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Introduction

ABOUT THIS SUPPLEMENT

This booklet supplements your “Owner Guide” and is part of the owner’s portfolio. It describes the operation of your flexible fuel vehicle (FFV) and how it differs from an unleaded gasoline powered vehicle. Therefore it is very important that you read this guide and thoroughly familiarize yourself and others operating the vehicle with this information.

Some of the information in this supplement replaces certain instructions in the “Owner Guide”. Please read this supplement carefully and completely. After reading this supplement, for complete vehicle information, also refer to the “Owner Guide” which is included with the vehicle.

VEHICLE IDENTIFICATION

Your vehicle is equipped with a 3.0L flexible fuel (FF) engine and fuel system. The Sable FFV uses fuel ethanol. Unleaded gasoline may also be used. However, methanol is **not** to be used. A decal on the inside of the fuel filler door shows you the correct alternative fuel for your FFV. See the *Refueling* section of this supplement for more information on the fuels which may be used in your FFV.

Your FFV can be identified by checking the eighth character of the Vehicle Identification Number (VIN) located on the forward left corner of your instrument panel. A “2” indicates the ethanol/gasoline FFV version.

WARNINGS

Warnings remind you to be especially careful in those areas where carelessness can cause damage to your vehicle or personal injury to yourself, your passengers or others. Please read all warnings carefully.

ABOUT THE WARRANTIES

The normal vehicle warranties will apply to your flexible fuel vehicle. For further information, refer to your “Warranty Information Booklet.”

Specified maintenance procedures must be followed. Repairs must be made by trained personnel.

It is important that your flexible fuel vehicle be properly maintained by Ford flexible fuel trained personnel. If a problem occurs, it is important that properly trained personnel diagnose the cause. If the problem relates to the fuel system, proper part replacement is imperative to keep your vehicle operating at normal performance. Flexible fuel components and standard fuel components are not interchangeable and if your vehicle is not serviced in accordance with flexible fuel vehicle procedures, damage may occur and your warranty may be invalidated.

PRECAUTIONARY INFORMATION

HEALTH INFORMATION

WARNING: Do not swallow fuel of any kind. Fuels such as gasoline, ethanol and mixtures of these fuels are highly toxic and if swallowed can cause death or permanent injury. **IMMEDIATELY SEEK MEDICAL ATTENTION** from a physician to treat anyone who has swallowed fuel. Be aware, if fuel is swallowed, onset of serious health effects may be delayed 12–24 hours.

WARNING: Avoid inhaling fuel vapors. Inhaling too much fuel vapor of any kind can lead to eye and respiratory tract irritation. In severe cases, excessive or prolonged breathing of fuel vapor can cause serious illness and permanent injury.

WARNING: Avoid getting fuel liquid in your eyes. If you get fuel in your eyes, remove contact lenses (if worn), flush immediately with plenty of water for at least 15 minutes and seek medical attention. Allowing fuel to get in your eyes will cause severe irritation. Failure to seek proper medical attention could lead to permanent injury.

WARNING: If you get fuel on your skin, wash with soap and water. Repeated or prolonged skin contact with fuel liquid or vapor causes skin irritation. Make sure you wash your hands before handling food.

WARNING: Fuels containing gasoline such as Fuel Ethanol may contain benzene which is a cancer-causing agent.

WARNING: If you are taking medication such as Antabuse® or other forms of disulfiram for the treatment of alcoholism, skin contact with fuel containing ethanol may cause the same kind of adverse reaction as drinking alcoholic beverages. In sensitive individuals, serious personal injury or sickness could result. If you are taking such medication, you should take extra care to avoid skin contact with fuel and to avoid breathing its vapors. If you do get fuel on your skin, wash it off immediately. Consult a physician promptly if you experience an adverse reaction.

NOTE: Flexible fuel vehicle fuel tanks may contain any percentage of ethanol from zero to 85 percent or more. Any fuel blends containing ethanol and gasoline should be treated the same as “Fuel Ethanol (E_d85)”, which is described in the *Refueling* section of this supplement.

Starting your vehicle

PREPARING TO START YOUR VEHICLE

Climate conditions and other factors play a large part in deciding how to start the engine. Read all the starting instructions carefully, so you'll be aware of these factors when you start the engine.

WARNING: Before turning the key, make sure the parking brake has been set fully. Place the gearshift in P (Park).

Do not crank the starter continuously for more than 30 seconds at a time, as starter overheating or other damage could result. If the engine fails or falters in starting, wait three or four seconds before re-engaging the starter. If the engine is flooded, or fires intermittently, and fails to start during a 30-second cranking period, wait two minutes before attempting to start the engine again.

A computer system controls the engine's idle RPM. When you start your vehicle, the engine's idling RPM normally runs high. These higher engine speeds will slow down when the vehicle warms up. If they do not, have the idle RPM checked.

WARNING: If the engine idling speed does not slow down automatically, do not allow your vehicle to idle for more than 10 minutes. Have the vehicle checked as soon as possible. Extended idling at high engine speeds can produce very high temperatures in the engine, fuel systems and exhaust system, creating the risk of fire or other damage to the vehicle and possibly resulting in personal injury.

If fuel odor is detected inside the vehicle, have the vehicle checked by a qualified service technician.

WARNING: Do not start your vehicle in a closed garage or other enclosed area. Exhaust fumes can be toxic. Always open the garage door before you start the engine.

Before you start your vehicle, do the following:

1. Make sure you and all your passengers buckle your safety belts.
2. Make sure your headlamps and other accessories are turned off.
3. Make sure the gearshift lever is in P (Park) and the parking brake is set before you turn the key.

Starting your vehicle

STARTING THE ENGINE

Starting procedure

1. Follow the steps under *Preparing to Start Your Vehicle*.
2. Turn the key to START until the engine starts, then release the key.
Do not press down on the accelerator.
3. Release the key as soon as the engine starts. Do not hold the key in START or you could damage the starter. After you start the engine, let it idle for about 15 seconds.
4. Hold your foot on the brake pedal, put the gearshift lever in gear and release the parking brake. Slowly release the brake pedal and drive away in a normal manner.

Cold weather starting

If your flexible fuel vehicle is equipped with an engine block heater, the standard 110V AC (male) plug is located at the front of the vehicle in the upper left-hand air inlet opening, under the bumper.

When the temperature is expected to be -23°C (-10°F) below and your vehicle has fuel ethanol (E₈₅) in the fuel tank, you should plug in the engine block heater to ensure a quick start.

If temperatures are expected to remain below -23°C (-10°F), it is recommended that you reduce the alcohol content in your fuel tank to about 70% by adding unleaded gasoline if your tank is not already full. Thirteen liters (three gallons) of gasoline will reduce the alcohol in 3/4 full tank from 85% to about 70%. In some areas, winter blends of E₈₅ will already contain the extra gasoline. See the *Refueling* section of this supplement for more information on alcohol fuels.

If you should unexpectedly have 85% alcohol in your fuel tank in extremely cold temperatures with no way to use the engine block heater, the engine may require extended crank times and several attempts to start.

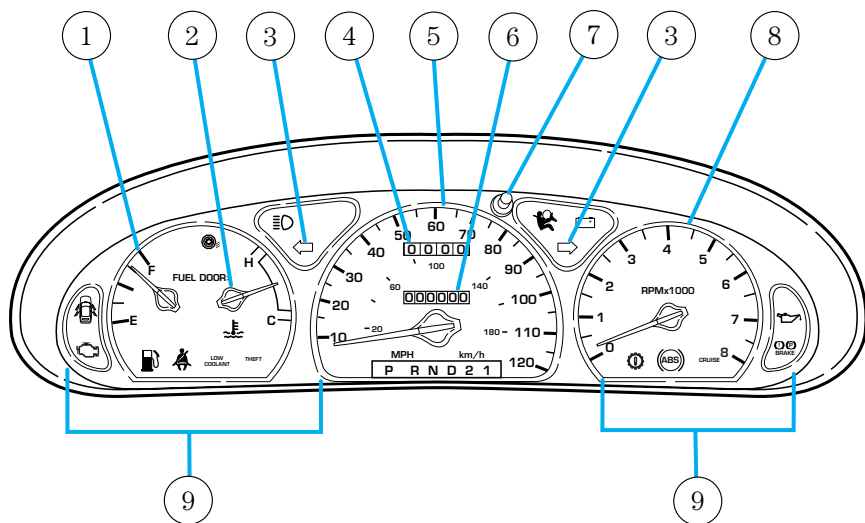
Starting your vehicle

If the engine fails to start using the preceding instructions

1. Press the accelerator pedal 1/3 to 1/2 of the way to floor and hold.
2. Turn the key to START position.
3. When the engine starts, release the key, then release the accelerator pedal gradually as the engine speeds up.
4. If the engine still fails to start, repeat steps one through three.
5. After the engine starts, hold your foot on the brake pedal, put the gearshift lever in gear and release the parking brake. Slowly release the brake pedal and drive away in a normal manner.

If your vehicle has alcohol content in the fuel tank between 10% and 30%, and the outside temperature is above 27°C (80°F), you may experience a rough or rolling idle after start up. The idle should improve in 10 to 30 seconds.

Instrument panel controls



1. Fuel gauge
2. Engine coolant temperature gauge
3. Turn signal indicator
4. Trip odometer
5. Speedometer
6. Odometer
7. Trip odometer reset control
8. Tachometer
9. Warning/indicator lights

WARNING LIGHTS AND GAUGES

The FFV instrument cluster has separate warning lights and gauges that tell you the condition of your vehicle. When illuminated, these warning lights and gauges warn you about the brakes and parking brake, safety belts, battery, oil pressure, high beams, air bag, anti-lock brake system, Powertrain Control Module (PCM) system (), door ajar status, speed control activation, temperature of the engine coolant, how much fuel you have in your tank, how fast you are

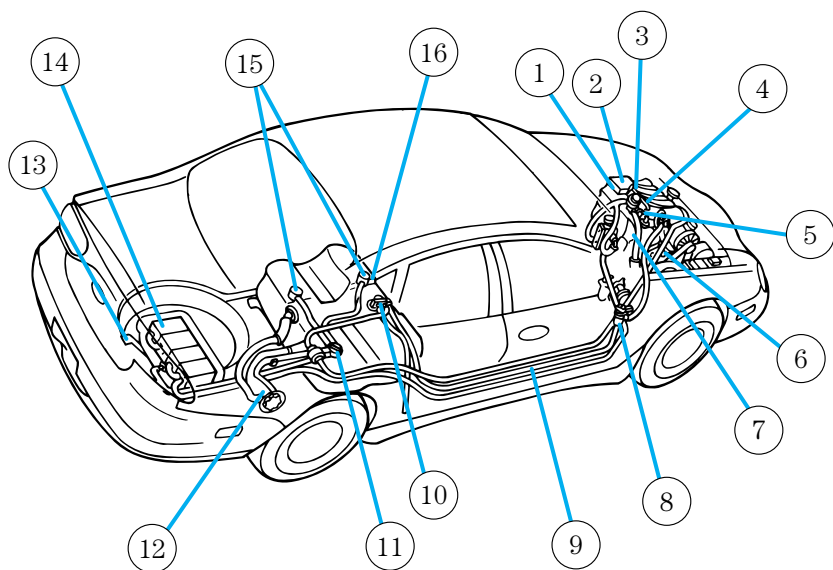
Instrument panel controls

driving, engine RPM, transmission range, trip distance and the total distance your vehicle has been driven.

Refer to your “Owner Guide” for more information regarding the warning lights and gauges for your FFV.

FLEX FUEL (FF) COMPONENT IDENTIFICATION

The accompanying illustration shows all of the unique 3.0L Sable FF components at a glance. All of these unique materials and alloys have “ethanol fuel compatibility”. NEVER replace a unique FF component with a standard vehicle component. Ford Motor Company has designed the materials, components and system configurations specifically for the 3.0L Sable FF vehicle and is monitoring the service history of these vehicles.



1. **Spark plug**— Has a colder heat range.
2. **Engine**— Able to use fuel ethanol, unleaded gasoline, or a combination of both fuels up to 85% alcohol.
3. **Fuel injectors**— Higher fuel flow capacity, modified spray nozzle design and material changes for “alcohol fuel compatibility.”

Instrument panel controls

4. **Fuel rail**— Material changes are made for “alcohol fuel compatibility.”
 5. **Engine block heater**— If equipped, is used to assist in cold start below -23°C (-10°F).
 6. **PCM processor**— Calibration is utilized to optimize engine function for alcohol fuel operation.
 7. **Wiring harness**— Wiring changes have been made to connect with the fuel sensor.
 8. **Fuel sensor**— Determines the percentage of ethanol in the fuel.
 9. **Fuel supply line**— Material changes are made for “alcohol fuel compatibility.”
 10. **Fuel pump assembly/fuel sending unit**— Fuel pump specifically designed for alcohol fuels. Stainless steel parts are used.
 11. **Vapor control valve**— Controls vapor flow to charcoal canister.
 12. **Filler tube**— Improved coating is applied and anti-siphon screens installed.
 13. **Charcoal canister tray**— Protective enclosure.
 14. **Evaporative emission system**— Charcoal canister system enlarged and modified for additional alcohol fuel vapor capacity and higher vapor flow.
 15. **Vapor (roll over) valves**— Helps to increase fuel capacity and vapor flow. Material changes are made for “alcohol fuel compatibility.”
 16. **Fuel tank**— A 68.2 liter (18 gallon) specially coated steel fuel tank is used for “alcohol fuel compatibility.”
- “Alcohol fuel compatibility” means that the component performs satisfactorily, is durable and does not contaminate the fuel when tested in worst-case ethanol-gasoline blends up to 85% alcohol.

