

File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-844
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 1999 model-year Ford Motor Company exhaust emission control systems are certified as described below for medium-duty vehicles:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: XFMXA04.6HGC Displacement: 4.6 Liters (280 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 non-methane organic gas (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) LEV certification exhaust emission standards for this engine family in grams per mile are:

| <u>Test Weight</u> <u>(lbs.)</u> | <u>Miles</u> | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> | <u>HCHO</u> | <u>CO (20°F)</u> |
|-------------------------------------|--------------|-------------|-----------|------------|-------------|------------------|
| 3751-5750 | 50,000 | 0.160 | 4.4 | 0.4 | 0.018 | 12.5 |
| | 120,000 | 0.230 | 6.4 | 0.6 | 0.027 | n/a |

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

The certification exhaust emission values set forth for NMOG reflect application of a 0.94 RAF for 1999 model-year LEVs. The LEV certification exhaust emission values for this engine family in grams per mile are:

| <u>Test Weight</u> <u>(lbs.)</u> | <u>Miles</u> | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> | <u>HCHO</u> | <u>CO (20°F)</u> |
|-------------------------------------|--------------|-------------|-----------|------------|-------------|------------------|
| 3751-5750 | 50,000 | 0.071 | 0.4 | 0.1 | 0.001 | 4.0 |
| | 120,000 | 0.083 | 0.5 | 0.1 | 0.002 | 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 medium-duty vehicle phase-in 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" (Title 13, California Code of Regulations, Section 1960.1(h)(2)).

BE IT FURTHER RESOLVED: That under the submitted medium-duty vehicle phase-in compliance plan, if the manufacturer incurs "Vehicle Equivalent Debits" for the aforementioned model year due to the manufacturer's failure to produce and deliver for sale in California the equivalent quantity of medium-duty vehicles certified to low-emission vehicle and/or ultra-low-emission vehicle exhaust emission standards required by the above-referenced standards and test procedures, all "Vehicle Equivalent Debits" incurred 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 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 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 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.).

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.

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 24th day of June 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

1999 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: FORD MOTOR COMPANY Exh. Eng. Fam.: XFMXA04.6HGC Evap. Fam.: XFMXE0155BAF/BAG

Engine Code Types: CA XXX 49S 50S ORVR: Yes No XXX

Exhaust Std: CA Tier-1 TLEV LEV XXX ULEV ZEV U.S. EPA TIER-1

Vehicle Class(es): PC LDT1 LDT2 MDV1 MDV2 XXX MDV3 MDV4 MDV5

Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A,LDT1,MDV1,MDV2,MDV3,MDV4)

Exhaust Emiss. Test Fuel: CBA Fuel Type: Gasoline

Evaporative Emission Test Procedure: California Federal XXX

Service Accumulation: Std AMA Mod AMA Mfr ADP XXX Other

NMOG Test Procedure: N/A Std XXX Equiv R/L Test Procedure: SHED Pt.Source XXX

Engine Configuration: V-8 Displacement: 4.6L (280 in³)

Valves/Cyl: 2 Rated HP: 220 @ 4500 RPM

Engine: Front XXX Mid Rear Drive: Fwd RWD XXX 4WD-FT 4WD-PT XXX

Exhaust Control System and Special Features 2TWC(2), 2HO2S(2), EGR, SFI
(Use abbreviations per SAE J1930 SEP91)

| EngineCode (California) | Vehicle Models | Trans. | | ETW | DPA | Ignition Part No (PCM) | EGR System Part No | Catalytic Converter Part No |
|----------------------------|----------------|----------------|-------|------|-----|------------------------------|--------------------------|-----------------------------------|
| | | A-Auto | M-Man | | | | | |
| 9VNABBB(A/N) | F150 4X2 | A ⁴ | | 5000 | * | XL3F-XB | F75E-DA | XL34-5E214-CA (LH) |
| 9VNABBB(A/N) | F150 4X2 | A | | 5250 | | " | " | XL34-5G218-CA (RH) |
| 9VNABDB(A/N) | F150 4X2 | A | | 5500 | | XL3F-ZB | " | |
| 9VNMBCB(A/N) | F150 4X2 | M ⁵ | | 5000 | * | XL3F-ADB | F75E-DA | XL34-5E214-CA (LH) |
| 9VNMBCB(A/N) | F150 4X2 | M | | 5250 | | " | " | XL34-5G218-CA (RH) |
| 9VNMBDB(A/N) | F150 4X2 | M | | 5000 | | XL3F-ADB | " | |
| 9VNMBDB(A/N) | F150 4X2 | M | | 5250 | | " | " | |
| 9VNABCB(A/N) | F150 4X4 | A | | 5500 | * | XL3F-YB | F75E-DA | XL34-5E214-DA (LH) |
| 9VNMBDB(A/N) | F150 4X4 | M | | 5500 | * | XL3F-ZB | F75E-DA | XL34-5G218-DA (RH) |

* See page 20.09.17.02 - 2

Engine Family: XFMXA04.6HGC

20.09.17.02 - 1

Issued: ~~MAY~~ 29 1998

Revised:

| Body | Trans | Tire | ETW | Non A/C DPA | A/C DPA | | | | | | |
|--------------|----------------|----------|---------|-------------|---------|------|------|------|------|------|------|
| (4X2) | | | | | | | | | | | |
| Regular Cab | Manual (RE390) | P235 AS | 4250 | 13.5 | 14.9 | | | | | | |
| | | | 4500 | 13.5 | 14.9 | | | | | | |
| | | | \$ 4750 | 13.5 | 14.9 | | | | | | |
| | | \$ | 5000 | 13.5 | 14.9 | 13.5 | 14.9 | | | | |
| | | | | | | | | \$ | 5250 | 13.5 | 14.9 |
| | | | | | | | | | | | |
| | | 4500 | 14.0 | 15.4 | 14.0 | 15.4 | | | | | |
| | | | | | | | \$ | 4750 | 14.0 | 15.4 | |
| | | \$ | 5000 | 14.0 | 15.4 | | | | | | |
| | | | | | | \$ | 5250 | 14.0 | 15.4 | | |
| | | LT245 AS | 4250 | 13.2 | 14.5 | | | | | | |
| | | | 4500 | 13.2 | 14.5 | | | | | | |
| | | | \$ 4750 | 13.2 | 14.6 | | | | | | |
| | | \$ | 5000 | 13.2 | 14.5 | 13.2 | 14.5 | | | | |
| \$ | 5250 | | | | | | | 13.2 | 14.5 | | |

| | | | | | | | | | | | |
|--------------|------------|----------|---------|------|------|------|------|------|------|------|------|
| (4X2) | | | | | | | | | | | |
| Regular Cab | 4R70W (DU) | P235 AS | 4500 | 13.1 | 14.4 | | | | | | |
| | | | 4750 | 13.1 | 14.4 | | | | | | |
| | | | \$ 5000 | 13.1 | 14.4 | | | | | | |
| | | \$ | 5250 | 13.1 | 14.4 | 13.1 | 14.4 | | | | |
| | | | | | | | | \$ | 5500 | 13.1 | 14.4 |
| | | | | | | | | | | | |
| | | 4750 | 13.9 | 15.3 | 13.9 | 15.3 | | | | | |
| | | | | | | | \$ | 5000 | 13.9 | 15.3 | |
| | | \$ | 5250 | 13.9 | 15.3 | | | | | | |
| | | | | | | \$ | 5500 | 13.9 | 15.3 | | |
| | | LT245 AS | 4500 | 13.2 | 14.5 | | | | | | |
| | | | 4750 | 13.2 | 14.5 | | | | | | |
| | | | \$ 5000 | 13.2 | 14.5 | | | | | | |
| | | \$ | 5250 | 13.2 | 14.5 | 13.2 | 14.5 | | | | |
| \$ | 5500 | | | | | | | 13.2 | 14.5 | | |

| | | | | | | | | | | | |
|--------------|----------------|----------|------|------|------|------|------|---------|------|------|------|
| (4X2) | | | | | | | | | | | |
| Super Cab | Manual (RE390) | P235 AS | 4500 | 12.9 | 14.2 | | | | | | |
| | | | 4750 | 12.9 | 14.2 | | | | | | |
| | | | 5000 | 12.9 | 14.2 | | | | | | |
| | | \$ | 5250 | 12.9 | 14.2 | 12.9 | 14.2 | | | | |
| | | | | | | | | P255 AS | 4500 | 13.4 | 14.7 |
| | | | | | | | | | 4750 | 13.4 | 14.7 |
| | | 5000 | 13.4 | 14.7 | 13.4 | 14.7 | | | | | |
| | | | | | | | \$ | 5250 | 13.4 | 14.7 | |
| | | LT245 AS | 4500 | 12.5 | 13.8 | | | | | | |
| | | | 4750 | 12.5 | 13.8 | | | | | | |
| | | | 5000 | 12.5 | 13.8 | | | | | | |
| | | \$ | 5250 | 12.5 | 13.8 | 12.5 | 13.8 | | | | |

| | | | | | | | | | | | |
|--------------|------------|---------|---------|------|------|----------|------|---------|------|------|------|
| (4X2) | | | | | | | | | | | |
| Super Cab | 4R70W (DU) | P235 AS | 4750 | 12.5 | 13.8 | | | | | | |
| | | | 5000 | 12.5 | 13.8 | | | | | | |
| | | | \$ 5250 | 12.5 | 13.8 | | | | | | |
| | | \$ | 5250 | 12.5 | 13.8 | 12.5 | 13.8 | | | | |
| | | | | | | | | P255 AS | 4750 | 13.3 | 14.6 |
| | | | | | | | | | 5000 | 13.3 | 14.6 |
| | | \$ | 5250 | 13.3 | 14.6 | | | | | | |
| | | | | | | LT245 AS | 4750 | 12.6 | 13.9 | | |
| | | 5000 | 12.6 | 13.9 | | | | | | | |
| | | \$ 5250 | 12.6 | 13.9 | | | | | | | |

\$ = ALVW

| Body | Trans | Tire | ETW | Non A/C DPA | A/C DPA | | | | | | |
|--------------------------------|----------------|----------|---------|-------------|---------|------|------|--------|------|------|------|
| (4X4) | | | | | | | | | | | |
| Regular Cab and Super Cab Long | Manual (RE390) | P-metric | 4750 | 16.0 | 17.4 | | | | | | |
| | | | 5000 | 16.0 | 17.4 | | | | | | |
| | | | \$ 5250 | 16.0 | 17.4 | | | | | | |
| | | \$ | 5500 | 16.0 | 17.4 | 16.0 | 17.4 | | | | |
| | | | | | | | | LT 245 | 4750 | 16.0 | 17.4 |
| | | | | | | | | | 5000 | 16.0 | 17.4 |
| | | 5250 | 16.0 | 17.4 | 16.0 | 17.4 | | | | | |
| | | | | | | | \$ | 5500 | 16.0 | 17.4 | |
| | | LT 265 | 4750 | 16.3 | 17.7 | | | | | | |
| | | | 5000 | 16.3 | 17.7 | | | | | | |
| | | | \$ 5250 | 16.3 | 17.7 | | | | | | |
| | | \$ | 5500 | 16.3 | 17.7 | 16.3 | 17.7 | | | | |

| | | | | | | | | | | | |
|--------------------------------|------------|----------|---------|------|------|------|------|--------|------|------|------|
| (4X4) | | | | | | | | | | | |
| Regular Cab and Super Cab Long | 4R70W (DU) | P-metric | 4750 | 16.6 | 18.0 | | | | | | |
| | | | 5000 | 16.6 | 18.0 | | | | | | |
| | | | \$ 5250 | 16.6 | 18.0 | | | | | | |
| | | \$ | 5500 | 16.6 | 18.0 | 16.6 | 18.0 | | | | |
| | | | | | | | | LT 245 | 4750 | 16.0 | 17.4 |
| | | | | | | | | | 5000 | 16.0 | 17.4 |
| | | 5250 | 16.0 | 17.4 | 16.0 | 17.4 | | | | | |
| | | | | | | | \$ | 5500 | 16.0 | 17.4 | |
| | | LT 265 | 4750 | 17.6 | 19.0 | | | | | | |
| | | | 5000 | 17.6 | 19.0 | | | | | | |
| | | | \$ 5250 | 17.6 | 19.0 | | | | | | |
| | | \$ | 5500 | 17.6 | 19.0 | 17.6 | 19.0 | | | | |

| | | | | | | | | | | | |
|-----------------|----------------|----------|---------|------|------|------|------|--------|------|------|------|
| (4X4) | | | | | | | | | | | |
| Super Cab Short | Manual (RE390) | P-metric | 4750 | 15.4 | 16.8 | | | | | | |
| | | | 5000 | 15.4 | 16.8 | | | | | | |
| | | | \$ 5250 | 15.4 | 16.8 | | | | | | |
| | | \$ | 5500 | 15.4 | 16.8 | 15.4 | 16.8 | | | | |
| | | | | | | | | LT 245 | 4750 | 15.5 | 16.9 |
| | | | | | | | | | 5000 | 15.5 | 16.9 |
| | | 5250 | 15.5 | 16.9 | 15.5 | 16.9 | | | | | |
| | | | | | | | \$ | 5500 | 15.5 | 16.9 | |
| | | LT 265 | 4750 | 15.8 | 17.2 | | | | | | |
| | | | 5000 | 15.8 | 17.2 | | | | | | |
| | | | \$ 5250 | 15.8 | 17.2 | | | | | | |
| | | \$ | 5500 | 15.8 | 17.2 | 15.8 | 17.2 | | | | |

| | | | | | | | | | | | |
|-----------------|------------|----------|---------|------|------|------|------|--------|------|------|------|
| (4X4) | | | | | | | | | | | |
| Super Cab Short | 4R70W (DU) | P-metric | 4750 | 16.0 | 17.4 | | | | | | |
| | | | 5000 | 16.0 | 17.4 | | | | | | |
| | | | \$ 5250 | 16.0 | 17.4 | | | | | | |
| | | \$ | 5500 | 16.0 | 17.4 | 16.0 | 17.4 | | | | |
| | | | | | | | | LT 245 | 4750 | 15.6 | 17.0 |
| | | | | | | | | | 5000 | 15.6 | 17.0 |
| | | 5250 | 15.6 | 17.0 | 15.6 | 17.0 | | | | | |
| | | | | | | | \$ | 5500 | 15.6 | 17.0 | |
| | | LT 265 | 4750 | 17.1 | 18.5 | | | | | | |
| | | | 5000 | 17.1 | 18.5 | | | | | | |
| | | | \$ 5250 | 17.1 | 18.5 | | | | | | |
| | | \$ | 5500 | 17.1 | 18.5 | 17.1 | 18.5 | | | | |

* = ETW/ALVW
 \$ = ALVW

Engine Family: XFMXA04.6HGC *F150 pick up*

Issued: **MAY 29 1988**
 Revised: