



ALTERNATIVE FUELS AND FLEET EFFICIENCY



About Alternative Fuels

Alternative Fuels

What are Biofuels? Biofuels, which are used primarily for transportation, are liquid fuels produced from biomass materials. Biofuels refer to ethanol and biodiesel. Biofuels are made by converting various forms of biomass such as corn or animal fat into liquid fuels and can be used as replacements or additives for gasoline or diesel. Biofuels generally have lower life-cycle carbon dioxide emissions than do their fossil fuel counterparts.

What is E85 ethanol? E85 ethanol is an alternative fuel to gasoline. It's a high-octane, cleaner-burning fuel that's a blend of 85% ethanol and 15% gasoline. Ethanol is domestically produced and mostly renewable, typically produced from grain, switch grass, willow, and other biomass resources.



What is an E85 flexible-fuel vehicle?

Flexible fuel vehicles (FFVs) are designed to run on gasoline or a blend of up to 85% ethanol (E85). Except for a few engine and fuel system modifications, they are identical to gasoline-only models. FFVs have been produced since the 1980s, and dozens of models are currently available. Since FFVs look just like gasoline-only models, you may have an FFV and not even know it.

How can I tell if my vehicle can run off of E85? E85 window stickers have been sent to USDA agencies and should be placed in the vehicle. Also, General Motors has identified their E85 capable vehicles with a yellow gas cap since 2006. An E85 vehicle can be identified by the Vehicle Identification Number (contact OPPM for assistance).



Review <http://www.fueleconomy.gov/feq/current.shtml>

To find out about gas mileage tips, alternative fuels, tax incentives, etc.

On 'E'? Why not fill up with E-85?

Phone: 202-720-8616

Biodiesel

What Is Biodiesel? Biodiesel consists of chemicals known as fatty acid methyl esters (FAME) that can be used as a diesel fuel substitute or diesel fuel additive. Biodiesel is typically made from oils produced from agricultural crops such as soybeans or canola but can also be made from various other feedstocks such as animal fats.

How Is Biodiesel Used? Biodiesel is used in the same manner in which petroleum diesel is used. It can be pumped into most tanks that take diesel fuel. Though biodiesel can be used in petroleum based diesel tanks, it can be used as a substitute or blended along with petroleum based diesel. For example, a blend of 20% biodiesel with 80% petroleum diesel is known as B20. Biodiesel has excellent lubricating properties, and therefore usage of the blends can be beneficial for engine performance. Biodiesel also has virtually no sulfur content, making it a popular additive for low- and ultra-low-sulfur diesel fuels required by the Environmental Protection Agency.



E85 - Ethanol

How do E85 FFVs compare to dedicated gasoline vehicles? FFVs experience no loss in performance when operating on E85. However, since a gallon of ethanol contains less energy than a gallon



of gasoline, FFVs typically get about 20-30% fewer miles per gallon when fueled with E85.

What are the benefits of using E85?

There are several important benefits to using E85 ethanol, including:

1. Ethanol, the major component of E85 ethanol, is a renewable fuel
2. E85 ethanol helps reduce dependence on petroleum
3. E85 ethanol helps reduce greenhouse gas emissions
4. E85 ethanol can help improve your vehicle's performance. How? E85 ethanol has a higher octane rating than gasoline, which allows for more horsepower and torque
5. E85 ethanol can help reduce smog-forming emissions
6. E85 ethanol can help support the domestic agriculture industry in the U.S.

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How do E85 powered vehicles work? If E85 isn't available, can the vehicle still run? E85 ethanol flexible fuel vehicles are designed to run on E85 ethanol, gasoline, or any blend of the two. So even if E85 ethanol fuel is not available, the vehicle will still run. Every flexible fuel vehicle has an engine control module that helps to identify which fuel or blend of fuels is running through the vehicle's system. Based on that information, the system automatically adjusts itself to run on that fuel type.

The full-length quarterly **Alternative Fuel Awareness Newsletter** will be forthcoming on February 1, 2009.



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