## FORD MOTOR COMPANY

**EXECUTIVE ORDER A-010-1452** 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 YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE	STANDARDS & TEST PROCEDURE	SERVICE CLASS <sup>2</sup>	ECS & SPECIAL FEATURES 3
2008	8FMXH06,8BSS	6.8	Gasoline	Otto	HDO	TWC, 2HO2S, <b>SF</b> l
			ENGINE N	IODELS / CODES (r	rated power, in h	p)
ENGINE (	L)		SE OFTANNISCE SETANNI	0506 957491 0500	8F718I 0505. BI	F718L0506, 8F728N0500, 8F728N0505, 8F728N0506,
6.8	F-450/550 Chass	s Cab: 8F718N05	00, 8F/18NU3U3, 8F/16N	500, 8F728U05 <u>05, 8</u>	RF728U0506 (36	(2)
0.6			8F7ZBOU	*		
-				*		
				*		
*						E. J. Till. 10. Code of Foreign Regulations, Section 66 abc.
t=not appl	licable; GVWR=gross vehic =horsepower; kw=kilowatt; NG=compressed/liquefied t	de weight raling; 13 C	CR xyz=Title 13, California Co lefted petroleum gas; E85=85%	de of Regulations, Sec 6 ethanol fuel: MF=mul	ti fuel a.k.a. BF≂bi í	6.abc=Title 40, Code of Faderal Regulations, Section 86.abc; fuel; DF=dual fuel; FF=flexible fuel;

compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85

INVM HUD=ign/medium/neavy-duty diesel; UB=urban bus: HDO=heavy duty Otto;

ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBl=throttle body fuel injection; SFI/MFI=sequential/multi-port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburator; 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; SPL=smoke puff limiter; (2004may28)

ECMPCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; [2) (suffix)=in series;

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.)

	NMHC NOx			NMHC+NOx		СО		PM		нсно		
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
	FIP	EURO	111	- LOIKO		•	14.4		0.01	*	0.01	•
TD			0,35	<b>\</b>	0.56		*	*	*	•	*	*
EL	0.21	-	_	<b>₩</b> ./	0.33	1 .	5.2		*	*	0.00	•
ERT	0.12	-	0.21		0.33			+		•		*
NTE	T	*					<u> </u>		<u></u>		-te-deed or amid	-1111

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(d) 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).

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 \_\_\_\_\_\_ day of December 2006.

Mobile Source Operations Division