California Environmental Protection Agency AIR RESOURCES BOARD	FORD MOTOR COMPANY	EXECUTIVE ORDER A-010-1613 New Diesel or Incomplete Medium-Duty Vehicles Using Certified 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 following diesel or incomplete medium-duty vehicles (MDV) with a manufacturer's GVWR from 8501 to 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

ENGINE DESCRIPTION								
MODEL YEAR	ENGINE FAMILY	ENGINE MANUFACTURER	EMISSION STD CATEGORY [2]	FUEL TYPE [1]	STANDARDS & TEST PROCEDURE	ENGINE SIZES (L)	ECS & SPECIAL FEATURES [3]	OBD COMPLIANCE
2011	BFMXE05.4AFF	FORD MOTOR COMPANY	ULEV	Gasoline	Otto	5.4	TWC, SFI, 2HO2S, 2HAFS	OBD(P)
	EXECUTIVE ORDER A-010-1612							

Gasoline, LPG or Alcohol Vehicles Only			VEHICLE DESCRIPTION				
EVAPORATIVE FAMILY	EVAPORATIVE UL (K)	FUEL TANK CAPACITY (gallons)	VEHICLE MODEL YEAR	VEHICLE MAKE & MODELS	ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)	OBD COMPLIANCE
BFMXF0265NAS	150	55	2011	E350	5.4	E350 Incomplete / BE414G05 (255)	OBD(P)
BFMXF0265NAS	150	40	2011	E350	5.4	E350 Incomplete / BE414F05 (255)	OBD(P)

* =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; **(2004may26)**

[1] **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;

[2] **SULEV / ULEV / LEV**=super ultra / ultra / low emission vehicle;

[3] 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); **TBI**=throttle body fuel injection; **SFI/MFI**=sequential/multi port fuel injection; **DGI**=direct gasoline injection; **GCARB**=gaseous carburetor; **IDI/DDI**=indirect/direct diesel injection; **TC/SC**=turbo/super charger; **CAC**=charge air cooler; **EGR**=exhaust gas recirculation; **PAIR/AIR**=pulsed/secondary air injection; **SPL**=smoke puff limiter; **OBD(F) / (P) / ($)**=full / partial / partial with a fine / on-board diagnostic; **ECM/PCM**=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 1956.8; 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, 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 dual- and flexible-fuel, the CERT values in brackets [ ] are those when tested on conventional test fuel.) [4]

	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	*	0.20	*	*	*	14.4	*	0.01	*	0.01	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.08	*	0.14	*	*	*	4.4	*	*	*	0.001	*
NTE	*		*		*		*		*		*	

[4] **g/bhp-hr**=grams per brake horsepower-hour; **FTP**=Federal Test Procedure; **EURO**=Euro III European Steady-State Cycle; **NTE**=Not-to-Exceed emission limit; **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 optional emission standards and test procedures in 13 CCR 1956.8 applicable to diesel or incomplete MDV with a 8501-14000 pound GVWR and shall be subject to 13 CCR 2139(c) (in-use testing of engines certified for use in diesel or incomplete MDV with a 8501-14000 pound GVWR).

BE IT FURTHER RESOLVED: For the listed vehicle models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1968.2 (on-board diagnostic, full or partial compliance), 13 CCR 1976(b)(1)(F) {evaporative emission standards}, 13 CCR 2035 et seq. (emission control warranty), and 13 CCR 2235 [fill pipes and openings of motor vehicle fuel tanks]. (The braces **{ }** are for gasoline, LPG or alcohol fueled vehicles only. The brackets **[ ]** are for gasoline or alcohol fueled vehicles only.)

Vehicles 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 8th day of July 2010.

Robert Kennedy for Annette Hebert

Annette Hebert, Chief
Mobile Source Operations Division

A-010-1613

E.O. # MDEV

2011 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY DUTY ENGINE

Manufacturer: Ford Motor Company Engine Family: BFMXE05.4AFF

Displacement: 5.4 Liter 330 Cubic Inches

All Eng Codes in Eng Family: CA___ 49S___ 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 F-Series Incomplete Engine Configuration V8

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

Engine Model (Engine Code)	Transmission	Ign. System or PCM Part No. -12A650-	Fuel System Injtr Part No. -9F593-	Catalyst Part No. -5E212-
Initial Certification				
E350 (40 gal)[1]				
BE414F05	Auto	BC2A – ACC	9C2E – A5A	9C24 – JF 9C24 – JE 9C24 – KE
E350 (55 gal)[1]				
BE414G05	"	BC2A – ADC	"	"

[1] EVAP family BFMXF0265NAS

Comments:

Prepared by: Batak 7-6-10

Reviewed by: P.A. 7/7/10

Test Group: BFMXE05.4AFF
Issued: May 11, 2010
Revised:

Large Engine Evaporative Emission Form

Manufacturer: Ford Motor Company

1. **Model Year:** 2011
2. **Date:** 5/11/2010
3. **Process Code:** New Submission
   (New Submission, Correction, Running Change)
4. **Test Data Set Number:** 1
5. **EPA Standardized Evaporative Family name:** BFMXF0265NAS
6. **Fuel:** E10
   (Gasoline, LPG, Methanol, CNG, Other)
7. A.) **Evaporative Certification Standard:** 86.008-10(b) - Otto Cycle
   (86.091-10(b) Otto Cycle, 86.091-11(b) Diesel, 86.096-10(b) Otto Cycle, 86.096-11(b) - Diesel, 86.098-11 Cycle)

   B.) **Weight Category:** 8501 < GVWR < 14k
   (GVWR <=14K, 14K < GVWR < 26k, GVWR >26K)

8. Evaporative Results

	Test #1	Test #2	Test #3	Calif. LEV-II
Procedure	Federal	Federal	- - -	Standards
Date of Test	2/12/2008	1/31/2008		
3-Day diurnal g/test		0.70		1.00
2-Day diurnal g/test	0.52			1.25
Running Loss g/test		0.00		0.05
Spit Back g/test				N/A

Note: Vehicle 184W401, 5.4L E450 Cutaway 55 gal, was used for the 3-Day, 2-Day and Running Loss testing.

9. Evaporative Family/Engine Comparison Information

Evaporative Family Code	Engine Manufacturer	Engine Family	Evap Control System
BFMXF0265NAS	Ford Motor Co.	BFMXE05.4AFF	Canister

Test Group: BFMXE05.4AFF
Issued: May 11, 2010
Revised: