

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-141

Relating to Certification of New Heavy-Duty Engines and Vehicles

CATERPILLAR, INC.

Pursuant to the authority vested in the Air Resources Board at Sections 43100, 43101, and 43102 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and Caterpillar, Inc. and any modifications to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following engine and emission control system produced by the manufacturer are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Model Year: 2001

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
1CPXH0893ERK	14.6	893	Turbocharger Charge Air Cooler Electronic Control Module Direct Diesel Injection

Engine models and codes are listed on attachments.

BE IT ORDERED AND RESOLVED: That the following are the certification exhaust emission standards (Title 13, California Code of Regulations, Section 1956.8) and certification exhaust emission values for this engine family in grams per brake horsepower-hour under the Federal Test Procedure ("FTP"):

	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
Standard	1.3	15.5	4.0	0.10
Certification	0.2	1.4	3.7	0.08

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to the emission standards, including a "Not-to-Exceed" nitrogen oxides emission standard of 7.0 grams per brake horsepower-hour, under the EURO III tests in the Settlement Agreement. The following are the certification exhaust emission standards and certification exhaust emission values for this engine family in grams per brake horsepower-hour under the EURO III tests:

	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
Standard	1.3	15.5	6.0	0.10
EURO III	0.1	0.4	5.3	0.03

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2035 et seq.).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

1. The Settlement Agreement is in effect.
2. Caterpillar, Inc. is in compliance with all applicable certification requirements of the Settlement Agreement.

Engines certified under this Executive Order must conform to all applicable California emission regulations and to all applicable terms and conditions of the Settlement Agreement.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 21st day of December 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: CATERPILLAR INC.
Engine category: On-highway HDDE
EPA Engine Family: 1CPXH0893ERK
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
Cert Eng '97	C-15	550 @ 1800	294	177.9	1850 @ 1200	339	136.8	EM, DI, TC, ECM,
1	C-15	550 @ 1800	319	193.2	1850 @ 1200	334	134.8	EM, DI, TC, ECM,
2	C-15	550 @ 1800	319	193.2	1850 @ 1200	334	134.8	EM, DI, TC, ECM,
3	C-15	515 @ 1800	304	183.9	1850 @ 1200	339	136.9	EM, DI, TC, ECM,
4	C-15	515 @ 1800	304	183.9	1750 @ 1200	320	129.2	EM, DI, TC, ECM,
5	C-15	515 @ 1800	304	183.9	1850 @ 1200	339	136.9	EM, DI, TC, ECM,
6	C-15	515 @ 1800	304	183.9	1850 @ 1200	339	136.9	EM, DI, TC, ECM,
7	C-15	515 @ 1800	304	183.9	1750 @ 1200	320	129.2	EM, DI, TC, ECM,
8	C-15	515 @ 1800	304	183.9	1750 @ 1200	320	129.2	EM, DI, TC, ECM,
9	C-15	515 @ 1800	304	183.9	1650 @ 1200	301	121.6	EM, DI, TC, ECM,
10	C-15	515 @ 1800	301	182.1	1850 @ 1200	336	135.5	EM, DI, TC, ECM,
11	C-15	515 @ 1800	301	182.1	1750 @ 1200	317	128.0	EM, DI, TC, ECM,
12	C-15	515 @ 1800	301	182.1	1850 @ 1200	336	135.5	EM, DI, TC, ECM,
13	C-15	515 @ 1800	301	182.1	1850 @ 1200	336	135.5	EM, DI, TC, ECM,
14	C-15	515 @ 1800	301	182.1	1750 @ 1200	317	128.0	EM, DI, TC, ECM,
15	C-15	515 @ 1800	301	182.1	1750 @ 1200	317	128.0	EM, DI, TC, ECM,
16	C-15	515 @ 1800	301	182.1	1650 @ 1200	298	120.4	EM, DI, TC, ECM,
17	C-15	500 @ 1800	294	178.2	1850 @ 1200	339	136.9	EM, DI, TC, ECM,
18	C-15	490 @ 1800	290	175.5	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
19	C-15	490 @ 1800	290	175.5	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
20	C-15	490 @ 1800	290	175.5	1750 @ 1200	320	129.1	EM, DI, TC, ECM,
21	C-15	490 @ 1800	290	175.5	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
22	C-15	490 @ 1800	287	173.8	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
23	C-15	490 @ 1800	287	173.8	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
24	C-15	490 @ 1800	287	173.8	1750 @ 1200	317	127.8	EM, DI, TC, ECM,
25	C-15	490 @ 1800	287	173.8	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
26	C-15	475 @ 1800	282	170.9	1750 @ 1200	320	129.1	EM, DI, TC, ECM,
27	C-15	475 @ 1800	282	170.9	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
28	C-15	475 @ 1800	279	169.2	1750 @ 1200	317	127.8	EM, DI, TC, ECM,
29	C-15	475 @ 1800	279	169.2	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
30	C-15	470 @ 1800	279	169.1	1750 @ 1200	320	129.2	EM, DI, TC, ECM,
31	C-15	470 @ 1800	279	169.1	1550 @ 1200	284	114.7	EM, DI, TC, ECM,

