

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-314
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 light-duty trucks:

| <u>Engine Family</u> | <u>Displacement Cubic Inches (Liters)</u> | <u>Exhaust Emission Control Systems (Special Features)</u> |
|----------------------|---|--|
| HFM2.3T5FGGX | 140 (2.3) | Exhaust Gas Recirculation Three-Way Catalysts (Two) Oxygen Sensor (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:

| <u>Equivalent Inertia Weight</u> | <u>Hydrocarbons Grams per Mile</u> | <u>Carbon Monoxide Grams per Mile</u> | <u>Nitrogen Oxides Grams per mile</u> |
|--|--|---|---|
| 0-3999 | 0.39 | 9.0 | 1.0 |

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

| <u>Equivalent Inertia Weight</u> | <u>Hydrocarbons Grams per Mile</u> | <u>Carbon Monoxide Grams per Mile</u> | <u>Nitrogen Oxides Grams per Mile</u> |
|--|--|---|---|
| 0-3999 | 0.21 | 3.5 | 0.3 |

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 22nd day of July, 1986.



K. D. Drachand, Chief
Mobile Source Division

Manufacturer Ford Motor Company Engine Family HFM2.3T5FGGX (~~H2.3TGG~~)
 Evaporative Family 7HM Engine Type I4
 Liters (CID) 2.3 (140)

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:

Ranger 4x2
 Regular Cab (SWB, LWB)
 Super Cab (SWB)

Ranger 4x4
 Regular Cab (SWB, LWB)
 Super Cab (SWB)

Aerostar 4x2
 Van (SWB)
 Bus (SWB)

Engine: Front X Mid. Rear

Drive: FWD RWD X 4WD Full Time 4WD Part Time X
 Engine Family H2.3TGG

| | | | | | | | | |
|------------|-------------|------|--|--|--|--|--|--|
| Issue Date | JUL 10 1986 | 17-3 | | | | | | |
| Revised | | | | | | | | |

E.O. # A-10-314

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Page 2A

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

Manufacturer Ford Motor Company Engine Family HFM2.3T5FGGX (H2.3TGG)

Liter (CID) 2.3 (140) Eng. Type I4

Emission Control Sys. (Special Features) CL, EGR, TWC, (EFI)

| Engine Code | Vehicle Models (If Coded see attachment) | Trans. Type | Equiv. Test Weight | Ign. System (ECU) EEC IV Part No. | Fuel System EFI Part No. | EGR Valve Sonic Part No. | Catalyst TWC Part No. |
|-------------|--|-------------|--------------------|-----------------------------------|--------------------------|--------------------------|---|
| 749TR00B | Ranger 4x2 SCS | Y5X396 (M5) | 3375 | E7TF-AA | E59E-AB | E59E-AC/ E79E-BA | E67A-DB E77A-KA/ -KB/ -HB/ -HC@ |
| | Ranger 4x4 SCS | | 3500 | | | | |
| | Ranger 4x4 SCS | K5X397 (M5) | | | | | |
| 700A/N | Ranger 4x2 RCS | Y5X396 (M5) | 3000 | | | | |
| | Ranger 4x4 RCS | | 3125 | | | | |
| | Ranger 4x4 RCS | K5X397 (M5) | 3125 | | | | |
| 49RR00A/N | Aerostar 4x2 Van SWB | Y5X396 (M5) | 3625 | | | | E69A-LB E79A-ALA/ -ALB@ |
| | Bus SWB | | | | | | |
| | | | | | | | |
| 19TR00B | Ranger 4x2 RCS | Y5X396 (M5) | 3000 | | | | E67A-DB E77A-KA/ -KB/ -HB/ -HC@ |
| | Ranger 4x4 RCS | Y5X396 (M5) | 3125 | | | | |
| | Ranger 4x4 RCS | K5X397 (M5) | 3125 | | | | |

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 comment. If two test weights are listed, the lower weight will be used for testing.

Added per R/C-107

Engine Family H2.3TGG

| | | | | | | | |
|------------|---------------------|-------|--|--|--|--|--|
| Issue Date | JUL 10 1987 | 17-4A | | | | | |
| Revised | 10-17 NOV 26 APR 21 | | | | | | |

19_87 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. # A-10-314

Page 2B

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

Manufacturer Ford Motor Company Engine Family HFM2.3T5FGGX (H2.3TGG)

Liter (CID) 2.3 (140) Eng. Type I4

Emission Control Sys. (Special Features) CL, EGR, TWC, (EFI)

| Engine Code | Vehicle Models (If Coded see attachment) | Trans. Type | Equiv. Test Weight | Ign. System (ECU) EEC IV Part No. | Fuel System EFI Part No. | EGR Valve Sonic Part No. | Catalyst TWC Part No. |
|-------------|--|----------------|--------------------|-----------------------------------|--------------------------|--------------------------|--|
| 750TR00B | Ranger 4x2 SCS | A4X024 (L4) | 3375 | E7TF-JA | E59E-AB | E59E-AC/ E79E-BA | E67A-DB E77A-KA/ -KB -HB/ -HCE |
| 0SR00A/N | Ranger 4x2 RCS RCL | | 3000 3125 | | | | |
| A/N | Aerostar 4x2 Van SWB | | 3250 | | | | E69A-LB E79A-ALA/ -ALBE |

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 comment. If two test weights are listed, the lower weight will be used for testing.
@ Added per B/C-107

Engine Family H2.3TGG

Issue Date JUL 10 1986
Revised APR 21