

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-144

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 **conditionally** certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Model Year: 2002

Fuel Type: Diesel with a maximum sulfur content of 15 parts per million (ppm)

| <u>Engine Family</u> | <u>Displacement</u> |                     | <u>Exhaust Emission Control Systems and Special Features</u>  |
|----------------------|---------------------|---------------------|---|
|                      | <u>Liters</u>       | <u>Cubic Inches</u> |   |
| 2CPXH0442H3K         | 7.2                 | 442                 | Turbocharger<br>Charge Air Cooler<br>Engine Control Module<br>Direct Diesel Injection<br>Continuous Trap Oxidation<br>Catalytic Converter |

Engine models and codes are listed on attachments.

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

|               | <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulate Matter</u> |
|---------------|---------------------------|------------------------|------------------------|---------------------------|
| Standards     | 1.3                       | 15.5                   | 4.0                    | 0.10                      |
| FEL           | n/a                       | n/a                    | 3.0                    | 0.01                      |
| Certification | 0.4                       | 1.4                    | 3.0                    | 0.01                      |

BE IT FURTHER RESOLVED: That the above-described certification is subject to the following terms, limitations and conditions:

- (i) The above family emission limits (FELs) are the maximum emission levels declared by the manufacturer to represent the emission standards applicable to this engine family that must be applied for determining compliance of any model within this family.
- (ii) These FELs shall not be used to generate any averaging, banking and trading emission credits.
- (iii) These FELs shall not be amended by the manufacturer to values that exceed 3.0 g/bhp-hr nitrogen oxides or 0.01 g/bhp-hr particulate matter.

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to emission standards under the EURO III tests in the Settlement Agreement, including a "Not-to-Exceed" nitrogen oxides emission standard of 3.75 g/bhp-hr. The following are the emission standards and certification levels, in g/bhp-hr, under the EURO III tests:

|               | Total<br><u>Hydrocarbons</u> | Carbon<br><u>Monoxide</u> | <u>Nitrogen Oxides</u> | Particulate<br><u>Matter</u> |
|---------------|------------------------------|---------------------------|------------------------|------------------------------|
| Standards     | 1.3                          | 15.5                      | 3.0                    | 0.01                         |
| Certification | 0.1                          | 0.7                       | 2.9                    | 0.004                        |

BE IT FURTHER RESOLVED: That the above-described certification is also subject to the following terms, limitations and conditions:

- (i) The manufacturer must take appropriate measures to ensure that all vehicles equipped with engines covered by this Executive Order bear appropriate labels in the vehicle fuel tank filler area and the driver's dashboard-area disclosing the low sulfur (15 ppm maximum) fuel requirement.
- (ii) The manufacturer must take appropriate measures to ensure that all vehicles equipped with engines covered by this Executive Order are sold only to fleets with central fueling capability for low sulfur diesel fuel.
- (iii) The manufacturer must require these fleet owners to sign agreements which require the fleet owner to use appropriate low sulfur diesel fuel and stipulate that the fleet owner is at risk of voiding the warranty for use of improper diesel fuel.

BE IT FURTHER RESOLVED: In the event that the engine manufacturer fails to ensure the use of, or the owners or operators of vehicles on which the engines in this family are installed fail to use, the specified low-sulfur fuel, this Executive Order can be revoked by the Air Resources Board. All engines sold under the revoked Executive Order shall be deemed uncertified.


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 listed engine models comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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.

Executed at El Monte, California this 25<sup>TH</sup> day of April 2001.

 FOR  
R. B. Summerfield, Chief  
Mobile Source Operations Division