

1988 CAR/ TRUCK SHOP MANUAL

Engine/Emissions Diagnosis



**Ford Parts and Service Division
Training and Publications Department**

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Important Safety Notice

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles as well as the personal safety of the individual doing the work. This Shop Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This Manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this Manual must first establish that he compromises neither his personal safety nor the vehicle integrity by his choice of methods, tools or parts.

Notes, Cautions, and Warnings

As you read through the procedures, you will come across NOTES, CAUTIONS, and WARNINGS. Each one is there for a specific purpose. NOTES give you added information that will help you to complete a particular procedure. CAUTIONS are given to prevent you from making an error that could damage the vehicle. WARNINGS remind you to be especially careful in those areas where carelessness can cause personal injury. The following list contains some general WARNINGS that you should follow when you work on a vehicle.

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to be under the vehicle.
- Be sure that the ignition switch is always in the OFF position, unless otherwise required by the procedure.
- Set the parking brake when working on the vehicle. If you have an automatic transmission, set it in PARK unless instructed otherwise for a specific operation. If you have a manual transmission, it should be in REVERSE (engine OFF) or NEUTRAL (engine ON) unless instructed otherwise for a specific operation. Place wood blocks (4" x 4" or larger) to the front and rear surfaces of the tires to provide further restraint from inadvertent vehicle movement.
- Operate the engine only in a well-ventilated area to avoid the danger of carbon monoxide.
- Keep yourself and your clothing away from moving parts, when the engine is running, especially the fan and belts.
- To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.
- Do not smoke while working on a vehicle.
- To avoid injury, always remove rings, watches, loose hanging jewelry, and loose clothing before beginning to work on a vehicle.
- Keep hands and other objects clear of the radiator fan blades. The electric cooling fan on the 2.3L turbocharged engine can start to operate at any time by an increase in underhood temperature, even though the ignition is in the OFF position. The Tempo/Topaz and Escort electric cooling fan can start at any time for the same reason, but only when the ignition switch is in the ON position. Therefore, care should be taken to ensure that the electric cooling fan motor is completely disconnected when working under the hood.

Passenger Car Cross Reference Index

Manual	Content	Vehicle Lines
A	Body, Chassis, Electrical	Lincoln Town Car, Ford Crown Victoria/ Mercury Grand Marquis
B	Body, Chassis, Electrical	Mark VII, Thunderbird/ Cougar, Mustang
C	Body, Chassis, Electrical	Tempo/Topaz, Escort
D	Powertrain, Lubrication, Maintenance . . .	Lincoln Town Car, Ford Crown Victoria/ Mercury Grand Marquis, Mark VII, Thunderbird/ Cougar, Mustang
E	Powertrain, Lubrication, Maintenance . . .	Tempo/Topaz, Escort
F	Pre-Delivery	All Models
H	Engine/Emissions Diagnosis	All Car & Truck Models
	Body, Chassis, Electrical, Powertrain Maintenance, Lubrication	Taurus/Sable
	Body, Chassis, Electrical, Powertrain, Maintenance, Lubrication	Continental

Truck Cross Reference Index

Manual	Content	Vehicle Lines
A	Body, Chassis, Electrical	Bronco, Econoline (E-150 through E-350) (F-150 through F-350)
B	Engine	Bronco, Econoline (E-150 through E-350) (F-150 through F-350)
D	Body, Chassis, Electrical	F-, FT, B-, C-600 through 8000 Series
E	Engine	F-, FT, B-, C-600 through 8000 Series
F	Pre-Delivery, Hoisting and Jacking	All Truck Series
H	Engine/Emissions Diagnosis	All Car & Truck Models

ENGINE/EMISSIONS DIAGNOSIS

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