#### State of California AIR RESOURCES BOARD

# EXECUTIVE ORDER A-10-359 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 1988 model-year Ford Motor Company exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family	Displacement Liters (Cubic Inches)		Exhaust Emission Control System (Special Features)		
JFM2.3V5HEH5	2.3	(140)	Exhaust Gas Recirculation Heated Oxygen Sensor Three-Way Catalyst (Electronic Port Fuel Injection) (On-Board Diagnostics)		

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The following are the emission standards for this engine family:

Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
Grams per Mile	Grams per Mile	Grams per mile
0.39	7.0	0.7

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

Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
Grams per Mile	Grams per Mile	Grams per Mile
0.23	2.0	0.6

BE IT FURTHER RESOLVED: That the listed models were 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 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 in also comply with 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 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  $\underline{\it 80}$ 

day of August, 1987.

K. D. Drachand, Chief Mobile Source Division

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## 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

nufacturerFord Motor Compa	Engine Family <u>JFM2.3V5H</u>	Engine Family <u>JFM2.3V5HEH5</u>								
Evaporative Family 8HML	Engine Type OTTO SPARK	Engine Type OTTO SPARK I-4								
	Liters (CID) 2.3 (140	)								
ABBREVIATIONS										
Ignition System	Exhaust Emissions Control System	Special Features								
CA-Centrifugal Advance ECU-Electronic Control Unit EI-Electronic Ignition ESAC-Electronic Spark Advance Control VA-Vacuum Advance VR-Vacuum Retard	AIP-Air Injection Pump AIV-Air Injection Valve DBC-Dual Bed Catalyst EGR-Exhaust Gas Recirculation EIC-Electronic Injection Control EM-Engine Modification OC-Oxidation Catalyst OS-Oxygen Sensor HOS-Heated Oxygen Sensor SPL-Smoke Puff Limiter or Throttle Delay TOC-Trap Oxidizer, Continual TOP-Trap Oxidizer, Periodical TWC-Three-way Catalyst WUOC-Warm-up Oxidation Catalyst WUTWC-Warm-up Three-way Catalyst	CCV-Combustion Chamber Valve CFI-Central Fuel Injection or Throttle Body Injection DID-Diesel Injection- Direct DIP-Diesel Injection- Prechamber EFI-Electronic Fuel Injection IC-Intercooler or Aftercoole								
Fuel System		Fuel Injection OBD-On-Board								
CFI, CL, DID, DIP, EFI, MFI nV-nVenturi Carburetor		Diagnostics TC-Turbocharger								
VEHICLE MODELS:		•								
TEMPO 54D - 4 DR SEDAN	·									

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

TEMPO 66D - 2 DR SEDAN TOPAZ 54D - 4 DR SEDAN TOPAZ 66D - 2 DR SEDAN

# 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

assenger Cars X light-Duty Trucks Medium-Duty Vehicles Gas X Diesel

Engine Code	Vehicle Models (If Coded see	Trans. Type	Equiv. Test	Ign. System (ECU)	Fuel System	EGR Valve	Catalyst
	attachment) (Dyno Hp)		Weight	Part No. 12A650	Part No. 9F593	Part No. 9D475	Part No. 5E212
26DROOA	TEMPO-66D 9.1 1/	A-4 (4WD)	3125	E8TF-BEA	E67E-BB	E6AE-BA	E73C-AA (2WD)
	9.2 2/ 7.4 1/ 7.3 2/	A-4 (2WD)	3000				E73X-AD (4WD)
	TEMPO-54D 9.1 1/	A-4 (4WD)	3125				·
	9.2 2/ 7.4 1/ 7.3 2/	A-4 (2WD)	3000				
	TOPAZ-66D 9.1 1/	A-4 (4WD)	3125				
	9.2 2/ 7.4 1/ 7.3 2/	A-4 (2WD)	3000				·
	TOPAZ-54D 9.1 1/	A-4 (4WD)	3125				
	9.2 2/ 7.4 1/ 7.3 2/	A-4 (2WD)	3000		- -		
-	1/ GOODYEAR TIRES 2/ MICHILIN TIRES						

quipment. If two test weights are listed, the lower weight will be used for testing.

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# 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

nufi tur ter CIE	rer <u>FORD MOTOR COM</u> 2,3L (140)	PANY		Engine Family <u>JFM2.3V5HEH5</u> Eng. Tyoe <u>OTTO SPARK I-4</u>			
ission C	ontrol Sys. (Specia	l Featur	es) <u>ECU.l</u>	ESAC, DBC, EGR, HG	OS.TWC.EFI.OBD		
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System  Part No.  9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
26DROON	TEMPO-66D 8.3 1/	A-4 (4WD)	3125	E8TF-BEA	E67E-BB	E6AE-BA	E73C-AA (2WD)
	8.4 2/ 6.7 1/ 6.6 2/	A-4 (2WD)	3000				E73X-AD (4WD)
	6.7 1/ 6.6 2/	A-4 (2WD)	2875				
	TEMPO-54D 8.3 1/ 8.4 2/	A-4 (4WD)	3125				
,	6.7 1/ 6.6 2/	A-4 (2WD)	3000	·			
	TOPAZ-66D 8.3 1/ 8.4 2/	A-4 (4WD)	3125				
	6.7 1/ 6.6 2/	A-4 (2WD)	3000				
	6.7 1/ 6.6 2/ TOPAZ-54D	A-4 (2WD)	2875				
	8.3 1/ 8.4 2/	A-4 (4WD)	3125	i			
	6.7 1/ 6.6 2/ 1/ GOODYEAR TIRES	A-4 (2WD)	3000				
•	2/ MICHILIN TIRES						

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# 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

anu turer FORD MOTOR COMPANY				Engine Family <u>JFM2.3V5HEH5</u>				
iter (CID	) <u>2.3L (140)</u>			Eng. Tyoe <u>OTTO SPARK I-4</u>				
mission C	ontrol Sys. (Specia	l Featur	es) <u>ECU.l</u>	ESAC, DBC, EGR, HO	OS,TWC,EFI,OBD			
Engine Code	Vehicle Models (If Coded see attachment)	Trans. Type	Equiv. Test Weight	Ign. System (ECU)	Fuel System	EGR Valve	Catalyst	
	(Dyno Hp)			Part No. 12A650	Part No. 9F593	Part No. 9D475	Part No. 5E212	
25CR00A	TEMPO-66D 7.4 1/	M-4	3000	E8TF-BBA	E67E-BB	E6AE-BA	E73C-AA	
	7.3 2/ 7.4 1/ 7.3 2/		2875					
	TEMPO-54D 7.4 1/ 7.3 2/		3000					
	TOPAZ-66D 7.4 1/ 7.3 2/	M-4 .	3000					
	7.4 1/7.3 2/		2875					
	TOPAZ-54D 7.4 1/ 7.3 2/		3000					
25CR00N	TEMPO-66D 6.7 1/ 6.6 2/	M-4	2875					
	1/ GOODYEAR TIRES 2/ MICHILIN TIRES							

dease refer to manufactureres 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.

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# 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

ter (CID	) <u>2.3L (140)</u>			Eng. Tyo	oe <u>OTTO SPARI</u>	<u>I-4</u>	
ission C	Control Sys. (Specia	l Featur	es) <u>ECU.</u>	ESAC.DBC.EGR.H	HOS.TWC.EFI.OBI	)	
Engine Code	Vehicle Models (If Coded see attachment)	Trans. Type	Equiv. Test Weight	Ign. System (ECU)	Fuel System	EGR Valve	Catalyst
	(Dyno Hp)		5	Part No. 12A650	Part No. 9F593	Part No. 9D475	Part No. 5E212
25CROON	TEMPO-54D 6.7 1/ 6.6 2/	M-4	3000	E8TF-BBA	E67E-BB	E6AE-BA	E73G-AA
	6.7 1/ 6.6 2/		2875				
	TOPAZ-66D 6.7 6.6		3000				:
	TOPAZ-54D 6.7 1/ 6.6 2/		3000				
	6.7 1/ 6.6 2/		2875				
5QROOA	TEMPO-66D 7.4 1/ 7.3 2/	M-5	2875	ESTF-AXA	E67E-BB	E6AE-BA	E73C-AA
	7.4 1/ 7.3 2/		3000		-  -  -		
	TEMPO-54D 7.4 1/ 7.3 2/		3000				
	1/ GOODYEAR TIRES 2/ MICHILIN TIRES						

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#### 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

anu tur	er FORD MOTOR COM	PANY		Engine Fam:	ily <u>JFM2.3V5H</u>	EH5	
iter (CID	) <u>2.3L (140)</u>	,		Eng. Tyo	oe <u>OTTO SPARI</u>	<u>I-4</u>	
mission C	Control Sys. (Specia	l Featur	es) <u>ECU.</u>	ESAC, DBC, EGR, HO	OS,TWC,EFI,OBD		
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System Part No. 9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
25QR00A	TOPAZ-66D 7.4 1/ 7.3 2/ 7.4 1/ 7.3 2/	M-5	2875 3000	E8TF-AXA	E67E-BB	E6AE-BA	E73C-AA
	TOPAZ-54D 7.4 1/ 7.3 2/		3000				
2507 TON	TEMPO-66D 6.7 1/ 6.6 2/ TEMPO-54D	M-5	2875 2875				
	6.7 1/ 6.6 2/ TOPAZ-66D 6.7 1/		2875				
	6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/	:	2875			,	
	6.7 1/ 6.6 2/ 1/ GOODYEAR TIRES	·	3000				
	2/ MICHILIN TIRES						

equipment. If two test weights are listed, the lower weight will be used for testing.

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Lter (CII	) <u>2.3L (140)</u>			Eng. Tyc	oe <u>OTTO SPARI</u>	K I-4	<del>.</del>
mission (	Control Sys. (Specia	l Featur	es) <u>ECU.</u> ]	SAC.DBC.EGR.HC	OS,TWC,EFI,OBD		
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System  Part No.  9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
26RROOA	TEMPO-66D 7.4 1/ 7.3 2/ TEMPO-54D 7.4 1/ 7.3 2/ TOPAZ-66D 7.4 1/ 7.3 2/ TOPAZ-54D 7.4 1/ 7.3 2/ TEMPO-66D 6.7 1/ 6.6 2/ TEMPO-54D 6.7 1/ 6.6 2/ TOPAZ-66D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/	A-3 (2WD)	3000 3000 3000 3000 3000 3000	E8TF-AZC	E67E-BB	E6AE-BA	E73C-AA
	1/ GOODYEAR TIRES 2/ MICHILIN TIRES					:	

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				Engine Family <u>JFM2.3V5HEH5</u> Eng. Tyoe <u>OTTO SPARK I-4</u>				
Emission C	ontrol Sys. (Specia	l Featur	es) <u>ECU,</u>	ESAC, DBC, EGR, H	OS,TWC,EFI,OBD			
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System Part No. 9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212	
826DR10N	TEMPO-66D 8.3 1/ 8.4 2/ 6.7 1/ 6.6 2/ 6.7 1/ 6.6 2/ TEMPO-54D 8.3 1/ 8.4 2/ 6.7 1/ 6.6 2/ TOPAZ-66D 8.3 1/ 8.4 2/ 6.7 1/ 6.6 2/ TOPAZ-54D	A-4 (4WD)  A-4 (2WD) A-4 (4WD)  A-4 (4WD)  A-4 (2WD) A-4 (2WD) A-4 (2WD) A-4 (2WD) A-4 (2WD) A-4 (2WD)	3125 3000 2875 3125 3000 3125 3000 2875 3125 3000	E8TF-BEB	E67E-BB	E6AE-BA	E73C-AA (2WD) E73X-AD (4WD)	

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### 1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

	Cars X light-Du						
Manuractur	rer <u>Ford Motor Co</u>	mpany		Engine Fam:	ily <u>JFM2.3V5</u>	HEH5	
Liter (CII	2,3L (140)			Eng. Tyc	oe <u>OTTO SPARI</u>	ζ I-4	
Emission (	Control Sys. (Specia	l Featur	es) <u>ECU</u>	_ESAC.DBC.EGR.I	HOS,TWC,EFI,QB	<u> </u>	
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System Part No. 9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
826EROOA	TEMPO-66D 7.4 1/ 7.3 2/	A-4	3000	E8TF-AZC	E67E-BB	E6AE-BA	E73C-AA
	TEMPO-54D 7.4 1/ 7.3 2/ TOPAZ-66D 7.4 1/ 7.3 2/ TOPAZ-54D 7.4 1/ 7.3 2/	A-4 A-4	3000 3000 3000				
	1/ GOODYEAR TIRES 2/ MICHILIN TIRES						

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Manuactur	er <u>Ford Motor Co</u>	mpany		Engine Fami	ily <u>JFM2.3V5</u>	IEH5	
Liter (CID	)2,3L_(140)			Eng. Tyo	oe <u>OTTO SPARI</u>	<u> </u>	
Emission C	ontrol Sys. (Specia	l Featur	es) <u>ECU</u>	ESAC, DBC, EGR, F	NOS, TWC, EFI, OBI	)	
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System  Part No.  9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
826EROON	TEMPO-66D 6.7 1/ 6.6 2/ 6.7 1/ 6.6 2/ TEMPO-54D 6.7 1/ 6.6 2/ TOPAZ-66D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/ See page one for a	A-4 A-4 A-4	3000 2875 3000 3000	E8TF-AZC	E67E-BB	E6AE-BA	E73C-AA

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assenger C	ars X light-Du	ity Trucks	Me	dium-Duty Vehi	cles Gas	<u>X</u> Dies	el
anufacture	r <u>Ford Motor Co</u>	mpany		Engine Fami	1y <u>JFM2,3V5H</u>	EH5	
iter (CID)	2,3L (140)	)		Eng. Tyc	e <u>OTTO SPAR</u> K	<u> </u>	
mission Co	ontrol Sys. (Specia	al Featur	es) <u>ECU</u>	ESAC.DBC.EGR.	OS, TWC, EFI, OBI	)	
Engine	Vehicle Models (If Coded see	Trans. Type	Equiv. Test	Ign. System	Fuel System	EGR Valve	Catalyst
Code (If Coded see attachment) (Dyno Hp)		Weight	Part No. 12A650	Part No. 9F593	Part No. 9D475	Part No. 5E212	
325FR00A	TEMPO-66D 7.4 1/	M-5	2875	E8TF-AXB	E67E-BB	E6AE-BA	E73C-AA
	7.3 2/ TEMPO-54D 7.4 1/		2875				
	7.3 2/ 7.4 1/ 7.3 2/		3000				
	TOPAZ-66D 7.4 1/		2875				
	7.3 2/ TOPAZ-54D 7.4 1/		2875				
	7.3 2/7.4 1/7.3 2/		3000				

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufactureres 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.

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1/ GOODYEAR TIRES 2/ MICHILIN TIRES

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lanufacture	er <u>Ford Motor Co</u>	mpany		Engine Fami	ily <u>JFM2.3V5</u> F	IEH5	
iter (CID)	) 2.3L (140)			Eng. Tyc	oe <u>OTTO SPAR</u> F	<u> 1-4</u>	
Emission Co	ontrol Sys. (Specia	l Featur	es) <u>ECU</u>	ESAC DBC EGR 1	OS, TWC, EFI, OBI		T
Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No. 12A650	Fuel System Part No. 9F593	EGR Valve Part No. 9D475	Catalyst Part No. 5E212
825FROON	TEMPO-66D 6.7 1/ 6.6 2/ TEMPO-54D 6.7 1/ 6.6 2/	M-5	2875 2875	E8TF-AXB	E67E-BB	E6AE-BA	E73C-AA
	TOPAZ-66D 6.7 1/ 6.6 2/ TOPAZ-54D 6.7 1/ 6.6 2/	,	2875				
	1/ GOODYEAR TIRES 2/ MICHILIN TIRES						

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufactureres 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.

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