

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-87

Relating to Certification of New Heavy-Duty Engines and Vehicles

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board at Sections 43100, 43101, and 43102 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and Detroit Diesel Corporation and any modifications to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following 2000 model-year Detroit Diesel Corporation diesel 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) or Liquefied Natural Gas (LNG)

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YDDXH12.7FGF (Series 60G)	12.7	775	Turbocharger Charge Air Cooler Electronic Control Module

The engine models and codes are listed on attachments.

BE IT ORDERED AND RESOLVED: That the following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour under the Federal Test Procedure ("FTP") for Heavy-Duty Diesel Engines (Title 13, California Code of Regulations, Section 1956.8):

	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"FTP"	1.2	15.5	4.0	0.05

BE IT FURTHER RESOLVED: That 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>Particulate Matter</u>
"FTP"	0.8	2.0	2.0	0.02

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, Sections 2035 et seq.).

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

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

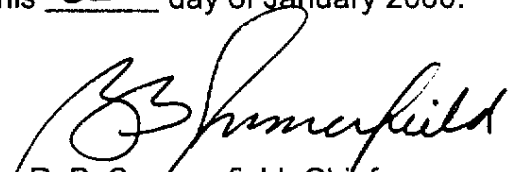
1. The Settlement Agreement is in effect.
2. The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement.

Engines certified under this Executive Order must conform to all applicable California emission regulations and to all applicable terms and conditions of the Settlement Agreement.

Executive Order A-290-81 dated December 30, 1999 is hereby superseded by Executive Order A-290-87.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 25th day of January 2000.


R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

10/14/99

EO: A-290-87

Manufacturer: **Detroit Diesel Corporation**

Process Code: **New Submission**

EPA Engine Family: **YDDXH12.7EGF**

Manufacturer Family Name: **Series 60G**

1. Engine Code

2. Engine Model

3. BHP @ RPM (SAE Gross)

4. Fuel Rate: mm/stroke @ peak HP (for diesels only)

5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)

6. Torque @ RPM (SEA Gross)

7. Fuel Rate: mm/stroke @ peak torque

8. Fuel Rate: (lbs/hr) @ peak torque

9. Emission Control Device Per SAE J1930

1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: mm/stroke @ peak HP (for diesels only)	5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lbs/hr) @ peak torque	9. Emission Control Device Per SAE J1930
957	CNG	330@2100		116.6	1400@1200		103.0	ECM π , ϵ , μ
961	LNG	330@2100		116.6	1400@1200		103.0	ECM π , ϵ , μ ↓