State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-319
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 Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1987 model-year Ford Motor Company exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

| Engine Family | Displacement Cubic Inches | (Liters) | Exhaust Emission Control Systems (Special Features) |
|---|---|---|---|
| HFM5.0V5HBC7 | 302 | (5.0) | Air Injection - Pump<br>Exhaust Gas Recirculation<br>Dual Three-Way Catalyst<br>Dual Oxidation Catalyst<br>Dual Heated Oxygen Sensors<br>(Electronic Fuel Injection) |

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

The following are the emission standards for this engine family:

| Hydrocarbons Grams per Mile | Carbon Monoxide Grams per Mile | Nitrogen Oxides Grams per mile |
|---|---|---|
| 0.39 | 7.0 | 0.7 |

The following are the certification emission values for this engine family:

| Hydrocarbons Grams per Mile | Carbon Monoxide Grams per Mile | Nitrogen Oxides Grams per Mile |
|---|---|---|
| 0.18 | 0.3 | 0.4 |

BE IT FURTHER RESOLVED: That the listed models were certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

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" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards as stipulated in "California Exhaust Emission Standards and Test Procedures for 1981 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) 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 regulations (Title 13, California Administrative Code, Section 2035 et seq.) and with Health and Safety Code Section 43204.

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 29th day of July, 1986.

K. D. Drachand, Chief
Mobile Source Division

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# 1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET



Manufacturer Ford Motor Company

Engine Family HFM5.0V5HBC7

Evaporative Family 7HM

Engine Type V8 ~~Otto Cycle~~

Liters (CID) 5.0 (302)

ABBREVIATIONS

**Ignition System**

CA-Centrifugal Advance
✓EEC-Electronic Engine Control
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA-Vacuum Advance
VR-Vacuum Retard

**Exhaust Emissions Control System**

✓AIP-Air Injection-Pump
AIV-Air Injection-Valve
CL-Closed Loop
✓EGR-Exhaust Gas Recirculation
EM-Engine Modification
OC-Oxidation Catalyst System
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
TR-Thermal Reactor
✓TWC-Three-Way Catalyst System

**Special Features**

CCV-Combustion Chamber Valve
CFI-Central Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection-Prechamber
✓EFI-Electronic Fuel Injection
IC-Intercooler or aftercooler
MFI-Mechanical Fuel Injection
TC-Turbocharger

**Fuel System**

CFI, CL, DID, DIP, EFI, MFI
nV-nVenturi Carburetor

**VEHICLE MODELS:**

| VEHICLE LINE | BODY STYLE | NAME PLATE |
|---|---|---|
| Mark VII 63D | 2 door | Lincoln Mark VII<br>Lincoln Mark VII Bill Blass Designer Series |
| Mark LSC 63D | 2 door | Lincoln Mark VII LSC |
| Continental 54D | 4 door | Lincoln Continental Givenchy Designer Series |

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VEHICLE MODELS:

| VEHICLE LINE | BODY STYLE | NAME PLATE |
|---|---|---|
| Ford 74K | Station Wagon | LTD Crown Victoria<br>LTD Crown Victoria LX<br>LTD Country Squire<br>LTD Country Squire LX |
| Ford 66K | 2 door | LTD Crown Victoria<br>LTD Crown Victoria LX |
| Ford 54K | 4 door | LTD Crown Victoria<br>LTD Crown Victoria LX |
| Mercury 74K | Station Wagon | Grand Marquis<br>Grand Marquis LX |
| Mercury 66K | 2 door | Grand Marquis<br>Grand Marquis LX |
| Mercury 54K | 4 door | Grand Marquis<br>Grand Marquis LX |
| Mustang 66B | 2 door | Mustang LX |
| Mustang 61B | 3 door | Mustang LX<br>Mustang GT |
| Mustang B2L | Convertible | Mustang LX<br>Mustang GT |
| Thunderbird 63D | 2 door | Thunderbird<br>Thunderbird LX |
| Cougar 66D | 2 door | Cougar LS<br>Cougar XR-7 |
| Town Car 54D | 4 door | Lincoln Town Car<br>Lincoln Town Car Signature Series<br>Lincoln Town Car Cartier Designer Series |

Engine: Front XX Mid. _____ Rear _____

Drive: FWD _____ RWD XX 4WD Full Time _____ 4WD Part Time _____

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type Manual | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 721PROOA | MUST-61B (9.9) (non-GT) | M5X335 | 3500 | E7SF-BA | E6TE-AB | E6AE-CA E6AE-DA (alt) | E6ZC-BA (-5F250-) |
| | MUST-61B (9.0) (GT) | | | | | | |
| | MUST-66B (10.1) | | 3375 | | | | |
| | MUST-B2L (10.2) | | 3625 | | | | |
| 721PROON | MUST-61B (9.0) (non-GT) | | 3500 | | | | |
| | MUST-61B (8.2) (GT) | | | | | | |
| | MUST-66B (9.2) | | 3375 | | | | |
| | MUST-B2L (9.3) | | 3625 | | | | |

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

Date of Issue 7-22-86 Revisions:

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type ____

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 622LR10A | MRK7-63D (10.1) | AOX070 | 4000 | E6SF-LC | E6TE-AB | E6AE-CA<br>E6AE-DA (alt) | E6LC-BA (-5F250-) |
| 722FR00A | TBR3-63D (8.1) | AOX059 | 3750 | E7SF-GB | E67E-BB<br>E67E-BA (alt) | E6AE-CA<br>E6AE-DA (alt) | E6SC-AA (-5F250-) |
| | COUG-66D (9.1) | | | | E59E-AB (alt) | | E6SC-AA (-5E212-) |
| | COUG-66D (Cougar XR7) (10.1)1/ (10.6)2/ | | | | | | |
| 722FR00N | TBR3-63D (7.4) | | 3625 | | | | |
| | COUG-66D (8.3) | | 3750 | | | | |
| | COUG-66D (Cougar XR7) (9.2)1/ (9.6)2/ | | | | | | |

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.
1/ P22560VR15 @ 30/30 psi 2/ P22560VR15 @ 26/26 psi

Date of Issue 7-22-86 Revisions: 7-8-87 (R/C 5.0-9)

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 Otto Cycle

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 722PROOA | MUST-61B (9.9) (non-GT) | AOXO74 AOXO70 | # 3625 | E7SF-EA | E6TE-AB | E6AE-CA E6AE-DA (alt) | E6ZC-BA (-5F250-) |
| | MUST-61B (9.0) (GT) | | | | | | |
| | MUST-66B (10.1) | | 3500 | | | | |
| | MUST-B2L (10.2) | | # 3750 | | | | |
| 722PROON | MUST-61B (9.0) (non-GT) | | # 3500 2/ | | | | |
| | MUST-61B (8.2) (GT) | | | | | | |
| | MUST-66B (9.2) | | 3500 | | | | |
| | MUST-B2L (9.3) | | # 3750 | | | | |
| | | | 2/ Dual Cert | | | | |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 722QROOA | LNCP-54D (13.3)<br><br>FORD-74K<br>(13.1) 1/<br>(13.8) 2/<br><br>FORD-66K<br>(12.6) 1/<br>(13.5) 2/<br><br>FORD-54K<br>(12.6) 1/<br>(13.5) 2/<br>(14.3) 3/<br><br>MERC-74K<br>(13.1) 1/<br>(13.8) 2/<br><br>MERC-66K<br>(12.6) 1/<br>(13.5) 2/<br><br>MERC-54K<br>(12.6) 1/<br>(13.5) 2/ | AOXO59 | 4250 | E7SF-NA | E67E-BB<br>E67E-BA<br>(alt)<br>E67E-AA<br>(alt)<br>E67E-AB<br>(alt) | E6AE-CA<br>E6AE-DA<br>(alt) | E6AC-BB<br>(-5E212-)<br><br>E6AC-BB<br>(-5E214-) |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 722QROON | FORD-74K<br>(11.9) 1/<br>(12.5) 2/ | AOX059 | 4250 | E7SF-NA | E67E-BB<br>E67E-BA (alt)<br>E67E-AA (alt)<br>E67E-AB (alt) | E6AE-CA<br>E6AE-DA (alt) | E6AC-BB (-5E212-)<br>E6AC-BB (-5E214-) |
| | FORD-66K<br>(11.5) 1/<br>(12.3) 2/ | | 4000<br>4250 | | | | |
| | FORD-54K<br>(11.5) 1/<br>(12.3) 2/<br>(13.0) 3/ | | | | | | |
| | MERC-74K<br>(11.9) 1/<br>(12.5) 2/ | | | | | | |
| | MERC-66K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |
| | MERC-54K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 722RROOA | MRK7-63B(10.1) | AOXO68<br>AOXO59 | 4000 | E7SF-GB | E67E-BB<br>E67E-BA (alt)<br>E59E-AA (alt)<br>E59E-AB (alt) | E6AE-CA<br>E6AE-DA (alt) | E6LC-CB (-5F250-)<br>E6LC-BC (-5E212-) |
| 722SROOA | FORD-66K (12.6) 1/ (13.5) 2/<br>FORD-54K (12.6) 1/ (13.5) 2/ (14.3) 3/<br>MERC-66K (12.6) 1/ (13.5) 2/<br>MERC-66K (12.6) 1/ (13.5) 2/ | AOXO69 | 4250 | E7SF-JA | | | E6AC-BB (-5E212-)<br>E6AC-BB (-5E214-) |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 722SROON | FORD-66K<br>(11.5) 1/<br>(12.3) 2/ | AOX069 | 4000 | E7SF-JA | E67E-BB<br>E67E-BA<br>(alt) | E6AE-CA<br>E6AE-DA<br>(alt) | E6AC-BB<br>(-5E212-)<br>E6AC-BB<br>(-5E214-) |
| | FORD-54K<br>(11.5) 1/<br>(12.3) 2/<br>(13.0) 3/ | | 4250 | | E59E-AA<br>(alt)<br>E59E-AB<br>(alt) | | |
| | MERC-66K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |
| | MERC-54K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 723RROOA | LNCP-54D (13.3)<br>FORD-74K (13.1) 1/ (13.8) 2/<br>FORD-66K (12.6) 1/ (13.5) 2/<br>FORD-54K (12.6) 1/ (13.5) 2/ (14.3) 3/<br>MERC-74K (13.1) 1/ (13.8) 2/<br>MERC-66K (12.6) 1/ (13.5) 2/<br>MERC-54K (12.6) 1/ (13.5) 2/ | AOXO61 | 4250 | E7SF-UA | E67E-BB<br>E67E-BA (alt)<br>E59E-AA (alt)<br>E59E-AB (alt) | E6AE-CA<br>E6AE-DA (alt) | E6AC-BB (-5E212-)<br>E6AC-BB (-5E214-) |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 ~~Otto Cycle~~

