

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-421  
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 1990 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</u>
LFM05.8BSA7	5.8 (351)	Exhaust Gas Recirculation Heated Oxygen Sensor Three-Way Catalyst Secondary Air Injection 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	6.0

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>
LFM05.8BSA7	0.9	8.2	4.5

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 (Title 13, California Code of Regulations, Section 2036 and California Health and Safety Code Section 43205.5).

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 13<sup>th</sup> day of July, 1989.



K. D. Drachand, Chief  
Mobile Source Division

E.O.# A-10-421

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Ford Motor Company Engine Family LFM05.8BSA7 (L5.8A)  
 Evaporative Family 9HM Engine Type V-8  
 Liters (CID) 5.8L

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  
 MIL-Malfunction Indicator Light

Fuel System

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

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

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

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Revised							

1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY DUTY ENGINES

Manufacturer Ford Motor Company Engine Family LFM05.8BSA7

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

Emission Control Sys. (Special Features) EGR/AIP/TWC/HOS/EPFI

Engine Code	Maximum Rated HP at RPM	Rated Torque at RPM	Ign. System (ECU)	Fuel System	EGR Valve	Catalyst
			Part No. -12A650-	Part No. -9F593-	Part No. -9F483-	Part No. -5E212-
8-76A-R11	210 @ 3800	310 @ 2800	E8TF-AUC	E5TE-BB	E8TE-BA	E8TA-KB
9-76C-R10*	"	"	"	"	"	"
9-76C-R11**	"	"	E9TF-AFA	"	"	"
8-75A-R10	"	"	E8TF-ATB	"	"	"
9-75A-R10*	"	"	"	"	"	"
9-75A-R11**	"	"	E9TF-AEA	"	"	"
9-76A-R00	"	"	E9TF-PA	"	"	"
(R/C 5.8-HD-4)						
9-76A-R01*	"	"	"	"	"	"
9-76A-R10**	"	"	E9TF-PB	"	"	"

Comments: See page one for abbreviations and evaporative emission family identification.

- \* R/C 5.8-HD-5 changed the air pump pulley ratio for all calibrations.
- \*\* R/C 5.8-HD-6 added new calibrations.

Date	6-8-89	20.17.02.00-2					
Revised							