31	C-15	470 @ 1800	279	16	1550 @ 1200	284	114.7	EM, TC, ECM,
32	C-15	470 @ 1800	279	169.1	1550 @ 1200	284	114.7	EM, DI, TC, ECM,
33	C-15	470 @ 1800	279	169.1	1650 @ 1200	301	121.6	EM, DI, TC, ECM,
34	C-15	470 @ 1800	277	167.5	1750 @ 1200	317	127.9	EM, DI, TC, ECM,
35	C-15	470 @ 1800	277	167.5	1550 @ 1200	281	113.5	EM, DI, TC, ECM,
36	C-15	470 @ 1800	277	167.5	1650 @ 1200	298	120.4	EM, DI, TC, ECM,
37	C-15	470 @ 1800	277	167.5	1550 @ 1200	281	113.5	EM, DI, TC, ECM,
38	C-15	455 @ 1800	272	164.4	1650 @ 1200	301	121.6	EM, DI, TC, ECM,
39	C-15	450 @ 1800	270	163.7	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
40	C-15	450 @ 1800	270	163.7	1550 @ 1200	283	114.4	EM, DI, TC, ECM,
41	C-15	455 @ 1800	269	162.8	1650 @ 1200	298	120.4	EM, DI, TC, ECM,
42	C-15	450 @ 1800	266	162.0	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
43	C-15	450 @ 1800	266	162.0	1550 @ 1200	280	113.2	EM, DI, TC, ECM,
44	C-15	435 @ 1800	261	158.3	1650 @ 1200	301	121.7	EM, DI, TC, ECM,
45	C-15	435 @ 1800	261	158.3	1550 @ 1200	283	114.4	EM, DI, TC, ECM,
46	C-15	435 @ 1800	259	156.8	1650 @ 1200	299	120.5	EM, DI, TC, ECM,
47	C-15	435 @ 1800	259	156.8	1550 @ 1200	280	113.2	EM, DI, TC, ECM,
48	C-15	450 @ 1800	268	162.0	1550 @ 1200	280	113.2	EM, DI, TC, ECM,
49	C-15	515 @ 1800	301	182.1	1650 @ 1200	298	120.4	EM, DI, TC, ECM,

Engine Model Summary Form

Manufacturer: CATERPILLAR INC.
Engine category:
EPA Engine Family: 1CPXH0893ERK
Mfr Family Name:
Process Code: New Sub - continued

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
50	C-15	435 @ 1800	247	149.5	1850 @ 1200	292	118.0	EM, DI, TC ECM,
51	C-15	435 @ 1800	257	149.5	1550 @ 1200	275	111.0	EM, DI, TC, ECM,
52	C-15	403 @ 1800	215	129.9	1550 @ 1200	277	111.8	EM, DI, TC, ECM,
53	C-15	403 @ 1800	215	129.9	1450 @ 1200	260	105.0	EM, DI, TC ECM,
54	C-15	403 @ 1800	215	129.9	1450 @ 1200	260	105.0	EM, DI, TC ECM,
55	C-15	515 @ 1800	301	182.1	1650 @ 1200	298	120.4	EM, DI, TC ECM,
56	C-15	375 @ 1800	213	129.1	1450 @ 1200	259	104.6	EM, DI, TC ECM,
57	C-15	375 @ 1800	213	129.1	1450 @ 1200	259	104.6	EM, DI, TC ECM,
58	C-15	450 @ 1800	268	162.0	1550 @ 1200	280	113.2	EM, DI, TC ECM,
59	C-15	375 @ 1800	213	129.1	1550 @ 1200	276	111.5	EM, DI, TC ECM,
60	C-15	375 @ 1800	213	129.1	1450 @ 1200	259	104.6	EM, DI, TC ECM,
61	C-15	375 @ 1800	213	129.1	1450 @ 1200	259	104.6	EM, DI, TC ECM,
62	C-15	380 @ 1800	204	123.4	1450 @ 1200	258	104.2	EM, DI, TC ECM,
63	C-15	380 @ 1800	204	123.4	1350 @ 1200	243	97.9	EM, DI, TC ECM,
64	C-15	380 @ 1800	204	123.4	1350 @ 1200	243	97.9	EM, DI, TC ECM,
65	C-15	355 @ 1800	202	122.4	1450 @ 1200	259	104.5	EM, DI, TC ECM,
66	C-15	355 @ 1800	202	122.4	1350 @ 1200	243	97.9	EM, DI, TC ECM,
67	C-15	355 @ 1800	202	122.4	1350 @ 1200	243	97.9	EM, DI, TC ECM,
68	C-15	500 @ 1800	291	176.5	1850 @ 1200	338	135.6	EM, DI, TC ECM,
69	C-15	450 @ 1800	268	162	1550 @ 1200	280	113.2	EM, DI, TC ECM,
70	C-15	515 @ 1800	301	182.1	1650 @ 1200	298	120.4	EM, DI, TC ECM,
71	C-15	515 @ 1800	301	182.1	1650 @ 1200	298	120.4	EM, DI, TC ECM,
72	C-15	450 @ 1800	268	162	1550 @ 1200	280	113.2	EM, DI, TC ECM,