



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 December 15, 1998 Settlement Agreement between the Air Resources Board and the manufacturer, and any modifications thereof to the Settlement Agreement;

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)
2005	5CPXL12.5ESK	12.5	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control Module			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
225 ≤ KW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.6	2.2	0.10	8	3	15

**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 13<sup>TH</sup> day of July 2004.

Allen Lyons, Chief  
Mobile Source Operations Division

# Engine Model Summary Form

ATTACHMENT 1 OF 1

U-R-001-0260

Manufacturer: **CATERPILLAR INC.**  
 Engine category: **Nonroad Over 50 Hp**  
 EPA Engine Family: **5CPXL12.5ESK**  
 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 Cert Engine	C13	fuel rates are 520@1800	nominal values. 301	Due to product- ion engine avgs. 182.1	1625@1400	these fuel rates 323	may change. 152.0	EM,DI,TC,ECM,CAC EM,DI,TC,ECM,CAC

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

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	C13	520@1800	301	182.0	1625@1400	323	152.0	EM,DI,TC,ECM,CA
3	C13	520@1800	301	182.0	1625@1400	323	152.0	EM,DI,TC,ECM,CA
5	C13	425@2100	218	154.1	1510@1400	299	140.9	EM,DI,TC,ECM,CA
6	C13	425@2100	218	154.1	1510@1400	299	140.9	EM,DI,TC,ECM,CA
7	C13	345@1800	200	116.8	1207@1400	240	112.6	EM,DI,TC,ECM,CA
8	C13	371@1800	215	127.3	1300@1400	253	121.6	EM,DI,TC,ECM,CA
9	C13	311@1800	189	114.3	1059@1400	216	101.7	EM,DI,TC,ECM,CA
10	C13	440@2100	226	160.0	1483@1400	290	137.0	EM,DI,TC,ECM,CA
11	C13	385@2100	194	137.0	1297@1400	249	117.0	EM,DI,TC,ECM,CA
12	C13	415@2100	212	150.0	1398@1400	272	128.0	EM,DI,TC,ECM,CA

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

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
4	C13	463@2100	235	166.0	1565@1575	308	163.0	EM,DI,TC,ECM,CA

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

Mfr Family Name:

Process Code: **Running Change - 3**

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
14	C13	400@1200	200	142	1336@1400	258	142	EM,DI,TC,ECM,CA

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

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
15	C13	385@2100	193	136.6	1297@1400	253	119.2	EM,DI,TC,ECM,CA

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

Mfr Family Name:

Process Code: **Running Change - 5**

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					1634 @ 1400	314	148.0	
3		520 @ 2100	266	188.0	1634 @ 1400	314	148.0	
16	C13	475 @ 2100	246	173.0	1545 @ 1400	298	140.0	EM, DI, TC, ECM,

# Engine Model Summary Form

Manufacturer: **CATERPILLAR INC.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **5CPXL12.5ESK**

Mfr Family Name:

Process Code: **Running Change - 6**

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
17	C13	463@2100	243	172.0	1586@1400	317	150.0	EM, DI, TC, ECM,
18	C13	304@2000	161	108.0	1148@1000	221	74.0	EM, DI, TC, ECM,
19	C13	310@2000	164	110.0	1167@1000	221	75.0	EM, DI, TC, ECM,
20	C13	314@2000	166	112.0	1187@1000	229	77.0	EM, DI, TC, ECM,
21	C13	319@2000	168	113.0	1207@1000	230	77.0	EM, DI, TC, ECM,
22	C13	325@2000	168	113.0	1226@1000	235	79.0	EM, DI, TC, ECM,
23	C13	330@2000	170	114.0	1245@1000	238	80.0	EM, DI, TC, ECM,
24	C13	334@2000	174	117.0	1265@1000	242	81.0	EM, DI, TC, ECM,
25	C13	339@2000	175	118.0	1285@1000	245	82.0	EM, DI, TC, ECM,