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type AOD | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 23RROON | FORD-74K<br>(11.9) 1/<br>(12.5) 2/ | AOX061 | 4250 | E7SF-UA | E67E-BB<br>E67E-BA (alt)<br>E59E-AA (alt)<br>E59E-AB (alt) | E6AE-CA<br>E6AE-DA (alt) | E6AC-BB (-5E212-)<br>E6AC-BB (-5E214-) |
| | FORD-66K<br>(11.5) 1/<br>(12.3) 2/ | | 4000 | | | | |
| | FORD-54K<br>(11.5) 1/<br>(12.3) 2/<br>(13.0) 3/ | | 4250 | | | | |
| | MERC-74K<br>(11.9) 1/<br>(12.5) 2/ | | | | | | |
| | MERC-66K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |
| | MERC-54K<br>(11.5) 1/<br>(12.3) 2/ | | | | | | |

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Passenger Cars X Light-Duty Trucks ____ Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer Ford Motor Company Engine Family HFM5.0V5HBC7

Liter (CID) 5.0L (302) Eng. Type V8 Otto Cycle

Emission Control Sys. (Special Features) EEC/EFI/EGR/EGS/AIP/TWC

| Engine Code | Vehicle Models (If Coded see attachment) (Dyno Hp) | Trans. Type Manual | Equiv. Test Weight | Ign. System EEC IV Part No. -12A650- | Fuel System Part No. -9F593- | EGR Valve Part No. -9F483- | Catalyst Part No. |
|---|---|---|---|---|---|---|---|
| 21PR05A * | MUST-61B (9.9) (non-GT) | M5X335 | 3500 | E7SF-BB * | E6TE-AB | E6AE-CA<br>E6AE-DA (alt)<br>E7AE-AA * (alt) | E6ZC-BA (-5F250-) |
| | MUST-61B (9.0) (GT) | | | | | | |
| | MUST-66B (10.1) | | # 3500 | | | | |
| | MUST-B2L (10.2) | | 3625 | | | | |
| 21PR05N * | MUST-61B (9.0) (non-GT) | | 3500 | | | | |
| | MUST-61B (8.2) (GT) | | | | | | |
| | MUST-66B (9.2) | | # 3375 2/ | | | | |
| | MUST-B2L (9.3) | | 3625 | | | | |
| | | | 2/ Dual Cert. | | | | |