

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-782  
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 medium-duty vehicles:

Emission Standard Category: Low-Emission Vehicle (LEV)

Fuel Type: Gasoline

Engine Family: WFMXA05.4JGC Displacement: 5.4 Liters (326 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 non-methane organic gases (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>
5751-8500	50,000	0.195	5.0	0.6	0.022	12.5
	120,000	0.280	7.3	0.9	0.032	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 1998 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>
5751-8500	50,000	0.080	1.5	0.1	0.001	4.2
	120,000	0.101	2.0	0.3	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 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 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.).

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 25<sup>th</sup> day of July 1997.



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

E.O.# A-10-782

1998 MODEL YEAR SUPPLEMENTAL DATA SHEET  
EXHAUST/EVAPORATIVE SYSTEM & CALIFORNIA REQUIREMENTS  
PASSENGER CARS, LIGHT-DUTY AND MEDIUM-DUTY TRUCKS

Mfgr. FORD MOTOR COMPANY Exhaust Engine Family: WFMXA05.4JGC

Engine Code Types: CA X 49S      50S     

Evap Emissions Family: WFMXE0155B1F/B1G

Exh Std: Tier-0      Tier-1      TLEV      LEV X ULEV      ZEV      EPA TIER-0      TIER-1     

NMOG Test Proc.: Equiv.  
Evap Std: 50K      Useful Life with R/L X, R/L Test Proc.: Point Source **ORUR: NO**  
Service Accum: Med. AMA

Veh Class(es): PC      LDT1      LDT2      MDV1      MDV2      MDV3 X MDV4      MDV5     

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

Exh Cert Fuel(s): Indo      Ph2 X Diesel: 13 CCR 2282      or 40CFR 86.113-90      or -94       
M85      CNG      LPG      Other (specify)     

Fuel Type(s): Dedicated      Flex Fuel      Dual-Fuel       
Gasoline X Diesel      M85      CNG      LPG      Other (specify)     

Hybrid: Type A      B      C     , APU Cycle (eg., Otto, Diesel, Turbine)     

Engine Config V-8 Displacement: 5.4L(326) Liters (Cubic Inches)

Valves/Cyl: 2 Rated HP: 230 @ 4250 RPM

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

Exhaust Control System and Special Features 2TW<sup>2</sup>HO2S<sup>2</sup>EGR, SFI  
(Use abbreviations per SAE J1930 SEP91)

Engine Code (also list CA/49ST/50ST	Vehicle Models (if coded see attachment)	Trans. Type A-Automatic M-Manual	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
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846UR00A		A			F85F-YA	F75E-CA	F85A-AA F85A-BA
	Expedition 4x2		6000	*			
	Expedition 4x4		6000	*			
	Navigator 4x2		6000	*			
	Navigator 4x4		6500	*			

\* See Section 20.09.17.03

ENGINE FAMILY: WFMXA05.4JGC  
ISSUED:  
REVISED: **JUN 16 1997**

1998 MODEL YEAR SUPPLEMENTAL DATA SHEET  
 EXHAUST/EVAPORATIVE SYSTEM & CALIFORNIA REQUIREMENTS  
 PASSENGER CARS, LIGHT-DUTY AND MEDIUM-DUTY TRUCKS

Mfgr. FORD MOTOR COMPANY Exhaust Engine Family: WFMXA05.4JGC  
 Engine Code Types: CA X 49S\_\_\_ 50S\_\_\_  
 Evap Emissions Family: WFMXE0155B1F/B1G  
 Exh Std: Tier-0\_\_\_ Tier-1\_\_\_ TLEV\_\_\_ LEV X ULEV\_\_\_ ZEV\_\_\_ EPA TIER-0\_\_\_ TIER-1\_\_\_  
 Evap Std: 50K\_\_\_ Useful Life with R/L X R/L Test Proc. Pt. Source ORVR: NO  
 Veh Class(es): PC\_\_\_ LDT1\_\_\_ LDT2\_\_\_ MDV1\_\_\_ MDV2\_\_\_ MDV3 X MDV4\_\_\_ MDV5\_\_\_  
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1,MDV1,MDV2,MDV3,MDV4)  
 Exh Cert Fuel(s): Indo\_\_\_ Ph2 X Diesel: 13 CCR 2282\_\_\_ or 40CFR 86.113-90\_\_\_ or -94\_\_\_  
 M85\_\_\_ CNG\_\_\_ LPG\_\_\_ Other (specify)  
 Fuel Type(s): Dedicated\_\_\_ Flex Fuel\_\_\_ Dual-Fuel\_\_\_  
 Gasoline X Diesel\_\_\_ M85\_\_\_ CNG\_\_\_ LPG\_\_\_ Other (specify)\_\_\_  
 Hybrid: Type A\_\_\_ B\_\_\_ C\_\_\_, APU Cycle (eg., Otto, Diesel, Turbine)\_\_\_  
 Engine Config V-8 Displacement: 5.4L(326) Liters (Cubic Inches)  
 Valves/Cyl: 2 Rated HP: 230 @ 4250 RPM  
 Engine: Front X Mid\_\_\_ Rear\_\_\_ Drive: Fwd\_\_\_ RWD X 4WD-FT\_\_\_ 4WD-PT X

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

Engine Code (also list CA/49ST/50ST	Vehicle Models (if coded see attachment)	Trans. Type A-Automatic M-Manual	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
846UR05A		A			F85F-YB	F75E-CA	F85A-AA F85A-BA
	Expedition 4x2		6000	*			
	Expedition 4x4		6000	*			
	Navigator 4x2		6000	*			
	Navigator 4x4		6500	*			

\* See Section 20.09.17.03



EO# A-10-782

Supplemental Data Sheet DPA Summary

VEHICLE LINE	ETW	CDT	NON - AC CODE	DPA	TRLHP (HP)	CDT	NON - AC CODE	DPA	TRLHP (HP)
EXPEDITION 4x2	5000	18.12	(C)	12.0	19.12	15.69	(C)	13.2	19.64
(UN93)	5250	17.03	(C)	12.0	19.00	16.17	(C)	13.2	20.01
E4OD	5500	17.75	(R)	12.0	19.10	16.65	(R)	13.2	20.36
P255/70R16 A/S TIRE	6000	18.93	(C)	12.0	19.54	17.62	(C)	13.2	20.99
E4OD	5000	15.88	(C)	12.2	19.41	15.09	(C)	13.4	20.42
P255/70R16 A/T TIRE	5250	16.54	(C)	12.2	19.57	15.64	(C)	13.4	20.69
	5500	17.20	(R)	12.2	19.71	16.19	(R)	13.4	20.94
	6000	18.51	(C)	12.2	19.98	17.30	(C)	13.4	21.38
EXPEDITION 4x4	5500	14.91	(C)	14.2	22.74	14.06	(C)	15.6	24.11
(UN93)	6000	15.95	(C)	14.2	23.19	15.06	(C)	15.6	24.56
E4OD	6500	17.00	(C)	14.2	23.57	16.07	(C)	15.6	24.93
P255/70R16 A/S TIRE									
E4OD	5500	14.79	(C)	14.6	22.92	14.03	(C)	16.0	24.16
P255/70R16 A/T TIRE	6000	15.84	(C)	14.6	23.35	14.93	(C)	16.0	24.77
	6500	16.90	(C)	14.6	23.71	15.83	(C)	16.0	25.31
E4OD	5500	14.82	(C)	14.8	22.88	13.89	(C)	16.2	24.41
P265/70R17 A/T TIRE	6000	15.71	(C)	14.8	23.54	14.82	(C)	16.2	24.96
	6500	16.59	(C)	14.8	24.15	15.75	(C)	16.2	25.44
NAVIGATOR 4x2	5500	16.51	(C)	13.8	20.53	15.50	(C)	15.2	21.87
(UN173)	6000	17.56	(C)	13.8	21.06	16.34	(C)	15.2	22.63
E4OD									
P245/75R16 A/S TIRE									
NAVIGATOR 4x4	6000	15.69	(C)	15.9	23.57	14.82	(C)	17.3	24.96
(UN173)	6500	16.67	(C)	15.9	24.04	15.77	(C)	17.3	25.41
E4OD									
P245/75R16 A/S TIRE									
NAVIGATOR 4x4	6000	16.12	(C)	15.6	22.94	15.33	(C)	17.0	24.13
(UN173)	6500	17.02	(C)	15.6	23.54	15.91	(C)	17.0	25.18
E4OD									
P255/75R17 A/T TIRE									



ENGINE FAMILY: WFMXA05.4JGC  
ISSUED:  
REVISED:

JUN 16 1997