

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-61

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

DETROIT DIESEL CORPORATION

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 1997 model-year Detroit Diesel Corporation diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Compressed Natural Gas (CNG)

<u>Engine Family</u>	<u>Engine Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VDD8.5FZKARB	8.5 (518)	Turbocharger Charge Air Cooler 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>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.2	15.5	4.0	0.05

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

<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
0.8	2.6	1.9	0.03

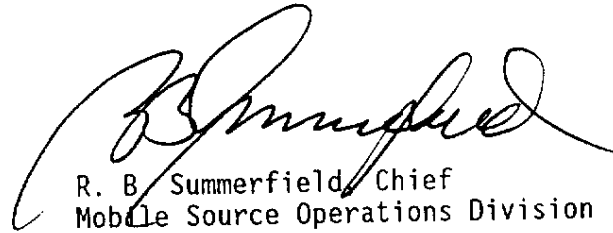
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the listed engine models are certified for use in urban bus applications.

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 19<sup>th</sup> day of February 1997.



R. B. Summerfield, Chief  
Mobile Source Operations Division

17-VDD8.5FZKARB-11A

E.O. No. A-290-61

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

Page 1 of 1

Manufacturer: Detroit Diesel Corporation Engine Family: VDD8.5FZKARB  
 Displacement: 8.5 Liters 518 Cubic Inches  
 Maximum Rated Power: 275 HP @ 2100 RPM Engine Configuration: I-4  
 Ignition: Compression \_\_\_\_\_ Compression with Glow Plug \_\_\_\_\_ Spark X  
 Fuel Type(s): Dedicated X Flex-Fuel \_\_\_\_\_ Dual-Fuel \_\_\_\_\_ Diesel \_\_\_\_\_ M100 \_\_\_\_\_ M85 \_\_\_\_\_  
                   CNG X 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 \_\_\_\_\_ Urban Bus X  
 Exhaust ECS (include: MFI, TC, CAC): ECM/PCM, CAC, (TC)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @Rated HP mm <sup>3</sup> /Stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX/ Catalytic Converter Part No.
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SERIES 50G BUS

CNG	275@2100	NA (93.7)	23520611	23518523		
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NA: Data not applicable to gaseous fueled engine.

Date Issued: 11-13-96

Rev.: