

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-80

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: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YDDXH08.5FJN (Series 50 Bus)	8.5	519	Turbocharger Charge Air Cooler Electronic Control Module Oxidation Catalytic Converter

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>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"FTP"	1.3	15.5	4.0	0.05

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to the following emission standards, in grams per brake horsepower-hour, under the EURO III tests in the Settlement Agreement, and a "Not-to-Exceed" nitrogen oxides emission standard of 7.0 grams per brake horsepower-hour:

	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"EURO III"	1.3	15.5	6.0	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>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"FTP"	0.1	1.0	4.0	0.04
"EURO III"	0.03	0.3	5.9	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.
3. Pursuant to Paragraph 16 of the Settlement Agreement, no more than 2,000 light heavy-duty, medium heavy-duty and urban bus engines produced by the manufacturer between July 31, 1999 and October 1, 2002 ("Exclusion Engines") shall be subject to the aforementioned emission standards, including the "Not-to-Exceed" nitrogen oxides emission standard, under the EURO III tests.

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.

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

Executed at El Monte, California this 30<sup>th</sup> day of December 1999.

*Raphael Summerfield*

R. B. Summerfield, Chief  
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

11/11/99

A-290-80

Manufacturer: **Detroit Diesel Corporation**

Process Code: **New Submission**

EPA Engine Family: **YDDXH08.5FJN**

Manufacturer Family Name: **Series 50 Bus**

1. Engine Code    2. Engine Model    3. BHP@RPM (SAE Gross)    4. Fuel Rate: mm/stroke @ peak HP (for diesel 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

Diesel Fuel #2	Series 50 Bus	3. BHP@RPM (SAE Gross)	4. Fuel Rate: mm/stroke @ peak HP (for diesel 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
1213		250@2100	183.6	85.5	890@1200	238.3	63.4	TC, CAC, ECM, OC Converter ECM ↑
1214		275@2100	202.1	94.1	890@1200	238.3	63.4	
1215		320@2100	231.5	107.8	1150@1200	306.3	81.5	
1216	(800 rpm idle)	320@2100	231.5	107.8	1150@1200	306.3	81.5	
Diesel Fuel #1								TC, CAC, ECM, OC ↓ Converter ECM ↑
1210		250@2100	191.0	85.0	890@1200	237.4	60.4	
1211		275@2100	210.7	93.8	890@1200	237.4	60.4	
1212		320@2100	245.8	109.4	1150@1200	325.5	82.8	TC, CAC, ECM, OC