

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-395
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 1989 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 Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
KFM2.3T5FMC5	2.3 (140)	Exhaust Gas Recirculation Heated Oxygen Sensor Three-Way Catalyst (Electronic Port Fuel Injection) On-Board Diagnostics (Exempted)

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>Loaded Vehicle Weight(lbs.)</u>	<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0-3750	0.39	9.0	1.0

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

<u>Loaded Vehicle Weight(lbs.)</u>	<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0-3750	0.29	7.3	0.2

BE IT FURTHER RESOLVED: That the listed models are 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 vehicle manufacturer is certifying to the optional NOx standard by providing evidence that there are sufficient

projected sales of vehicles certifying to the primary NOx emission standard, or is allowed a delay in implementation under small volume manufacturer provisions, or is allowed a delay in implementation under the "in lieu" standards, or is certifying passenger cars weighing more than 5250 lbs. loaded vehicle weight.

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 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Administrative Code, Section 1968) 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.), with the 2 year/24,000 mile warranty provisions of 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 12th day of September 1988.


K. D. Drachand, Chief
Mobile Source Division

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Manufacturer Ford Motor Company Engine Family K2.3TMC (KFM2.3T5FMC5)
 Evaporative Family 9HM Engine Type I4
 Liters (CID) 2.3 (140)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 ECU-Electronic Control Unit
 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
 EGR-Exhaust Gas Recirculation
 EIC-Electronic Injection Control
 (Diesel Only)
 EM-Engine Modification
 SPL-Smoke Puff Limiter or
 Throttle Delay
 TOC-Trap Oxidizer, Continual
 TOP-Trap Oxidizer, Periodical
 DBC-Dual Bed Catalyst
 OC-Oxidation Catalyst
 TWC-Three-Way Catalyst
 WUOC-Warm-Up Oxidation Catalyst
 WUTWC-Warm-Up Three-Way Catalyst
 OS-Oxygen Sensor
 HOS-Heated Oxygen Sensor

Special Features

CFI-Central Fuel
 Injection or
 Throttle Body
 Injection
 EPFI-Electronic Port
 Fuel Injection
 MPFI-Mechanical Port
 Fuel Injection
 SFI-Sequential Fuel
 Injection
 DID-Diesel Injection-
 Direct
 DIP-Diesel Injection-
 Prechamber
 TC-Turbocharger
 SC-Supercharger
 IC-Intercooler or
 Aftercooler
 CCV-Combustion Chamber
 Valve
 OBD-On-Board
 Diagnostics

Fuel System

CFI, EPFI, MPFI, SFI, DID, DIP, HOS, OS
 nV-nVenturi Carburetor
 VV-Variable Venturi Carburetor

VEHICLE MODELS:

Ranger 4x2
 RCS, RCL, SCS

Ranger 4x4
 RCS, RCL

Engine: Front X Mid Rear
 Drive: FWD RWD X 4WD Full Time 4WD Part Time X

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

Manufacturer Ford Motor Company Engine Family K2.3TMC (KFM2.3T5FMC5)

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

Emission Control Sys. (Special Features) EGR, TWC, HOS (EPFI, OBD)

Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (EEC IV) Part No. -12A650-	Fuel System (EPFI) Part No. -9F593-	EGR Valve (Sonic) Part No. -9F483-	Catalyst (TWC) Part No. -5E212-
949SR00A/N	Ranger 4x2 RCS (11.0) RCL (11.0) SCS (11.3) Ranger 4x4 RCS (12.1) RCL (12.1)	M5	3125 3250 3375 3500	E9TF-AA	E59E-AB	E8TE-DA	E87A-EA

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: 7-14-88
Revisions: 12-15-88 (Revised DPA)