Servicing your vehicle

REFUELING

Use only fuels which meet the type specified for the calibration number printed on the calibration decal. Use of other fuels may cause powertrain damage as well as loss of vehicle performance. It will also invalidate the Ford Warranty and any extended service agreement.

WHAT FUELS SHOULD BE USED?

Your Sable FFV uses fuel ethanol. Unleaded gasoline may be also used. However, **do not** use fuel methanol. The correct fuel for your FFV is shown on a decal, located on the inside surface of the fuel filler door.

These vehicles will operate well on ordinary commercial quality unleaded regular gasoline, but only the highest quality fuel ethanol will provide the same level protection and performance.

Standards for these fuels have been developed to provide FFVs the best possible performance, safety and durability. To assist alcohol fuel providers in meeting these standards, guidelines have also been developed which prescribe "Ethanol Fuel Compatible" dispensing station equipment. Fuel stations may apply to be certified as meeting these standards. However, not all stations meet these standards at this time. To ensure proper operation of your Sable FFV on fuel ethanol, refuel at certified stations. These standards and guidelines can be obtained from the Ford Motor Company Alternative Fuels Program (call toll-free 1-800-ALT-FUEL (258-3835) or contact the U.S Dept of Energy Alternative Fuels Data Center (call toll-free 1-800-423-1DOE (423-1363)).

WHAT IS FUEL ETHANOL (E₈₅)?

Pure ethanol is the alcohol which is the intoxicating agent in liquor, beer and wine. It is distilled from the fermentation of plants such as field corn and sugar cane. When ethanol is used in the making of motor fuels, a small amount of a bad tasting chemical is added to discourage beverage use. The resulting fuel is called E_a100 meaning 100% pure ethanol diluted by 2% to 5% gasoline as the "denaturant."

Fuel ethanol (E_a85) is then made by adding 15% more unleaded gasoline. The resulting fuel also has a higher octane rating than unleaded regular gasoline and other properties which allow engine designs with greater efficiency and power.

Servicing your vehicle

Winter blends may contain up to 30% unleaded gasoline (25% plus the denaturant) to enhance cold engine starts. Severely cold weather may require additional measures for reliable starting. This supplement contains specific information for starting under these conditions.

Ethanol is more chemically active than gasoline. It corrodes some metals and causes some plastic and rubber components to swell, break down or become brittle and crack, especially when mixed with gasoline. Special materials and procedures have been developed for the Sable FFV and for the dispensers used by ethanol fuel providers.

Ethanol also has less energy per liter (gallon), so fuel economy in kilometer per liters (miles per gallon) will decrease as the percentage of ethanol goes up.

U.S. government regulations require fuel ethanol dispensing pumps to have a small, square, orange and black label with the common abbreviation for the fuel such as: "E85" above the mid-line and the words "MINIMUM xx% ETHANOL" below the mid-line. The "xx%" is replaced with either "70%" or "85%" as appropriate for the region.

See *Precautionary Information* for more fuel information.

Use of other fuels may cause powertrain damage as well as loss of vehicle performance. It will also invalidate your extended service agreement.

Do not operate the engine while refueling. Do not smoke while refueling.

WARNING: Do not modify the fuel system configuration or components, or replace components with parts not especially designed for use with fuel ethanol. Ford Motor Company has specially designed the materials, components and system configuration for ethanol-fueled vehicles and the particular system is precisely calibrated for efficient operation. The use of different parts or materials could produce an untested configuration that could result in fire, personal injury, or could cause engine damage.

ADDING ENGINE OIL

Ethanol/gasoline flexible fuel vehicles use Motorcraft engine oil (part number XO-5W30-QSP or XO-10W30-QSP, meeting Ford specification WSS-M2C153-G) designed for gasoline fueled vehicles.

Servicing your vehicle

Use of a specific oil is mandatory for proper operation of flexible fueled engines throughout the warranty period and for validation of the extended service agreement.

Oil change intervals must be maintained at the recommended intervals. Refer to the “Service Guide” for the service interval schedules.

SPARK PLUGS

The spark plugs used in the flexible fuel vehicle are different than those used in the gasoline-powered vehicle. This is necessary to prevent engine damage due to pre-ignition.

Standard spark plugs must never be installed on the FFV engine, because disabling and expensive engine damage may occur. Proper spark plugs may be purchased through your dealer.

The FFV vehicle recommended Motorcraft spark plugs part number AGSF-22PP, which is installed as original equipment, **must** always be used for **all** types of fuels.

LONG-TERM STORAGE

Due to the small amounts of corrosive impurities that may be found in E₈₅, it is recommended that the fuel be switched over to 100% high-quality unleaded gasoline prior to long-term storage of your FFV.

