California Environmental Protection Agency

Air Resources Board

FORD MOTOR COMPANY

EXECUTIVE ORDER A-010-1745 New On-Road Heavy-Duty Engines Page 1 of 2 Pages

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 YEAR	ENGINE FAMILY	ENGINE	FUEL TYPE 1	STANDARDS	INTENDED SERVICE	ECS & SPECIAL FEATURES 3	DIAGNOSTIC 5				
TEAR		SIZES (L)		& TEST PROCEDURE	CLASS 2	TC, DDI, CAC, EGR-C,					
2013	DFMXH06.7B23	FMXH06.7B23 6.7		Diesel	LHDD	ECM, PTOX, OC, SCR-U	OBD (F)				
1	NS CONTROL	ADDITIONAL IDLE EMISSIONS CONTROL 4									
	30g	N/A									
ENGINE (ENGINE MODELS / CODES (rated power, in hp)										
6.7		4V F-Series / DFA17M05; DFA17M0Z (300)									
*		*									
L=liter: hp	=horsepower; kw=kilowa NG=compressed/liquefied	tt; hr=hour; natural gas; LPG=	•	85=85% ethanol fuel; MF=m		R 86.abc=Title 40, Code of Federal Regulatio =bi fuel; DF=dual fuel; FF=flexible fuel;	ns, Section 86.abc;				
BCS=er up catalyst; TBI=throttle super charg control mod ESS=er (per 13 CC	mission control system, DPF=diesel particulate a body fuel injection; SFI ger; CAC=charge air codule; EM=engine modificagine shutdown system (R 1956.8(a)(6)(D); Exen	WC/OC=three-way/ ilter, PTOX=periodi MFI=sequential/mul ler; EGR / EGR-C= ation; 2 (prefix)=par per 13 CCR 1956.8(a apt=exempted per 13	oxidizing catalyst, NAC=N c trap oxidizer, HO2S/O2S it port fuel injection; DGI=dexhaust gas recirculation / callel, (2) (suffix)=in series (6)(A)(1); 30g=30 g/hr N(3 CCR 1956.8(a)(6)(B) or for the catalysis of the catalysis oxidized (1) or for the catalysis oxidized (1) oxidiz	Ox adsorption catalyst: SCR s=heated/oxygen sensor; HA direct gasoline injection; GCA cooled EGR; PAIR/AIR=puls ; Ox (per 13 CCR 1956.8(a)(6)	FS/AFS=heated// RB=gaseous car ed/secondary air (C); APS=intern /A=not applicable	ctive catalytic reduction – urea / – ammonia; air-fuel-ratio sensor (a.k.a., universal or linear buretor, IDI/DDI=indirect/direct diesel injectio injection; SPL=smoke puff limiter; ECM/PCN al combustion auxiliary power system; ALT=a (e.g., Otto engines and vehicles);	oxygen sensor); n; TC/SC=turbo/ f=engine/powertrain				

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 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, 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 1956.8 are in parentheses.).

in g/bhp-hr	NMHC		NOx		NMHC+NOx		co		РМ		нсно	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	* ^	* 1		*	*	*	*	*	*	*	*
CERT	0.000	0.000	0.11	0.14	*	*	0.7	0.04	0.000	0.000	*	*
NTE	0.21		0.30		*		19.4		0.02			.==.

4 g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, including RMCSET=ram mode cycle supplemental emissions testing; 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; (Rev.: 2007-02-26)

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: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" adopted Dec. 12, 2002, as last amended Sep. 1, 2006, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

BE IT FURTHER RESOLVED: That the listed engine models are conditionally certified on the condition that the manufacturer provides required information to show compliance with heavy-duty on-board diagnostics requirements within 45 days from the date of the Executive Order. Failure to submit the required data by the specified date, or failure of the submitted data to show compliance with the 13 CCR 1971.1 requirements, shall be cause for the Executive Officer to rescind this conditional certification, in which case all engines covered under this conditional certification would be deemed uncertified and subject to civil penalties pursuant to Health and Safety Code Section 43154.

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).

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