State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-119-1

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

CATERPILLAR, INC

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 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-45-9;

IT IS ORDERED AND RESOLVED: That the following 1998 model-year Caterpillar, Inc. diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

Engine Family		Displacement (Cubic Inches)	Exhaust Emission Control Systems and Special Features		
WCPXH0442HSK	7.1	(442)	Turbocharger Charge Air Cooler Engine Control Module		

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour:

Total	Carbon	Nitrogen	<u>Particulates</u>		
<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>			
1.3	15.5	4.0	0.10		

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

Total	Carbon	Nitrogen	<u>Particulates</u>
<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>	
0.9	1.4	3.9	0.08

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, Section 2035 et seq.).

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

- 1. Any engine which employs a defeat device shall not be covered by this Executive Order.
- 2. Within 120 days following the issuance of Executive Order A-13-119, the manufacturer must show cause, to the satisfaction of the Executive Officer or his designee, that the strategy for fuel injection timing, including timing during the fuel economy mode, is not a defeat device.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

R. B. Summerfield, Chief

Mobile Source Operations Division

9/24/97

ED: A-13-119-1

Manufacturer: CATERPILLAR INC.

EPA Engine Family: WCPXH0442HSK

1.Engine Code

Manufacturer Family Name:

Process Code: New Submission

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4.Fuel Rate:

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930 7.Fuel Rate: mm/stroke@peak torque 6.Torque @ RPM (SEA Gross) S.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) mm/stroke @ peak HP (for diesel only) 3.BHP@RPM (SAE Gross) 2.Engine Model

		EM, DI, TC, ECM,	EM, DICPC, ECM,	EM, DIÇAC, ECM,	EM, DICAC, ECM,	EM, DICPE, ECM,	EM, DICAC, ECM,	EM, DICTIC, ECM,	EM, DICTIC, ECM,	EM, DICAC, ECM,	EM, DIÇPC, ECM,	CAC
	may change.	8.97	9.77	71.8	77.6	71.8	71.8	59.2	9.65	54.9	48.0	
	these fuel rates	158	160	148	160	148	148	122	123	113	66	
· 1-	.의	860 @ 1440	860 @ 1440	800 @ 1440	860 @ 1440	800 @ 1440	800 @ 1440	660 @ 1440	660 @ 1440	605 @ 1440	520 @ 1440	
	Due to product-	123.1	104.7	104.7	95.1	95.1	86.1	86.1	79.9	72.9	72.9	
	nominal values.	152	141	141	129	126	116	116	108	66	66	
	fuel rates are	330 @ 2400	300 @ 2200	300 @ 2200	275 @ 2200	275 @ 2200	250 @ 2200	250 @ 2200	230 @ 2200	210 @ 2200	210 @ 2200	
	Vote: Peak HP and Peak Torque	3126	3126	3126	3126	3126	3126	3126	3126	3126	3126	
	Note: Peak HP	1 - Cert. Engine	2	3	4	5	9	7	8	6	10	