134 @ 2100
2.Engine Model	and Peak Torque	3126	•	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126
1.Engine Code	Note: Peak HP	1 - Cert Engine		က	4	വ	9	7	ထ	6	10	Ξ	12	13	15	16	17	18	19	20