State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-645
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 1996 model-year Ford Motor Company exhaust emission control systems are certified as described below for passenger cars:

Emission Standard Category: Ultra-Low Emission Vehicle (ULEV)

Fuel Type: Compressed Natural Gas (CNG)

Engine Family: TFM4.6V8C7EK Displacement: 4.6 Liters (278 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 ULEV certification exhaust emission standards for this engine family in grams per mile are:

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde
50,000	0.040	1.7	0.2	0.008
100,000	0.055	2.1	0.3	0.011

The certification exhaust emission values set forth for non-methane organic gas (NMOG) reflect application of a reactivity adjustment factor (RAF) for CNG-fueled passenger car ULEVs, and the addition of the product of the methane exhaust emission value and a RAF for methane emission of CNG-fueled passenger car ULEVs.

BE IT FURTHER RESOLVED: That, as of the date of this order, the Air Resources Board (the Board or ARB) has not adopted a RAF for passenger car ULEVs operated on CNG. At the proposal of the manufacturer for the certification of the aforementioned engine family, and based on available data and analysis, 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

BE IT FURTHER RESOLVED: That, as of the date of this order, the ARB has not adopted a methane RAF for passenger car ULEVs operated on CNG. The manufacturer has elected to apply towards the certification of this engine family a methane RAF of 0.0047. The methane RAF of 0.0047 for CNG-operated passenger car ULEVs is also being proposed for adoption by the Board in a September 28, 1995, public hearing as amendments to the "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles". In the event these amendments do not become effective, the methane RAF for the listed vehicles will be deemed equal to the numerical value of the currently effective methane RAF for passenger car low-emission vehicles operated on CNG (0.0047). The applicable methane RAF for the listed engine family shall be treated for all purposes relating to this certification as:

Reactivity Adjustment Factor for Methane Mass Emission: 0.0047

The ULEV certification exhaust emission values for this engine family in grams per mile are: (The value in parentheses is the actual certification value before rounding off.)

Miles	Non-Methane Organic Gas	Carbon Monoxide	Nitrogen Oxides	Formaldehyde
50,000	0.029	0.4	0.0 (0.04)	0.003
100,000	0.043	0.6	0.1	0.004

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 non-methane organic gas (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 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 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 25th day of September 1995.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

E.O.# A-10-645

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY Eng. Family: TFM4.6V8C7EK

Pass Car: X (PC) Light-Duty Truck: __(T1/T2) Med-Duty Vehicle: __ (M1/M2/M3/M4/M5)

Standards Type: ULEV (Tier 0/1, AB965, TLEV,LEV,ULEV) Vehicle Type: (FFV,HEV(type A/B/C)

Fuel Type: NATURAL GASOLINE Evaporative Family: TFM00000GMEZ

Engine Config: V-8 Liter (CID): 4.6L (278)

Engine: Front X Mid.__ Rear__ Drive: FWD__ RWD X 4WD-FT__ 4WD-PT_

Exhaust ECS & Special Features:(incl. CARB, MFI) 2TWC (2) ,2 HO2S (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 (ECM/PCM) Part No.	EGR System Part No.	Catalyst Part No.
618LR05A	CROWN VIC	A	4500	7.8	F6AF-FB	F6AE-AA	F6AC-CB (5E212) F6AC-CB (5E214)
618LR05A	CROWN VIC POLICE	A	4500	9.8	F6AF-FB	F6AE-AA	F6AC-CB (5E212) F6AC-CB (5E214)
618LR06A	CROWN VIC	A	4500	7.8	F6AF-FC	F6AE-AA	F6AC-CB (5E212) F6AC-CB (5E214)
618LR06A	CROWN VIC POLICE	A	4500	9.8	F6AF-FC	F6AE-AA	F6AC-CB (5E212) F6AC-CB (5E214)