

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-57

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 Detroit Diesel Corporation 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</u>	<u>(Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VDD8.5EJDARA (SERIES-50)	8.5	518	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 Hydrocarbon</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:

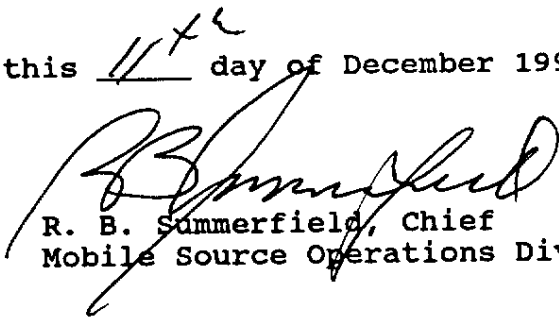
<u>Engine Family</u>	<u>Total Hydrocarbon</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VDD8.5EJDARA (SERIES-50)	0.1	1.6	4.9	0.09

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.).

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 11th day of December 1996.



R. B. Summerfield, Chief
Mobile Source Operations Division

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

Manufacturer: Detroit Diesel Corporation Engine Family: VDD8.5EJDARA
 Displacement: 8.5 Liters 518 Cubic Inches
 Maximum Rated Power: 350 HP @ 2100 RPM Engine Configuration: I-4
 Ignition: Compression Compression with Glow Plug Spark
 Fuel Type(s): Dedicated Flex-Fuel Dual-Fuel Diesel M100 M85
 CNG LNG LPG Other (specify) _____
 Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94
 Primary Intended Service Class: LHD MHD HHD Urban Bus
 Exhaust ECS (include. MFI, TC, CAC): ECM/PCM, CAC, (TC)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /Stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX/ Catalytic Converter Part No.
SERIES 50						
1D	350@2100	258.6 (120.4)	5235915	23518645 23518743		
2D	350@2100	258.6 (120.4)	↓	↓		
3D	320@2100	234.4 (109.1)	5236347			
4D	320@2100	234.4 (109.1)	↓	↓		
5D	315@2100	226.0 (105.2)	↓	↓		
6D	315@1950	236.1 (102.1)	↓	↓		
7D	300@2100	215.2 (100.2)	↓	↓		
8D	300@1800	239.1 (95.4)	↓	↓		
9D	275@2100	197.9 (92.2)	↓	↓		
10D	250@2100	179.3 (83.5)	↓	↓		