

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-186

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

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems and Special Features</u>
VCE661EJDASA (353D)	10.8	661	Charge Air Cooler Turbocharger Powertrain Control Module

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:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.3	15.5	5.0	0.10

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

<u>Engine Family</u>	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VCE661EJDASA (353D)	0.2	0.9	4.8	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, Section 2035 et seq.).

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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 9th day of January 1997.

Raphael Summerfield
for R. B. Summerfield, Chief
Mobile Source Operations Division

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

Manufacturer Cummins Engine Company, Inc. Engine Family (353D) VCE661EJDASA
 Displacement: 10.8 Liters 661 Cubic Inches
 Maximum Rated Power: 400 HP @ 1800 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
 Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94 X
 Primary Intended Service Class: LHD MHD HHD X Urban Bus
 Exhaust ECS (include MFI, TC, CAC): PCM (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.
M11-400E (1885) (1973)	400 @ 1800	213 (129)	3084589 3087557	3084473	N/A	N/A

Date Issued:

Revisions:

SUBMITTED

DEC 06 1996

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 Fuel Type(s): Dedicated X Flex-Fuel Dual-Fuel Diesel X M100 M85
 CNG LNG LPG Other (specify)
 Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94 X
 Primary Intended Service Class: LHD MHD HHD X Urban Bus
 Exhaust ECS (include MFI, TC, CAC): PCM (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 (1855)	330 @ 1800	172 (105)	3084589 3087557	3084473	N/A	N/A
M11-310E (1855)	310 @ 1800	161 (98)	3084589 3087557	3084473	N/A	N/A
M11-280E (1855)	280 @ 1800	146 (89)	3084589 3087557	3084473	N/A	N/A
M11 ESP I (1855)	280 @ 1800	146 (89)	3084589 3087557	3084473	N/A	N/A
M11 ESP II (1857)	310 @ 1800	161 (98)	3084589 3087557	3084473	N/A	N/A
M11-315ESP (1857)	315 @ 1800	166 (101)	3084589 3087557	3084473	N/A	N/A
M11-320E (1855)	320 @ 2000	157 (106)	3084589 3087557	3084473	N/A	N/A

Revisions:

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