

*File*

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	3FMXH05.4CP5	5.4	CNG	Otto	HDO
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>		<b>ENGINE MODELS / CODES (rated power in horsepower, hp)</b>			
2TWC, TWC, 2HO2S, SFI		1E414I0510 (225 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 DD/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		*	1.7	0.5	*	37.1	*	*
CORPORATE AVERAGE STANDARD		*	*	*	*	*	*	*
FAMILY EMISSION LIMIT (FEL)		*	*	*	*	*	*	*
CERTIFICATION LEVEL		*	0.05	0.3	*	3.0	*	*

**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 the listed engine models have been certified to the FTP optional NOx emission standard(s) listed above pursuant to 13 CCR Section 1956.1 or 1956.8.

**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 15<sup>TH</sup> day of July 2002.

Allen Lyons, Chief  
 Mobile Source Operations Division

2003 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY ENGINES

Manufacturer: Ford Motor CompanyEngine Family: 3FMXH05.4CP5Displacement: 5.4L /      Liter 326 /      Cubic InchesAll Eng Codes in Eng Family: CA      49S      50S XFuel Type(s): Dedicated X Flex Fuel      Dual-Fuel      Bi-Fuel      Gasoline      CNG X  
LNG      LPG      M85      M100      Other (specify)     Maximum Rated Power: 225 HP @ 4500 RPM F-Series Incomplete Engine Configuration V-8Exhaust Control System and Special Features 2TWC, TWC, 2HO2S, SFI  
(Use abbreviations per SAE J1930 SEP91).

Engine Model (Engine Code)	Ign. System or PCM	Fuel System Injtr	Catalyst
	Part No. -12A650-	Part No. -9F593-	Part No. -5F250- -5E212-

Initial Certification

1E41410510

1C2A-AC

F5TE-BA

YC2C-AA (CC-LH/RH)  
YC2C-AB.(UB)

Group: 3FMXH05.4CP5  
Issued: June 17, 2002  
Revised: