DETROIT DIESEL CORPORATION

EXECUTIVE ORDER A-290-0124 New On-Road Heavy-Duty Engines

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: The 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 GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE 1	STANDARDS & TEST PROCEDURE	SERVICE CLASS 2	ECS & SPECIAL FEATURES 3
YEAR 2007	7DDXH14,0ELY	14.0	Diesel	Diesel	HHDD	ECM, EGR, OC, PTOX, TC, CAC, DDI
ENGINE (I			ENGINE N	AODELS / CODES (r	ated power, in hp)
14.0				See Attachmi	ent	
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•				*		Till 40 Code of Forderal Populations Section 86

*=not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter; hp=horsepower; kw=kilowatt;

CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;

LIMIH HDD=light/medium/heavy heavy-duty dieset; UB=urban bus; HDO=heavy duty Otto;

ECS=emission control system; TMC/OC=three-way/oxidizing catalyst; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer, HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; DI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charge; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection gCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charge; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection gCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charge; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection gCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charge; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection; PAIR/AIR=pulsed/secondar

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.1 (urban bus) or 13 CCR 1956.8 (other than urban bus); 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, in g/bhp-hr, for this engine family. "Diesel" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.1 or 13 CCR 1956.8 are in parentheses.)

T NIN	INC.		Ox I	NMH	C+NOx		00	F	M	нс	НО
	, — —			FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
——		*			•	15.5	15.5	0.01	0.01	•	*
0.14	0.14	1.16	1,16	1.3	1.3		•	*	*	•	•
0.01	0.02		1.07	1.15	1.08	0.2	0.014	0.00	0.001		*
				1	.95	19	,375	0.	015		
	9.14 0.01	0.14 0.14 • • • 0.01 0.02	FTP EURO FTP 0.14 0.14 *	FTP EURO FTP EURO 0.14 0.14	FTP EURO FTP EURO FTP 0,14 0.14 * * * * * 1.15 1.16 1.3 0.01 0.02 1.14 1.07 1.15	FTP EURO FTP EURO FTP EURO 0.14 0.14 *	FTP EURO FTP EURO FTP EURO FTP 0.14	FTP EURO FTP EURO FTP EURO FTP EURO 0.14 0.14	NMHC NOX PTP EURO FTP EURO FTP 0.14 0.14 - </td <td> FTP EURO FTP EURO FTP EURO FTP EURO FTP EURO </td> <td> NMHC</td>	FTP EURO FTP EURO FTP EURO FTP EURO FTP EURO	NMHC

g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;

BE IT FURTHER RESOLVED: 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: The listed engine models have been certified to the split engine family standards under 13 CCR 1956.8(b) [diesel engines] or 13 CCR 1956.8(d) [Otto engines] and the incorporated 40 CFR 86.007-15(m)(9).

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels) and 13 CCR 2035 et seq. (emission control warranty).

day of January 2007.

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 Executive Order.

Executed at El Monte, California on this

Annette Hebert, Chief

Mobile Source Operations Division

Engine Model ummary Template

		2 Engine Model	3.BHP@RPM	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	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930
Engine Family	1.Engine coue	Section of the least	(2001)						
Control (Service) States (Service) Service (Serv	remontantistance communicación establista en concerna con en expensivo	Tringly	445@1800	260.4	155.9	1450@1100	266.0	97.3	ECM, TC, CAC
/DDXH14.0ELY	1940	Truck/Coach	425@1800	249.4	149.3	1450@1100	266.0	97.3	EGR, DOC
/DDXH14.0ELY	1 46.1	Truck/Coach	425/445@1800			1450@1100	266.0	97.3	DPF
7DDXH14.0EL1	1545 1543	Truck/Coach	490@1800	287.0	171.8	1550@1100	284.3	104.0	(all ratings)
ZDDXH14.0ELT	1544	Truck/Coach	455@1800	264.9	158.6	1550@1100	284.3	104.0	er in the later in
ZONXH14 OFI Y	7545	Truck/Coach	455/490@1800	0		1550@1100	284.3	104.0	
7DDXH14 0Fl Y	1546	Truck/Coach	515@1800	304.7	182.4	1550@1100	284.3	104.0	a e projecto de como en en en entre de la companya
7DDXH14 0ELY	1547	Truck/Coach	490/515@1800	0		1550@1100	284.3	104.0	d) the designation of the second seco
7DDXH14 0FLY	1548	Truck/Coach	515@1800	304.7	182.4	1650@1100	305.9	111.9	HER COLUMN TO THE COLUMN TO THE PROPERTY OF TH
7DXH14 0FI Y	1519 (1980) 1980 (Truck/Coach	470@1800	278.1	166.5	1650@1100	305.9	111.9	es y mandatur (apprende propiete) projekto, presente na menintante anticipitat principa permina.
7DDXH14.0ELY	1550	Truck/Coach	470/515@1800	0	CONTRACTOR	1650@1100	305.9	111.9	
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7DDXH14.0ELY	1991年 「CAT」	FIFTH DON Server consequence reconsequence (1904 para	425@1800	249.4	149.3	1450@1100	266.0	97.3	A - 2 ₍₁₎₍₁₎₍₁₎
7DOXH14.0EL1	opening of the property of the transfer	Firetruck	490@1800	287.0	171.8	1550@1100	284.3	104.0	GO
7DDXH14 0FLY	pppropagation of Differential Co. II	Firetruck	455@1800	264.9	158.6	1550@1100	284.3	104.0	Company may manage and the construction of the
ZDDXH14 OFLY	XXXXIIII Harris O Company of the CONTROL	Firetruck	515@1800	304.7	182.4	1550@1100	284.3	104.0	College (A)
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7DDXH14.0ELY	Herita i spri se son on experiment	Firetruck	470@1800	278.1	166.5	1650@1100	305.9	111.9	CORRESPONDED TO THE PROPERTY OF THE PROPERTY O
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