

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-696  
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 passenger cars:

Emission Standard Category: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: VFM4.6V8G2EL Displacement: 4.6 Liters (280 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

- Dual Three Way Catalytic Converters (two)
- Dual Heated Oxygen Sensors (two)
- Exhaust Gas Recirculation
- Sequential Multiport Fuel Injection

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

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

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.125	3.4	0.4	0.015	10.0
100,000	0.156	4.2	0.6	0.018	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.98 RAF for 1997 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

<u>Miles</u>	<u>Non-Methane Organic Gases</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Formaldehyde</u>	<u>Carbon Monoxide (20°F)</u>
50,000	0.066	1.0	0.1	0.001	7.5
100,000	0.074	1.2	0.1	0.001	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average NMOG exhaust mass emission requirements as set forth 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 under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles", and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

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 vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit 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 Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

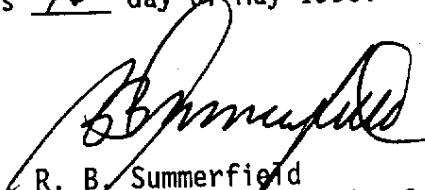
BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 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 16<sup>th</sup> day of May 1996.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

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

Manufacturer: Ford Motor Company Exhaust Engine Family: VFM4.6V8G2EL  
 Evap Standard: 50K \_\_\_ Useful Life with R/L X Evap Family: TFM1090AYMED  
 Exhaust Std: Tier 0 \_\_\_ Tier 1 \_\_\_ TLEV X LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_ ; EPA Tier 0 \_\_\_ Tier 1 \_\_\_  
 Vehicle Class(es): PC X LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ 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 X Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
 CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_  
 Engine Config: V-8 Liter (CID): 4.6 (280.0)  
 Engine: Front X Mid \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features: SFI/2HO2S(2)/EGR/2TWC(2)  
 (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.
718MR00A	FORD AFC (CROWN VICTORIA)	A	4000	8.7 <sup>1</sup> 9.9 <sup>2</sup>	F7AF-FA -12A650-	F6AE-BA/F6AE-AE -9D475/9D477-	F6AC-DA/ F6AC-DB
	MERCURY MFA (GRAND MARQUIS)	A	4000	9.4 <sup>1</sup> 10.1 <sup>2</sup>			
718NR00A	FORD AFC	A	4000	8.7 <sup>1</sup> 9.9 <sup>2</sup>	F7AF-GA	F6AE-BA/F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>1</sup> 10.1 <sup>2</sup>			
718QR00A	LINCOLN VFC	A	4250	8.6 <sup>1</sup> 10.5 <sup>2</sup>	F7AF-CA	"	"
718SR00A	*RIQBCAR)			8.6 <sup>3</sup>	F7AF-DA	"	"
718SR00A	(TOWN CAR) LINCOLN VFL	A	4250	8.6	F7AF-DA	"	"

<sup>1</sup> P215/70R15  
<sup>2</sup> P225/60R16  
<sup>3</sup> P225/75R15

E.O.# A-10-696

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

Manufacturer: Ford Motor Company Exhaust Engine Family: **VFM4.6V8G2EL**  
 Evap Standard: 50K X Useful Life with R/L \_\_\_\_\_ Evap Family: **VFM1090AYMED**  
 Exhaust Std: Tier 0 \_\_\_ Tier 1 \_\_\_ TLEV X LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_ ; EPA Tier 0 \_\_\_ Tier 1 \_\_\_  
 Vehicle Class(es): PC X LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ 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 X Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
 CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_  
 Engine Config: V-8 Liter (CID): 4.6 (280.0)  
 Engine: Front X Mid \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features: SFI/2HO2S(2)/EGR/2TWC(2)  
 (Use abbreviations per SAE J1930, Sep 91)

Engine Code (California)	Vehicle Models	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No. <del>-12A650-</del>	EGR System Part No. <del>-9D475/9D477-</del>	Catalyst Part No. <del>-5E212-</del>
718MR05	FORD AFC	A	4000	8.7 <sup>*1</sup> 9.9 <sup>*2</sup>	F7AF-FB	F6AE-BA/F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>*1</sup> 10.1 <sup>*2</sup>			"
718NR05A	FORD AFC	A	4000	8.7 <sup>*1</sup> 9.9 <sup>*2</sup>	F7AF-GB	F6AE-BA/F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>*1</sup> 10.1 <sup>*2</sup>			"
718QR05A 718SR05A	LINCOLN VFC	A	4250	8.6 <sup>*1</sup> 10.5 <sup>*2</sup> 8.6 <sup>*3</sup>	F7VF-CB F7VF-DB	" "	" "
718SR05A	LINCOLN VFL	A	4250	8.6 <sup>*3</sup>	F7VF-DB	"	"

<sup>\*1</sup> P215/70R15

<sup>\*2</sup> P225/60R16

<sup>\*3</sup> P225/75R15

ENGINE FAMILY: VFM4.6V8G2EL

20.09.17.02 - 2

R/C 4.6-2V-005

ISSUED: 6/10/96

REVISED: 7/1/96, 7/15/96

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

Manufacturer: Ford Motor Company Exhaust Engine Family: **VFM4.6V8G2EL**

Evap Standard: 50K X Useful Life with R/L \_\_\_\_\_ Evap Family: **VFM1090AYMED**

Exhaust Std: Tier 0 \_\_\_ Tier 1 \_\_\_ TLEV X LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_; EPA Tier 0 \_\_\_ Tier 1 \_\_\_

Vehicle Class(es): PC X LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ 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 X Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_

Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_\_\_

Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_, APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_

Engine Config: V-8 Liter (CID): 4.6 (280.0)

Engine: Front X Mid \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_

Exhaust ECS & Special Features: SFI/2HO2S(2)/EGR/2TWC(2)  
(Use abbreviations per SAE J1930, Sep 91)

Engine Code (California)	Vehicle Models	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No. <u>-12A650-</u>	EGR System Part No. <u>-9D475/9D477-</u>	Catalyst Part No. <u>-5E212-</u>
718MR06	FORD AFC	A	4000	8.7 <sup>1</sup> 9.9 <sup>2</sup>	F7AF-FC	F6AE-BA/F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>1</sup> 10.1 <sup>2</sup>			"
718NR06A	FORD AFC	A	4000	8.7 <sup>1</sup> 9.9 <sup>2</sup>	F7AF-GC	F6AE-BA/F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>1</sup> 10.1 <sup>2</sup>			"
718QR06A 718SR06A	LINCOLN VFC	A	4250	8.6 <sup>1</sup> 10.5 <sup>2</sup> 8.6 <sup>3</sup>	F7VF-CC F7VF-DC	"	"
718SR06A	LINCOLN VFL	A	4250	8.6 <sup>3</sup>	F7VF-DC	"	"

<sup>1</sup>P215/70R15

<sup>2</sup>P225/60R16

<sup>3</sup>P225/75R15

ENGINE FAMILY: VFM4.6V8G2EL

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R/C 4.6-2V-013

ISSUED: 7/15/96

REVISED:

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY Eng. Family: VFM4.6V8G2EL  
 Evap Standard: 50K Useful life with R/L X Evaporative Family: VFM1190AYMED  
 Exhaust Std: Tier 0    Tier1    TLEV X LEV    ULEV    ZEV   ; EPA Tier 0    Tier1     
 Vehicle Class(es): PC X LDT1    LDT2    MDV1    MDV2    MDV3    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 X Diesel: 13CCR 2282    or 40CFR86.113.90    or -94  
 M85    CNG    LPG    Other (specify)     
 Fuel Type(s): Dedicated    Flex-Fuel    Dual-Fuel    Gasoline X Diesel    M85     
 CNG    LNG    LPG    Other (specify)     
 Hybrid: Type A    B    C   , APU Cycle (e.g., Otto, Diesel, Turbine)     
 Engine Config: V-8 Liter (CID): 4.6L (280)  
 Engine: Front X Mid    Rear    Drive: FWD X RWD    4WD-FT    4WD-PT     
 Exhaust ECS & Special Features:(incl. CARB, MFI) 2TWC(2) / 2HO2S(2)/EGR, SFI  
 (Use abbreviations per SAE J1930 May91)

