

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-55

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 (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VDD11.EJDARA (SERIES-60)	11.1      677	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:

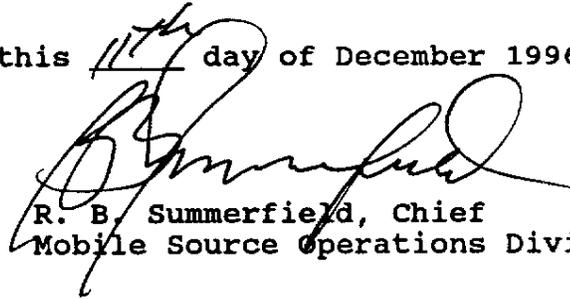
<u>Engine Family</u>	<u>Total Hydrocarbon</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VDD11.EJDARA (SERIES-60)	0.1	2.1	5.0	0.09

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 11<sup>th</sup> 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: VDD11.EJDARA  
 Displacement: 11.1 Liters 677 Cubic Inches  
 Maximum Rated Power: 365 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       
                   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): 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.
<b>11.1L</b>						
1H	365@1800	189.1 (113.2)	5235580 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	23518645 23518743	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	
2H	350@1800	180.7 (108.2)				
3H	350@2100	161.9 (113.1)				
4H	330@2100	152.6 (106.6)				
5H	330@1800	170.4 (102.0)				
6H	330@1700	179.2 (101.3)				
1I	350@2100	161.9 (113.1)				
2I	350@1800	180.7 (108.2)				
3I	330@1800	170.4 (102.0)				
4I	330@2100	152.6 (106.6)				
1J	330@1800	170.4 (102.0)				
2J	300@1800	155.4 (97.0)				
3J	300@1700	162.5 (92.4)				