State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-173

Relating to Certification of New Heavy-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;

IT IS ORDERED AND RESOLVED: That the following Cummins Engine Company, Inc. 1997 model 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

| Engine Family | Liters | (Cubic Inches) | Exhaust Emission Control Systems and Special Features |
|---|---|---|---|
| VCE661FJDABA (353H) | 10.8 | 661 | Charge Air Cooler<br>Turbocharger<br>Powertrain Control Module<br>Oxidation Catalytic Converter |

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 Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|
| 1.3 | 15.5 | 4.0 | 0.05 |

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

| Engine Family | Total Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|---|
| VCE661FJDABA (353H) | 0.2 | 0.5 | 4.0 | 0.04 |

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 listed engine models are certified for used in urban buses.

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 23rd day of December 1996.

John Kourakis for

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# A-21-173



# 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
## HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family (353H) VCE661FJDABA

Displacement: / 10.8 Liters / 661 Cubic Inches

Maximum Rated Power: 330 HP @ 2000 RPM Engine Configuration: I-6

Ignition: Compression X Compression with Glow Plug ____ Spark ____

Fuel Type(s): Dedicated X Flex-Fuel ___ Dual-Fuel ___ Diesel X M100 ___ M85 ___

CNG ___ LNG ___ LPG ___ Other (specify) ____

Diesel Cert Fuel: 13 CCR 2282 X 40 CFR 86.1313-90 ___ 40 CFR 86.1313-94 ___

Primary Intended Service Class: LHD ___ MHD ___ HHD ___ Urban Bus X

Exhaust ECS (include.MFI, TC, CAC): PCM, OC (TC, CAC)

(use abbreviations per SAE J1930 SEP91)

| Engine Model (Eng Code) | Rated HP @ RPM | Fuel Rate @ Rated HP mm3 / stroke (lbs/hr) | Fuel Pump & Injector Part No. | ECM/PCM Part No. | EGR Valve Part No. | PTOX / Catalytic Converter Part No. |
|---|---|---|---|---|---|---|
| M11-330E+ (2141) | 330 @ 2000 | 169 (114) | 3095731 | 3096662 | N/A | 3926265 |
| M11-280E+ (2141) | 280 @ 2000 | 139 ( 94) | 3095731 | 3096662 | N/A | 3926265 |

Date Issued

Revisions:

SUBMITTED

OCT 04 1996