### State of California AIR RESOURCES BOARD

### EXECUTIVE ORDER A-290-68

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 1999 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

		acement	Exhaust Emission Control
<b>Engine Family</b>	<u>Liters</u>	<u>Cubic Inches</u>	Systems and Special Features
XDDXH12.7EGL (Series 60 12.7L)	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):

	Total	Carbon	Nitrogen	Particulate
	<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>	<u>Matter</u>
"FTP"	1.3	15.5	4.0	0.10

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:

	Total	Carbon	Nitrogen	Particulate
	Hydrocarbons	<u>Monoxide</u>	<u>Oxides</u>	<u>Matter</u>
"EURO III"	1.3	15.5	6.0	0.10

BE IT FURTHER RESOLVED: That the following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

·	Total	Carbon	Nitrogen	Particulate
	<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>	<u>Matter</u>
"FTP"	0.1	0.7	3.9	0.10
"EURO III"	0.03		5.7	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, Sections 2035 et seq.).

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.

 The Settlement Agreement has not become null and void under Settlement Agreement Paragraph 165.

3. Detroit Diesel Corp. 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.

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

Executed at El Monte, California this \_\_\_\_\_\_ day of December 1998.

R. B. Summerfield, Chief Mobile Source Operations Division

# LARGE ENGINE MOLEL SUMMARY

A-290-68

Manufacturer: Detroit Diesel Corporation

Process Code: Running Change

EPA Engine Family: XDDXH12.7EGL			Manufacturer Family Name: Series 60, 12.71			-		
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 torq	9.Emission Control ue Device Per SAE J1930
1063	standard	470@2100	229.6	160.3	1550@1200	277.6	110.8	TC, ECM, cA.
1060	ratings	430@2100	210.6	147.1	1550@1200	277.6	110.8	( All vatings
1061	A training and manufacturing of the A terroritor market and analysis	400@2100	194.0	135.5	1550@1200	277.6	110.8	The racings.
1062		370@2100	179.1	125.1	1550@1200	277.6	110.8	
1058		430@1800	226.0	135.3	1550@1200	277.6	110.8	
1056	AND THE PROPERTY OF THE PARTY O	400@1800	209.7	125.5	1550@1200	277.6	110.8	
1059	Manager (grade specification) grade profession are an elementary public	370@1800	193.3	115.7	1550@1200	277.6	110.8	
1057	****	360@1800	187.9	112.5	1550@1200	277.6	110.8	
1064	pertinguings become de-	470@1800	248.2	148.6	1550@1200	277.6	110.8	
1052	и в Мерийниция и и проформу выполнующим применент на населения	430@2100	209.4	146.2	1450@1200	259.1	103.4	
1053	Sub-conducted and figure assessment of the figure on the confidence and control and the conducted and the conducted and control and conducted	400@2100	194.0	135.5	1450@1200	259.1	103.4	-
1054	-	370@2100	179.1	125.1	1450@1200	259.1	103.4	
1049	And the section of th	430@1800	226.0	135.3	1450@1200	259.1	103.4	A ser ser service of the service of
1050	Approximate and high physical property and the second	400@1800	209.7	125.5	1450@1200	259.1	103.4	
1051	gilleren er gettilse de erente terrente er et er de de de et	370@1800	193.3	115.7	1450@1200	259.1	103.4	
1055		360@1800	187.9	112.5	1450@1200	259.1	103.4	
1065	decrease/authorized decreates (1)	370/430-1800	And the state of t		1450@1200			
1066	- and a special specia	370/430-2100			1450@1200	**************************************	-	
1067		360/400-1800		Annual de la companya	1450@1200	Annual Control of the		
1069		360/400-1800			1550@1200			
1071	-	370/430-1800			1550@1200	the consequence of the consequen		The state of the s
1072		370/430-2100			1550@1200		1	
1073		430/470-2100		2	1550@1200			
1074		430/470-1800			1550@1200	Annual transplantation and analysis.		
1090		360@2100	179.1	125.1	1450@1200	259.1	103.4	
1091		360@2100	179.1	125.1	1550@1200	277.6	110.8	Annual Control of Cont
1092		360/400-2100	7		1450@1200			
1093	prompt options of approximate property and a second	360/430-2100			1450@1200		-	
1094	TOTAL MALES	360/400-2100			1550@1200		The first hand a second service of the second service of the second seco	ganach Caramananan (A. A and creamy
1095		360/430-2100			1550@1200	-	A Parametria de como d	AND
1070	The second secon	360/430-1800			1550@1200	***************************************		

## LARGE ENGINE MOLEL SUMMARY

12/1/98

A-290-68

Manufacturer: Detroit Diesel Corporation Process Code: New Submission

EPA Engine Family: XDDXH12.7EGL Manufacturer Family Name: Series 60, 12.7L

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
1042	premium	500@2100	250.6	175.0	1650@1200	302.2	120.6	TC, ECM , CA
1043	ratings	470@2100	232.2	162.2	1650@1200	302.2	120.6	(All ratings
1044		430@2100	211.8	147.9	1650@1200	302.2	120.6	CHEC YAS Crug.
1046		500@2100	250.6	175.0	1550@1200	283.9	113.3	
1045		470@2100	232.2	162.2	1550@1200	283.9	113.3	
1036		500@2100	250.6	175.0	1450@1200	261.6	104.4	
1048		470/500-2100	***************************************	parties and the second	1550@1200	politica est		A 1 I I PAGE 11 I I I I I I I I I I I I I I I I I I
1047	Springer and the state of the s	430/500-2100			1650@1200			