California Environmental Protection Agency AIR RESOURCES BOARD	CATERPILLAR INC.	EXECUTIVE ORDER U-R-001-0333 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)
2008	8CPXL58.6T2E	51.8 and 58.6	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Smoke Puff Limiter and Engine Control Module	Pump, Compressor, Generator 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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	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	--	--	5.3	1.6	0.14	19	4	31

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 21 day of December 2007.

Annette Hebert

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Template

ATTACHMENT 1 OF 1

U-R-001-0333

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
8CPXL58.6T2E	1	3512C	2500@1900	689	881	7388@1400	690	650	CAC, EM,DI,TC,ECM, SPL
8CPXL58.6T2E	2	3512C	2350@1900	647	828	6945@1400	653	615	EM,DI,TC,ECM
8CPXL58.6T2E	3	3512C	2250@1900	615	787	6651@1400	626	590	EM,DI,TC,ECM
8CPXL58.6T2E	4	3512C	2150@1900	587	751	6354@1400	602	567	EM,DI,TC,ECM
8CPXL58.6T2E	5	3512C	2250@1900	613	784	6314@1400	599	564	EM,DI,TC,ECM
8CPXL58.6T2E	6	3512C	2150@1900	587	751	6034@1400	575	542	EM,DI,TC,ECM
8CPXL58.6T2E	7	3512C	1250@1200	519	419	5876@900	551	334	EM,DI,TC,ECM
8CPXL58.6T2E	8	3512C	1476@1200	613	495	6935@900	649	393	EM,DI,TC,ECM
8CPXL58.6T2E	9	3512C	1476@1200	602	486	6455@1200	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	10	3512C	2206@1800	606	734	6431@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	11	3512C	2008@1800	557	674	5855@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	12	3512C	1825@1800	515	624	5320@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	13	3512C	2206@1800	606	734	6431@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	14	3512C	2008@1800	557	674	5855@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	15	3512C	1825@1800	515	624	5320@1800	NA	NA	EM,DI,TC,ECM
8CPXL58.6T2E	16	3512C	1502@1800	432	523	5255@1500	515	520	EM,DI,TC,ECM

Engine Model Summary Template

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	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
8CPXL58.6T2E	17	3512C	1450@1750	432.0	509	5191.5@1300	508	445	EM,DI,TC,ECM
8CPXL58.6T2E	18	3512C	1380@1750	412.6	486	4941@1300	483	422	EM,DI,TC,ECM