

20

State of California
AIR RESOURCES BOARD
EXECUTIVE ORDER A-21-288

Relating to Certification of New Medium-Duty Motor Vehicle Engines

CUMMINS ENGINE COMPANY, 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;

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and the Cummins Engine Company, Inc. and any modifications thereof to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following diesel-cycle engines produced by the manufacturer are certified for medium-duty vehicles with a manufacturer's gross vehicle weight rating (GVWR) from 8,501 to 14,000 pounds:

Model-Year: 2001

Fuel Type: Diesel

| <u>Engine Family</u> | <u>Engine Displacement Liters (Cubic Inches)</u> | <u>Exhaust Emission Control Systems and Special Features</u> |
|------------------------|--|--|
| 1CEXA0359BAZ (403Z) | 5.9 (359) | Turbocharger Charge Air Cooler Powertrain Control Module |

Engine models and codes are listed on attachments.

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

| | <u>Non-Methane Hydrocarbons plus Nitrogen Oxides</u> | <u>Carbon Monoxide</u> | <u>Particulate Matter</u> |
|-------|--|------------------------|---------------------------|
| "FTP" | 3.9 | 14.4 | 0.10 |

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to the following emission standards, in grams per brake horsepower-hour, under the EURO III tests in the Settlement Agreement, and a "Not-to-Exceed" nitrogen oxides emission standard of 5.0 grams per brake horsepower-hour:

| | <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Particulate Matter</u> |
|------------|-------------------------------|------------------------|------------------------|---------------------------|
| "EURO III" | 1.3 | 15.5 | 4.0 | 0.10 |

BE IT FURTHER RESOLVED: That the following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

| | <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>NMHC + NOx</u> | <u>Particulate Matter</u> |
|------------|-------------------------------|----------------------------|----------------------------|-----------------------|-------------------------------|
| "FTP" | n/a | 0.1 | n/a | 3.7 | 0.08 |
| "EURO III" | 0.03 | 0.3 | 3.6 | n/a | 0.06 |

BE IT FURTHER RESOLVED: That the listed engine models are certified to the optional standards and test procedures applicable to incomplete and diesel medium-duty vehicles from 8,501 to 14,000 pounds GVWR pursuant to Title 13, California Code of Regulations, Section 1956.8(g).

BE IT FURTHER RESOLVED: That the listed engine models shall be subject to the in-use compliance provisions applicable to 1995 and subsequent model-year medium-duty vehicles, set forth in Title 13, California Code of Regulations, Section 2139(c).

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).

BE IT FURTHER RESOLVED: That the listed engine models comply with the on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1 ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").

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. The Settlement Agreement is in effect.
2. The manufacturer is in compliance with all certification requirements of the Settlement Agreement.

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 13TH day of December 2000.


R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: Cummins Engine Company, Inc.
Engine category: On-highway HDDE
EPA Engine Family: 1CEXA0359BAZ
Mfr Family Name: 403Z
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 |
|----------------|-----------------|---------------------------|---|---|--------------------------------|---|---------------------------------------|---|
| 2866;FR90430 | ISB 235 | 235@2700 | 103 | 93.5 | 460@1600 | 89 | 48.2 | PCM, TC, CAC |
| 2907;FR90791 | ISB 245 | 245@2700 | 107 | 97.5 | 505@1600 | 97.7 | 52.7 | PCM, TC, CAC |
| 2905;FR90789 | ISB 235 | 235@2700 | 103 | 93.5 | 460@1600 | 89 | 48.2 | PCM, TC, CAC |
| 2903;FR90787 | ISB 235 | 235@2700 | 103 | 93.5 | 460@1600 | 89 | 48.2 | PCM, TC, CAC |
| 2495;FR90425 | ISB 245 | 245@2700 | 107 | 97.5 | 505@1600 | 97.7 | 52.7 | PCM, TC, CAC |
| 2497;FR90427 | ISB 235 | 235@2700 | 103 | 93.5 | 460@1600 | 89 | 48.2 | PCM, TC, CAC |

ATTACHMENT

A-21-288