Field

California Environmental Protection Agency AIR RESOURCES BOARD	FORD MOTOR COMPANY	EXECUTIVE ORDER A-010-1143 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-02-003;

IT IS ORDERED AND RESOLVED: That 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 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 (CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas)	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS (L/M/H HDD=light/medium/heavy heavy-duty [HD] diesel; UB=urban bus; HDO=HD Otto)
2003	3FMXH05.4CF5	5.4	Gasoline	Otto	HDO

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	ENGINE MODELS / CODES (rated power in horsepower, hp)
TWC, 2HO2S, SFI	3E414Y0505 (255 hp)

TWC/OC=three-way/oxidizing catalyst WU (prefix) =warm-up cat. O2S=oxygen sensor HO2S=heated O2S TBI=throttle body fuel injection MFI=multi port 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 SPL=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 (CERT), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) in grams per brake horsepower-hour (g/bhp-hr) for this engine family for hydrocarbon (HC) or non-methane HC (NMHC), oxides of nitrogen (NOx), or NMHC+NOx, carbon monoxide (CO) [except that "diesel" CO certification compliance may have been demonstrated pursuant to Code of Federal Regulations, Title 40, Part 86, Subpart A, Section 86.091-23(c)(2)(i) in lieu of testing], particulate matter (PM), and formaldehyde (HCHO) 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)): (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 Section 1956.1 or 1956.8 are in parentheses.)

* = not applicable [g/bhp-hr]	HC	NMHC	NOx	NMHC+NOx	CO	PM	HCHO
(DIRECT) STANDARD	1.9	*	4.0	*	37.1	*	*
CORPORATE AVERAGE STANDARD	*	*	*	*	*	*	*
FAMILY EMISSION LIMIT (FEL)	*	*	*	*	*	*	*
CERTIFICATION LEVEL	0.3	*	0.9	*	3.7	*	*

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 labels), and 2035 et seq. (emission control warranty).

Engines certified under this Executive Order shall 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 15TH day of July 2002.

Allen Lyons, Chief
Mobile Source Operations Division

E.O. # A-010-1143

ATTACHMENT

2003 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY DUTY OTTO-CYCLE ENGINES

Manufacturer: Ford Motor Company Engine Family: 3FMXH05.4CF5

Displacement: 5.4 Liter 326 Cubic Inches

All Eng Codes in Eng Family: CA__ 49S X 50S X

Fuel Type(s): Dedicated X Flex Fuel__ Dual-Fuel__ Bi-Fuel__ Gasoline X CNG__

LNG __ LPG __ M85 __ M100__ Other (specify)_____

Maximum Rated Power: 255 HP @ 4500 RPM E-Series Engine Configuration V8

Exhaust Control System and Special Features TWC, 2HO2S, SFI
(Use abbreviations per SAE J1930 SEP91)

Engine Model (Engine Code)	Ign. System or PCM Part No. -12A650-	Fuel System Injector Part No. -9F593-	Catalyst Part No. -5E212-
E-450 Stripped Chassis (55.0gal)[1] 3E414Y0505	3C2A-CB	F0TE-DB	3C24-CA

[1] EVAP family 3FMXE0310BAJ

Comments:

Test Group: 3FMXH05.4CF5
Issued: June 7, 2002
Revised: