

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-724  
Relating to Certification of New Motor Vehicles

FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by the 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-45-9;

IT IS ORDERED AND RESOLVED: That 1997 model-year Ford Motor Company exhaust emission control systems are certified as described below for medium-duty vehicles:

Emission Standard Category: Super-Ultra-Low-Emission Vehicle (SULEV)

Fuel Type: Compressed Natural Gas (CNG)

Engine Family: VFM5.468C7EK Displacement: 5.4 Liters (326 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

- Dual Warm-Up Three Way Catalytic Converters
- Three Way Catalytic Converter
- Dual Heated Oxygen Sensors
- Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The SULEV certification exhaust emission standards for this engine family in grams per mile are:

<u>Test Weight</u> (lbs.)	<u>Miles</u>	<u>Non-Methane</u> <u>Organic Gases</u>	<u>Carbon</u> <u>Monoxide</u>	<u>Nitrogen</u> <u>Oxides</u>	<u>Formaldehyde</u>
5751-8500	50,000	0.059	2.5	0.3	0.006
	120,000	0.084	3.7	0.45	0.008

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a reactivity adjustment factor (RAF) for 1997 model-year CNG-fueled medium-duty SULEVs.

BE IT FURTHER RESOLVED: That, as of the date of this order, the Air Resources Board has not proposed or adopted a RAF for medium-duty SULEVs operated on CNG. At the proposal of the manufacturer for the certification of the aforementioned engine family, and based on available data and analysis showing there is a strong likelihood that the RAF for such vehicles will be less than 1.000, the applicable RAF for the listed engine family shall be treated for all purposes relating to this certification as:

Reactivity Adjustment Factor for NMOG Mass Emission: 1.000

The SULEV certification exhaust emission values for this engine family in grams per mile are:

<u>Test Weight (lbs.)</u>	<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>
5751-8500	50,000	0.013	0.5	0.1	0.001
	120,000	0.018	0.8	0.23	0.002

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).


BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(5.1) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines").

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles 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 order and attachment.

Executed at El Monte, California this 23<sup>rd</sup> day of April 1997.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

E.O.# A-10-724

**1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**  
**PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES**

Manufacturer: Ford Motor Company Exhaust Engine Family: VFM5.468C7EK  
 Evap Standard: 50K N/A Useful Life with R/L \_\_\_\_\_ Evap Family: VFM00000GMKZ Alt. In Use X  
 Exhaust Std: Tier 0 \_\_\_ Tier 1 \_\_\_ TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ SULEV X ; EPA Tier 0 \_\_\_ Tier 1 \_\_\_  
 Vehicle Class(es): PC \_\_\_ LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 X MDV4 \_\_\_ MDV5 \_\_\_  
 Single Cert Std for Multi-Class Eng Fam: N/A (specify N/A, LDT1, MDV1, MDV2, MDV3, MDV4)  
 Exh Cert Fuel(s): Indo \_\_\_ Ph2 \_\_\_ Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG X LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline \_\_\_ Diesel \_\_\_ M85 \_\_\_  
 CNG X LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_  
 Engine Config: V-8 Liter (CID): 5.4 (326)  
 Engine: Front X Mid. \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features: 2WU-TWC/TWC/2HO2S/SFI  
 (Use abbreviations per SAE J1930, Sep 91)

Engine Code (California)	Vehicle Models	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No.	EGR System Part No.	Catalyst Part No.
746NR00A/N		A			F7UF-ACA	N/A	F7UA-5F250-JA (CC-RH/LH) F7UA-5F250-JB/C/D (Alt.) F7UA-5E212-TA (UB) F7UA-5E212-TB/C/D (Alt.)
	E-250 - RVL - NGV		7000	15.1			
	E-250 - RVL - NGV		7000	16.5*			
	E-250 - SVL - NGV		7000	15.1			
	E-250 - SVL - NGV		7000	16.5*			
	E-350 - RVL - NGV		7500	16.5			
	E-350 - RVL - NGV		7500	17.9*			
	E-350 - SVL - NGV		7500	15.6			
	E-350 - SVL - NGV		7500	17.0*			
	E-350 - SWL - NGV - 15		7500	14.7			
	E-350 - SWL - NGV - 15		7500	16.1*			
	E-350 - SWL - NGV - 12		8000	14.7			
	E-350 - SWL - NGV - 12		8000	16.1*			

\* WITH A/C

ENGINE FAMILY: VFM5.468C7EK

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ISSUED: 3-06-97

REVISED:

09 25 1997

E.O.# A-10-724

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 Exhaust Std: Tier 0 \_\_\_ Tier 1 \_\_\_ TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ SULEV X ; EPA Tier 0 \_\_\_ Tier 1 \_\_\_  
 Vehicle Class(es): PC \_\_\_ LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 X MDV4 \_\_\_ MDV5 \_\_\_  
 Single Cert Std for Multi-Class Eng Fam: N/A (specify N/A, LDT1, MDV1, MDV2, MDV3, MDV4)  
 Exh Cert Fuel(s): Indo \_\_\_ Ph2 \_\_\_ Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG X LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline \_\_\_ Diesel \_\_\_ M85 \_\_\_  
 CNG X LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_  
 Engine Config: V-8 Liter (CID): 5.4 (326)  
 Engine: Front X Mid. \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features: 2WU-TWC/TWC/2HO2S/SFI  
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Engine Code (California)	Vehicle Models	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No.	EGR System Part No.	Catalyst Part No.
746NR05A/N		A			F7UF-ACB	N/A	F7UA-5F250-JA (CC-RH/LH) F7UA-5F250-JB/C/D (Alt.) F7UA-5E212-TA (UB) F7UA-5E212-TB/C/D (Alt.)
	E-250 - RVL - NGV		7000	15.1			
	E-250 - RVL - NGV		7000	16.5*			
	E-250 - SVL - NGV		7000	15.1			
	E-250 - SVL - NGV		7000	16.5*			
	E-350 - RVL - NGV		7500	16.5			
	E-350 - RVL - NGV		7500	17.9*			
	E-350 - SVL - NGV		7500	15.6			
	E-350 - SVL - NGV		7500	17.0*			
	E-350 - SWL - NGV - 15		7500	14.7			
	E-350 - SWL - NGV - 15		7500	16.1*			
	E-350 - SWL - NGV - 12		8000	14.7			
	E-350 - SWL - NGV - 12		8000	16.1*			

\* WITH A/C

ENGINE FAMILY: VFM5.468C7EK

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R/C 5.4-23

ISSUED: APR 28 1997  
 REVISED: