

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-474  
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Ford Motor Company 1991 model-year gasoline engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 8,501 to 14,000 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
MFM05.8BSA6	5.8 (351)	Secondary Air Injection Exhaust Gas Recirculation Heated Oxygen Sensor Three-Way Catalyst Multipoint Electronic Fuel Injection

Engine models and codes are listed on attachments.

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

<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>
1.1	14.4	5.0

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

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>
MFM05.8BSA6	0.5	9.4	3.4

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Health and Safety Code Section 43205.5 and Title 13, California Code of Regulations, Section 2036).

Engines 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 attachments.

Executed at El Monte, California this 12<sup>th</sup> day of December, 1990.



R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

E.O.# A-10-474

1991 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Ford Motor Company Engine Family MFM05.8BSA6 (L5.8A)  
 Evaporative Family HM Engine Type V-8  
 Liters (CID) 5.8L (351)

ABBREVIATIONS:

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Fuel System</u>
DLI-Distributorless Ignition	AIR-Secondary Air Injection	DI-Direct Injection (Diesel)
EI-Electronic Ignition	ECTS-Engine Coolant Temp Sensor	EIC-Electronic Injection Control (Diesel)
PCME-Powertrain Control Module	EGR-Exhaust Gas Recirculation	IC-Intercooler or Aftercooler
	EM-Engine Modification	IDI-Indirect Diesel Injection
	HO2S-Heated Oxygen Sensor	MPI-Multipoint Electronic Fuel Injection
	KS-Knock Sensor	SC-Supercharged
	MAP-Manifold Absolute Pressure Sensor	SMPI-Sequential Multipoint Electronic Fuel Injection
	OC-Oxidation Catalyst	TAA-Turbocharged, Air to Air (Diesel)
	O2S-Oxygen Sensor	TAW-Turbocharged, Air to Air to Water (Diesel)
	SABV-Secondary Air Bypass Valve	TBI-Throttle Body Electronic Fuel Injection
	SASV-Secondary Air Switching Valve	
	SPL-Smoke Puff Limiter	
	TOC-Trap Oxidizer: Continuous	
	TOP-Trap Oxidizer: Periodic	
	TPS-Throttle Position Sensor	
	TWC-Three Way Catalyst	
	TWC+OC-Three Way Catalyst Plus Oxidation Catalyst	
	WUOC-Warm Up Oxidation Catalyst	
	WUTWC-Warm Up Three Way Catalyst	

Special Features

MIL-Malfunction Indicator Light  
 OBD-On Board Diagnostics

VEHICLE MODELS: E250/E350/Stripped or Cutaway  
 F250/F350

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

Engine Family: M5.8A

Issue Date	11-12-90	20.17.02.00-1					
Revised							

1991 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY DUTY ENGINES

Manufacturer Ford Motor Company Engine Family MFM05.8BSA6 (M5.8A)

Liters (CID) 5.8L (351) Eng. Type V-8

Emission Control Sys. (Special Features) AIR/EGR/HO2S/MPI/TWC  
(Use abbreviations per SAE J1930 Jun88)

Engine Code	Rated HP @ RPM	Ign. System or PCME	Fuel System	EGR Valve	Catalyst
		Part No. -12A650-	Part No. -9F593-	Part No. -9F483-	Part No. -5E212-
1-75A-R00	210 @ 3800	F2TF-EA	FOTE-CA	E8TE-BA	E8TA-LA
1-76A-R00	210 @ 3800	F2TF-PA	FOTE-CA	E8TE-BA	E8TA-LA
1-76C-R00	210 @ 3800	F2TF-FA	FOTE-CA	E8TE-BA	E8TA-LA
1-76B-R00	210 @ 3800	F2TF-NA	FOTE-CA	E8TE-BA	E8TA-KB
9-76C-R12	210 @ 3800	E9TF-AFB	FOTE-CA	E8TE-BA	E8TA-KB

Comments: See 20.17.02.00-1 for abbreviations and 20.17.02.00-4 for evaporative emission family identification.

Engine Family: M5.8A

Issue Date	11-12-90	20.17.02.00-2					
Revised							