File



State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-749
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 1998 model-year Ford Motor Company exhaust emission control systems are certified as described below for passenger cars:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: WFMXV04.6AAA Displacement: 4.6 Liters (280 Cubic Inches)

Exhaust Emission Control Systems & 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 LEV certification exhaust emission standards for this engine family in grams per mile are:

| Miles | Non-Methane Organic Gases | Carbon Monoxide | Nitrogen Oxides | Formaldehyde | Carbon Monoxide (20°F) |
|---|---|---|---|---|---|
| 50,000 | 0.075 | 3.4 | 0.2 | 0.015 | 10.0 |
| 100,000 | 0.090 | 4.2 | 0.3 | 0.018 | n/a |

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.94

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.94 RAF for 1998 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

| Miles | Non-Methane Organic Gases | Carbon Monoxide | Nitrogen Oxides | Formaldehyde | Carbon Monoxide (20°F) |
|---|---|---|---|---|---|
| 50,000 | 0.064 | 0.9 | 0.1 | 0.001 | 3.1 |
| 100,000 | 0.079 | 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 vehicle manufacturer is certifying the listed vehicle models to the "California Refueling Emission Standards and Test Procedures for 1998 and Subsequent Model Motor Vehicles," Title 13, California Code of Regulations, Section 1978, 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 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 listed vehicle models shall be clearly labeled as "low-emission motor vehicle" pursuant to the requirements of Health and Safety Code Section 43802(a).

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 "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

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 7th day of October 1997.

Raphael Susnowitz

for R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# A-10-749

# 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY  Eng. Family: WFMXV04.6AAA

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

Fuel Type: Dedicated Gasoline

Standards Type: LEV

Exh. Cert Fuel: PHASE II  Evaporative Family: WFMXR0115BAE

ORVR: YES

R/L T.P. Pt. Source

Evap T.P. Eqd

Engine Config: V-8  Liter (CID): 4.6L (280)

Engine: Front X  Mid. __  Rear __  Drive: FWD __  RWD X  4WD-FT __  4WD-PT __

NMOG T.P. Equiv

Service Accum: ADT

Exhaust ECS & Special Features:(incl. CARB, MFI 2TWC(2)/2HO2S/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. |
|---|---|---|---|---|---|---|---|
| 818MR08A | CROWN VIC. | A | 4250 | 10.5 | F8AF-EC | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818MR08A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-EC | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR08A | CROWN VIC. | A | 4250 | 10.5 | F8AF-FD | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR08A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-FD | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818QR08A | TOWN CAR | A | 4250 | 9.8 | F8AF-DC | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR08A | TOWN CAR | A | 4250 | 10.7<br>10.5[1] | F8AF-FD | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |

P235/60R16
P225/60R16

[1] DPA DIFFERENCE DUE TO TIRES



Date Issued: SEP 28 1997
Revised:

E.O.# A-10-749

# 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY  Eng. Family: **WFMXV04.6AAA**

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

Standards Type: LEV (Tier 0/1, AB965, TLEV,LEV,ULEV)  Vehicle Type: (FFV,HEV(type A/B/C)__
Fuel Type: PHASE II  Evaporative Family: **WFMXR0115BAE**

Engine Config: V-8  Liter (CID): 4.6L (280)

Engine: Front X  Mid.__  Rear__  Drive: FWD__  RWD X  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 (ECM/PCM) Part No. | EGR System Part No. | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 818MR10A | CROWN VIC. | A | 4250 | 10.5 | F8AF-EE | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818MR10A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-EE | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR10A | CROWN VIC. | A | 4250 | 10.5 | F8AF-FF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR10A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-FF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818QR10A | TOWN CAR | A | 4250 | 9.8 | F8AF-DE | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR10A | TOWN CAR | A | 4250 | 10.7<br>10.5[1] | F8AF-EF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |

P235/60R16 → 10.7
P225/60R16 → 10.5[1]

[1] DPA DIFFERENCE DUE TO TIRES (10.5 - P225/MICH vs 10.7 - P235/MICH)

20.09.17.02 -3

Date Issued:
Revised: 10/06/97

E.O.# A-10-749

# 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer: FORD MOTOR COMPANY  Eng. Family: **WFMXV04.6AAA**

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

Standards Type: LEV (Tier 0/1, AB965, TLEV,LEV,ULEV)  Vehicle Type: (FFV,HEV(type A/B/C)__
Fuel Type: PHASE II  Evaporative Family: **WFMXR0115BAE**

Engine Config: V-8  Liter (CID): 4.6L (280)

Engine: Front X  Mid.__  Rear__  Drive: FWD__  RWD X  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 (ECM/PCM) Part No. | EGR System Part No. | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 818MR11A | CROWN VIC. | A | 4250 | 10.5 | F8AF-EF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818MR11A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-EF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR11A | CROWN VIC. | A | 4250 | 10.5 | F8AF-FG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR11A | GRAND MARQ. | A | 4250 | 10.5 | F8AF-FG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818QR11A | TOWN CAR | A | 4250 | 9.8 | F8AF-DF | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR | A | 4250 | 10.7<br>10.5[1] | F8AF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |

P235/60R16 → 10.7
P225/60R16 → 10.5[1]

[1] DPA DIFFERENCE DUE TO TIRES  10.7/P235/MICH - 10.5/P225/MICH

20.09.17.02 -3

Date Issued:
Revised:

E.O.# A-10-749

# 1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

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Standards Type: LEV (Tier 0/1, AB965, TLEV,LEV,ULEV)  Vehicle Type: (FFV,HEV(type A/B/C)__
Fuel Type: PHASE II  Evaporative Family: **WFMXR0115BAE**

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Engine: Front X  Mid.__  Rear__  Drive: FWD__  RWD X  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 (ECM/PCM) Part No. | EGR System Part No. | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 818SR11A | TOWN CAR LIMOUSINE | A | 4750 | 10.6 | F8vF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR LIMOUSINE | A | 5250 | 10.6 | F8vF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR LIMOUSINE | A | 5500 | 10.6 | F8vF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR LIMOUSINE | A | 6000 | 10.6 | F8vF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR HEARSE | A | 5500 | 11.8 | F8vF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |



Date Issued:
Revised:
DEC 0 5 1997

E.O.# A-10749

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Standards Type: LEV (Tier 0/1, AB965, TLEV,LEV,ULEV)  Vehicle Type: (FFV,HEV(type A/B/C)__
Fuel Type: PHASE II  Evaporative Family: **WFMXR0115BAE**

Engine Config: V-8  Liter (CID): 4.6L (280)

Engine: Front X  Mid.__  Rear__  Drive: FWD__  RWD X  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 (ECM/PCM) Part No. | EGR System Part No. | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 818MR12A | CROWN VIC. | A | 4250 | 10.5 | F8VF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818MR12A | GRAND MARQ. | A | 4250 | 10.5 | F8VF-EG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR12A | CROWN VIC. | A | 4250 | 10.5 | F8VF-FH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818NR12A | GRAND MARQ. | A | 4250 | 10.5 | F8VF-FH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818QR12A | TOWN CAR | A | 4250 | 9.8 | F8VF-DG | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR12A | TOWN CAR | A | 4250 | 10.7<br>10.5(1) | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR12A | TOWN CAR LIMOUSINE | A | 4750 | 10.6 | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |



Date Issued:
Revised: DEC 08 1997

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 818SR12A | TOWN CAR LIMOUSINE | A | 5250 | 10.6 | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR12A | TOWN CAR LIMOUSINE | A | 5500 | 10.6 | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR LIMOUSINE | A | 6000 | 10.6 | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |
| 818SR11A | TOWN CAR HEARSE | A | 5500 | 11.8 | F8VF-EH | F6AE-BA | F8AC-5E212-AA<br>F8AC-5E212-AB<br>F8AC-5E214-AA<br>F8AC-5E214-AB |

(1) DPA DIFFERENCE DUE TO TIRES (10.5 - P225/MICH vs 10.7 - P235/MICH)



Date Issued:
Revised: 08 1997