California Environmental Protection Agency AIR RESOURCES BOARD	CATERPILLAR, INC.	EXECUTIVE ORDER U-R-001-0293 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)
2006	6CPXL32.0ESK	32.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control module	Generator

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 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	N/A	N/A	N/A
		CERT	--	--	5.4	1.6	0.13	--	--	--

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 21st day of December 2005.

Raphael Susnowitz

for Allen Lyons, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model

U-R-001-0293

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **6CPXL32.0ESK**

Mfr Family Name: **NA**

Process Code: **New Submission**

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
1	C32	1505@2100	376	530.8	4422@1400	418	393.4	EM,DI,TC,ECM,CAC
2	C32	1505@2100	376	530.8	4422@1400	418	393.4	EM,DI,TC,ECM,CAC
3	C32	1330@1500	469	473.0	NA	NA	NA	EM, DI, TC, ECM
5	C32	1502@1800	418	506.3	NA	NA	NA	EM, DI, TC, ECM,
6	C32	1357@1800	374	453.1	NA	NA	NA	EM, DI, TC, ECM,
8	C32	1357@1800	374	453.1	NA	NA	NA	EM, DI, TC, ECM,
9	C32	1508@1800	418	506.3	NA	NA	NA	EM, DI, TC, ECM,

Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **6CPXL32.0ESK**

Mfr Family Name:

Process Code: **Running Change - 1**

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
2		1500@2100						
9		1502@1800						
10	C32	1016@1750	294	345.9	3635@1300	349	305.4	EM, DI, TC, ECM,
11	C32	1257@1800	356	431.2	NA	NA	NA	EM, DI, TC, ECM,
12	C32	1126@1800	324	392.1	NA	NA	NA	EM, DI, TC, ECM,
13	C32	970@1750	277	325.8	3461@1300	335	292.9	EM, DI, TC, ECM,
14	C32	951@1800	266	322.7	3205@1400	298	280.3	EM, DI, TC, ECM,
15	C32	951@2100	238	336.9	3205@1400	298	280.3	EM, DI, TC, ECM,
16	C32	1125@1800	319	386.1	3792@1400	365	344.1	EM, DI, TC, ECM,
17	C32	1125@2100	279	393.6	3792@1400	365	344.1	EM, DI, TC, ECM,
18	C32	1200@1800	336	407.3	4045@1400	390	367.2	EM, DI, TC, ECM,
19	C32	1200@2100	301	425.9	4045@1400	390	367.2	EM, DI, TC, ECM,
20	C32	1350@1800	384	464.7	4552@1400	438	412.4	EM, DI, TC, ECM,
21	C32	1350@2100	340	480.6	4552@1400	438	412.4	EM, DI, TC, ECM,

Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **6CPXL32.0ESK**

Mfr Family Name:

Process Code: **Running Change - 2**

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
22	C32	1016@1750	294	345.9	3635@1300	349	305.4	EM, DI, TC, ECM,

Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **6CPXL32.0ESK - 3**

Mfr Family Name:

Process Code: **Running Change**

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
24	C32	1502@1800	418	506.3	NA	NA	NA	EM, DI, TC, ECM,
25	C32	1330@1500	469	473.0	NA	NA	NA	EM, DI, TC, ECM,
26	C32	1502@1800	418	506.3	NA	NA	NA	EM, DI, TC, ECM,
27	C32	1330@1500	469	473.0	NA	NA	NA	EM, DI, TC, ECM,
28	C32	1257@1800	356	431.2	NA	NA	NA	EM, DI, TC, ECM,
29	C32	1110@1500	408	412.2	NA	NA	NA	EM, DI, TC, ECM,

Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **6CPXL32.0ESK**

Mfr Family Name:

Process Code: **Running Change - 4**

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
30	C32	923@1800	257	311.4	3554@1300	345	302.0	EM, DI, TC, ECM,
31	C32	800@2100	207	292.9	2447@1350	239	217.1	EM, DI, TC, ECM,