State of California AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-256

Relating to Certification of New Heavy-Duty Engines and Vehicles

CUMMINS ENGINE COMPANY, 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 Cummins Engine Company, Inc. and any modifications to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following 2000 model-year Cummins Engine Company, Inc. diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

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| | | acement | Exhaust Emission Control | | |
|------------------------|---------------|---------------------|--|--|--|
| <u>Engine Family</u> | <u>Liters</u> | <u>Cubic Inches</u> | Systems and Special Features | | |
| YCEXH0505CAG (413N) | 8.3 | 505 | Powertrain Control Module Turbocharger Charge Air Cooler | | |

The 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") for Heavy-Duty Diesel Engines (Title 13, California Code of Regulations, Section 1956.8):

| | Total | Carbon | Nitrogen | Particulate |
|-------|---------------------|-----------------|----------|---------------|
| | <u>Hydrocarbons</u> | <u>Monoxide</u> | Oxides | <u>Matter</u> |
| "FTP" | 1.3 | 15.5 | 4.0 | 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:

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

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

| | Total | Carbon | Nitrogen | Particulate | |
|------------|---------------------|-----------------|----------|---------------|--|
| | <u>Hydrocarbons</u> | <u>Monoxide</u> | Oxides | <u>Matter</u> | |
| "FTP" | 0.1 | 0.7 | 3.8 | 0.07 | |
| "EURO III" | 0.1 | 0.3 | 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:

- The Settlement Agreement is in effect. 1.
- The Settlement Agreement has not become null and void under 2. Settlement Agreement Paragraph 165.
- Cummins Engine Co., Inc. is in compliance with all 3. 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 $\frac{24}{24}$ day day of June 1999.

R. B. Summerfield, Chief Mobile Source Operations Division

Engine Model Summary Form

Cummins Engine Company, Inc. Manufacturer:

On-highway HDDE Engine category:

EPA Engine Family: YCEXH0505CAG

Mfr Family Name: 413N

New Submission Process Code:

| htrol J1930 AG ► | | | | | |
|---|--|--|--|---|--|
| 9.Emission Control Device Per SAE J1930 PCM, TG, CAC PCM, TC, CAC | | | | | |
| | | | | | |
| 8. Fuel Rate: (Ibs/hr)@peak torque 93.4 84.9 | | | | | |
| 7.Fuel Rate: mm/stroke@peak torque 138 180 | | | | | |
| | | | | | |
| 6.Torque @ RPM (SEA Gross) 1050@1400 950@1400 | | | | | |
| 5.Fuel Rate: (Ibs/hr) @ peak HP (for diesels only) 120 112 | | | | | |
| 4. Fuel Rate: 3. BHP@RPM mm/stroke @ peak HP (for diesel only) 350@2000 178 166 | | | | | |
| 3.ВНР@RPM (SAE Gross) 350@2000 330@2000 | | | | | |
| e 2.Engine Model 5 ISC 350 4 ISC 330 | | | | na sana kanan ing na sana di sa sana masa | |
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| 1.Engine Code 2695,FR90675 2695,FR90674 | | | | | |

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