

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-138

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> | |
| 1CPXH0442HRK | 7.2 | 442 | 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 | 0.6 | 1.2 | 3.8 | 0.09 |

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 5.0 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 | 4.0 | 0.10 |
| EURO III | 0.1 | 0.6 | 3.9 | 0.06 |

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

ATTACHMENT

Engine Model Summary Form

A-13-138

Manufacturer: **Caterpillar Inc.**
 Engine category: **On-highway MHDD**
 EPA Engine Family: **1CPXH0442HRK**
 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 '98 | 3126 | 330 @ 2400 | 149 | 120.2 | 860 @ 1440 | 168 | 81.5 | CAC DI, TC, ECM, |
| 1 | 3126 | 330 @ 2400 | 157 | 126.7 | 860 @ 1440 | 169 | 81.9 | CAC D Q AC, ECM, |
| 2 | 3126 | 300 @ 2200 | 151 | 111.8 | 860 @ 1440 | 170 | 82.2 | CACDI Q AC, ECM, |
| 3 | 3126 | 300 @ 2200 | 150 | 111.2 | 800 @ 1440 | 157 | 76.0 | CACDI Q AC, ECM, |
| 4 | 3126 | 275 @ 2200 | 137 | 101.1 | 860 @ 1440 | 171 | 82.6 | CAC D Q AC, ECM, |
| 5 | 3126 | 275 @ 2200 | 137 | 101.1 | 800 @ 1440 | 158 | 76.7 | CAC D Q AC, ECM, |
| 6 | 3126 | 250 @ 2200 | 128 | 94.8 | 800 @ 1440 | 164 | 79.4 | CACDI Q AC, ECM, |
| 7 | 3126 | 250 @ 2200 | 126 | 93.0 | 660 @ 1440 | 131 | 63.5 | CAC D Q AC, ECM, |
| 8 | 3126 | 230 @ 2200 | 115 | 85.1 | 660 @ 1440 | 130 | 62.8 | CAC D Q AC, ECM, |
| 9 | 3126 | 210 @ 2200 | 99 | 73.6 | 605 @ 1400 | 115 | 55.8 | CAC D Q AC, ECM, |
| 10 | 3126 | 210 @ 2200 | 101 | 75.1 | 520 @ 1440 | 101 | 49.0 | CACDI, TC, ECM, |
| 11 | 3126 | 216 @ 2400 | 98 | 79.0 | 520 @ 1440 | 100 | 48.3 | CAC D Q AC, ECM, |
| 12 | 3126 | 207 @ 2300 | 96 | 74.2 | 520 @ 1440 | 101 | 49.1 | CAC D Q AC, ECM, |
| 13 | 3126 | 175 @ 2200 | 86 | 63.3 | 420 @ 1440 | 82 | 39.8 | CACDI Q AC, ECM, CAC |

DI, TC, CAC, ECM