California Environmental Protection Agency AIR RESOURCES BOARD	DETROIT DIESEL CORPORATION	EXECUTIVE ORDER A-290-0106 New On-Road Heavy-Duty Engines

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC) Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and the manufacturer, and any modifications thereof to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZE (liter)	FUEL TYPE	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS
2002	2DDXH12.7EGL	12.7	Diesel	Diesel	Heavy Heavy Duty

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	ENGINE MODELS / CODES (rated power in horsepower, hp)
DDI, TC, CAC, ECM	See Attachment
ABBREVIATIONS: OC=oxidizing catalyst TWC=three-way catalyst WU (prefix) =warm-up catalyst O2S=oxygen sensor HO2S=heated O2S TBI=throttle body fuel injection MFI=multiport fuel injection SFI=sequentialMFI DDI/IDI=direct /indirect diesel injection TC/SC=turbo/super charger CAC=charge air cooler EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR SP=smoke puff limiter ECM/PCM=engine /powertrain control module EM=engine modification 2 (prefix)=parallel (2) (suffix)=in series	

The following are the exhaust emission standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for this engine family for hydrocarbons (HC) or non-methane hydrocarbons (NMHC), oxides of nitrogen (NOx), or NMHC+NOx, carbon monoxide (CO), particulate matter (PM), and formaldehyde (HCHO) in grams per brake horsepower-hour (g/bhp-hr) under the "Federal Test Procedure" (FTP) (Title 13, California Code of Regulations, (13 CCR) Section 1956.1 (urban bus) or 1956.8 (other than urban bus)), and under the "Euro III Test Procedure" (EURO) in the Settlement Agreement, including a EURO's "Not-to-Exceed" NOx standard: (The emission standards and certification levels for default operations permitted under 13 CCR Section 1956.1 or 1956.8 are in parentheses.)

															EURO'S NOT-TO-EXCEED NOx STD	7.0
* = not applicable	HC		NMHC		NOx		NMHC+NOx		CO		PM		HCHO			
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO		
(DIRECT) STD	1.3	1.3	*	*	4.0	6.0	*	*	15.5	15.5	0.10	0.10	*	*		
AVERAGE STD	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
FEL	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
CERT	0.3	0.1	*	*	3.9	5.9	*	*	1.2	0.2	0.10	0.07	*	*		

BE IT FURTHER RESOLVED: That certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labeling), and 2035 et seq. (emission control system warranty).

BE IT FURTHER RESOLVED: That the listed engine models are conditionally certified subject to the following conditions: (1) The Settlement Agreement is in effect; and, (2) The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement and any modifications thereof.

Engines certified under this Executive Order shall conform to all applicable California emission regulations and all requirements under the Settlement Agreement and any modifications thereof.
The Bureau of Automotive Repair will be notified by copy of this Executive Order.
This Executive Order is not valid for engines produced on or after October 1, 2002.

Executed at El Monte, California on this 20th day of December 2001

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Detroit Diesel Corpertation**

Engine category: **On-highway HDDE**

EPA Engine Family: **2DDXH12.7EGL**

Mfr Family Name: **SERIES 60-12.7L**

Process Code: **New Submission**

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
1132	(low power)	330@2100	180.8	126.3	1250@1200	235.6	94.0	DDI,ECM,TC,CAC
1133	|	350@2100	184.2	128.6	1250@1200	236.0	94.2	
1135	|	330@2100	175.3	122.4	1350@1200	251.0	100.2	
1136	|	350@2100	192.3	134.3	1350@1200	255.2	101.9	
1145	|	350@1800	196.0	117.3	1350@1200	259.0	103.4	
1144	V	330@1800	181.9	108.9	1350@1200	241.9	96.5	
1164	(standard power)	430@1800	226.0	135.3	1450@1200	259.1	103.4	
1165	|	400@1800	209.7	125.5	1450@1200	259.1	103.4	
1166	|	370@1800	193.3	115.7	1450@1200	259.1	103.4	
1167	|	430@2100	209.4	146.2	1450@1200	259.1	103.4	
1168	|	400@2100	194.0	135.5	1450@1200	259.1	103.4	
1169	|	370@2100	179.1	125.1	1450@1200	259.1	103.4	
1170	|	360@1800	187.9	112.5	1450@1200	259.1	103.4	
1171	|	400@1800	209.7	125.5	1550@1200	277.6	110.8	
1172	|	360@1800	187.9	112.5	1550@1200	277.6	110.8	
1173	|	430@1800	226.0	135.3	1550@1200	277.6	110.8	
1174	|	370@1800	193.3	115.7	1550@1200	277.6	110.8	
1175	|	430@2100	210.6	147.1	1550@1200	277.6	110.8	
1176	|	400@2100	194.0	135.5	1550@1200	277.6	110.8	
1177	|	370@2100	179.1	125.1	1550@1200	277.6	110.8	
1178	|	470@2100	229.6	160.3	1550@1200	277.6	110.8	
1179	|	470@1800	248.2	148.6	1550@1200	277.6	110.8	
1190	|	360@2100	179.1	125.1	1450@1200	259.1	103.4	
1191	V	360@2100	179.1	125.1	1550@1200	277.6	110.8	

ATTACHMENT

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Engine Model Summary Form

Manufacturer: **Detroit Diesel Corp.**

Engine category: **On-highway HDDE**

EPA Engine Family: **2DDXH12.7EGL**

Mfr Family Name: **SERIES 60, 12.7L**

Process Code: **New Sub - continued**

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
1134	cruise power	330/350-2100			1250@1200			DDI, ECM,TC,CAC
1137	(low & standard)	330/350-2100			1350@1200			
1180		370/430-1800			1450@1200			
1181		370/430-2100			1450@1200			
1182		360/400-1800			1450@1200			
1183		360/430-1800			1450@1200			
1184		360/400-1800			1550@1200			
1185		360/430-1800			1550@1200			
1186		370/430-1800			1550@1200			
1187		370/430-2100			1550@1200			
1188		430/470-2100			1550@1200			
1189		430/470-1800			1550@1200			
1192		360/400-2100			1450@1200			
1193		360/430-2100			1450@1200			
1194		360/400-2100			1550@1200			
1195		360/430-2100			1550@1200			
1146		330/350-1800			1350@1200			

ATTACHMENT

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Engine Model Summary Form

Manufacturer: **Detroit Diesel Corp.**

Engine category: **On-highway HDDE**

EPA Engine Family: **2DDXH12.7EGL**

Mfr Family Name: **SERIES 60, 12.7 L**

Process Code: **New Sub - continued**

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
1376	(premium)	500@2100	250.6	175.0	1650@1200	302.2	120.6	DDI, ECM,TC,CAC
1377		470@2100	232.2	162.2	1650@1200	302.2	120.6	
1378		430@2100	211.8	147.9	1650@1200	302.2	120.6	
1379		500@2100	250.6	175.0	1550@1200	283.9	113.3	
1380		470@2100	232.2	162.2	1550@1200	283.9	113.3	
1381		500@2100	250.6	175.0	1450@1200	261.6	104.4	
1389		470/500-2100			1550@1200			
1388		430/500-2100			1650@1200			

ATTACHMENT

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