



## Biofuel Facts

**Benefits:** Biofuels, such as E85 ethanol and B20 biodiesel, are cleaner burning, homegrown, renewable fuels. Vehicles running on biofuels emit less air pollution, including cancer-causing compounds. The use of biofuels also helps reduce our dependence on petroleum and provides alternative markets for farm and forest products.

### E85 Ethanol

**E85:** A blend of 85% ethanol and 15% gasoline. E85 must only be used in flexible fuel vehicles.

**Ethanol:** Ethanol is a high-octane, domestic and renewable alcohol fuel produced primarily from plant sugars. It is blended with gasoline to make a cleaner burning, high performance vehicle fuel.

**Flexible fuel vehicle (FFV):** A vehicle designed to use any combination of gasoline or ethanol from 100% unleaded gasoline to E85. There are over six million FFVs in the U.S. and approximately 90,000 in Tennessee.

#### **How can I tell if my vehicle is an FFV?**

Visit [www.e85fuel.com](http://www.e85fuel.com) for the most recent list of FFVs. You can also check your vehicle owner's manual, visit your dealer, or check inside the fuel cap door to determine if you can use E85.

#### **How is an FFV different from a gasoline-only vehicle?**

An FFV contains a fuel sensor that detects the ethanol/gasoline ratio and adjusts engine operation accordingly. Because alcohols are corrosive, any parts that come in contact with the fuel (e.g., fuel tank, fuel lines, injectors) must be modified slightly to tolerate alcohol.

#### **How does E85 ethanol perform?**

Ethanol has a higher octane rating than regular unleaded gasoline, making E85 a premium fuel. Because a gallon of ethanol contains less energy than a gallon of gasoline, vehicles running on E85 will get fewer miles per gallon than unleaded gasoline (mileage varies depending upon type of vehicle and personal driving practices).

*Source: Renewable Fuels Association, National Ethanol Vehicle Coalition, U.S. Environmental Protection Agency*

### B20 Biodiesel

**B20:** A blend of 20% biodiesel and 80% petroleum diesel. B20 can be used in most diesel engines with little or no modification.

**Biodiesel:** A clean-burning alternative diesel fuel produced from vegetable oils or animal fats. Fuel-grade biodiesel must meet strict industry specifications to ensure proper vehicle performance. Biodiesel is NOT the same as raw vegetable oil. Unprocessed vegetable oil and recycled greases must be transformed into biodiesel.

#### **Can I use biodiesel in my existing diesel engine?**

Biodiesel can be used in most diesel engines with no modifications to the engine or the fuel system. Biodiesel has a solvent effect that cleans out diesel fuel deposits that accumulate on tank walls and in fuel lines after the use of petroleum diesel. This can result in fuel filter clogging if the filter is not checked and replaced after the initial use of biodiesel. This is particularly important for older vehicles.

#### **Will using biodiesel affect my engine warranty?**

Vehicle warranties do not cover engine problems caused by any fuel. Warranties cover defects in materials and workmanship only. To prevent problems, use only biodiesel that meets state and federal fuel quality requirements. Also, check your warranty to ensure that biodiesel meets the fuel parameters established by the engine manufacturer.

#### **How does biodiesel perform?**

Biodiesel performs much like traditional diesel. Because it has excellent lubrication abilities, biodiesel reduces wear and tear on the engine.

*Source: National Biodiesel Board [www.biodiesel.org](http://www.biodiesel.org)*

# Is Your Vehicle an FFV?

Many vehicle manufacturers offer some models as flexible fuel vehicles (FFVs). The following is a short list of vehicles that may be flexible fuel vehicles. Note that while several models were offered as FFVs in some years, they may not have been offered as FFVs in other years.

Many models will have a decal under the fuel door indicating E85 use is allowed, and some newer models may have a yellow fuel cap.

If you do not have visible identification that your vehicle is an FFV, or if you are interested in learning more about the makes and models that are produced as FFVs, the National Ethanol Vehicle Coalition (NEVC) maintains a current list of flexible fuel vehicles.



For a complete flexible fuel vehicle list, visit the National Ethanol Vehicle Coalition (NEVC) website at [www.E85fuel.com](http://www.E85fuel.com).

## **Chrysler**

Chrysler Aspen  
Chrysler Sebring  
Chrysler Town and Country  
Chrysler/Plymouth Voyager

Dodge Avenger  
Dodge Caravan  
Dodge Caravan Cargo  
Dodge Dakota  
Dodge Durango

Dodge Grand Caravan  
Dodge Ram 1500  
Dodge Stratus  
Jeep Commander  
Jeep Grand Cherokee

## **Ford / Lincoln / Mercury**

Ford Crown Victoria  
Ford E-Series Commercial Van  
Ford Expedition  
Ford Explorer  
Ford Explorer Sport Trac

Ford F-150  
Ford Ranger  
Ford Supercab Ranger  
Ford Taurus

Lincoln Navigator  
Lincoln Town Car  
Mercury Grand Marquis  
Mercury Mountaineer  
Mercury Sable

## **General Motors**

Buick Lucerne  
Buick Terraza  
Cadillac Escalade  
Chevrolet Avalanche  
Chevrolet Express  
Chevrolet HHR  
Chevrolet Impala

Chevrolet Monte Carlo  
Chevrolet S-10  
Chevrolet Silverado  
Chevrolet Suburban  
Chevrolet Tahoe  
Chevrolet Uplander

GMC Savana  
GMC Sierra  
GMC Sonoma  
GMC Yukon  
Hummer H2  
Pontiac Montana  
Saturn Relay

## **Izuzu**

Izuzu Hombre Pickup

## **Mazda**

Mazda B3000 Pickup

## **Mercedes**

C230 Sedan  
C240 Luxury Sedan and Wagon  
C300 Luxury and Sport  
C320 Sedan, Sport and Wagon

## **Toyota**

Toyota Sequoia  
Toyota Tundra

## **Nissan**

Nissan Armada  
Nissan Titan