Engine Code (Cert Std.)	Vehicle Models (if coded see attachment)	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No.	EGR System Part No.	Catalyst Part No.
718MR10A	FORD AFC	A	4000	8.7 <sup>(1)</sup> 9.9 <sup>(2)</sup>	F7AF-FC -12A650-	F6AE-BA F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>(1)</sup> 10.1 <sup>(2)</sup>			
718NR10A	FORD AFC	A	4000	8.7 <sup>(1)</sup> 9.9 <sup>(2)</sup>	F7AF-GC	F6AE-BA F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>(1)</sup> 10.1 <sup>(2)</sup>			
718QR10A 718SR10A	LINCOLN VFC	A	4250	8.6 <sup>(1)</sup> 10.5 <sup>(2)</sup> 8.6 <sup>(3)</sup>	F7VF-CC F7VF-DC		
718SR10A	LINCOLN VFL	A	4250	8.6 <sup>(3)</sup>	F7VF-DC		

(1) P215/70R15  
 (2) P225/60R16  
 (3) P225/75R15

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY Eng. Family: VFM4.6V8G2EL  
 Evap Standard: 50K X Useful life with R/L      Evaporative Family: VFM1190AYMED  
 Exhaust Std: Tier 0      Tier1      TLEV X LEV      ULEV      ZEV     ; EPA Tier 0      Tier1       
 Vehicle Class(es): PC X LDT1      LDT2      MDV1      MDV2      MDV3      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 X Diesel: 13CCR 2282      or 40CFR86.113.90      or -94  
 M85      CNG      LPG      Other (specify)       
 Fuel Type(s): Dedicated      Flex-Fuel      Dual-Fuel      Gasoline      X Diesel      M85       
 CNG      LNG      LPG      Other (specify)       
 Hybrid: Type A      B      C     , APU Cycle (e.g., Otto, Diesel, Turbine)       
 Engine Config: V-8 Liter (CID): 4.6L (280)  
 Engine: Front X Mid.      Rear      Drive: FWD X RWD      4WD-FT      4WD-PT       
 Exhaust ECS & Special Features:(incl. CARB, MFI) 2TWC(2) / 12HO2S(2)/EGR, SFI  
 (Use abbreviations per SAE J1930 May91)

Engine Code (Cert Std.)	Vehicle Models (if coded see attachment)	Trans. Type A-Automatic M-Manual	ETW	DPA	Ignition (PCM) Part No. <del>-12A650-</del>	EGR System Part No. <del>-9D475/9D477-</del>	Catalyst Part No. <del>-5E212-</del>
718MR11A	FORD AFC	A	4000	8.7 <sup>(1)</sup> 9.9 <sup>(2)</sup>	F7AF-FE	F6AE-BA F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>(1)</sup> 10.1 <sup>(2)</sup>			
718NR11A	FORD AFC	A	4000	8.7 <sup>(1)</sup> 9.9 <sup>(2)</sup>	F7AF-GE	F6AE-BA F6AE-AE	F6AC-DA F6AC-DB
	MERCURY MFA	A	4000	9.4 <sup>(1)</sup> 10.1 <sup>(2)</sup>			
718QR11A 718SR11A	LINCOLN VFC	A	4250	8.6 <sup>(1)</sup> 10.5 <sup>(2)</sup> 8.6 <sup>(3)</sup>	F7VF-CE F7VF-DE		
718SR11A	LINCOLN VFL	A	4250	8.6 <sup>(3)</sup>	F7VF-DE		

(1) P215/70R15  
 (2) P225/60R16  
 (3) P225/75R15