



growth energy™
America's Ethanol Supporters

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Ever thought of running your car on clean energy? High level blends of ethanol burn cleaner than gasoline and come in a renewable supply. By harvesting crops produced every year, we are assured of an environmentally-friendly fuel, which reduces the need for foreign oil and fossil fuel.

Ethanol is a high-octane, liquid, domestic, renewable fuel, produced by the fermentation of plant sugars. Today, U.S. ethanol producers have the capacity to produce more than 9 billion gallons of alcohol. Think about it – grain grown by Americans, processed by Americans, fueling Americans' cars.

E85 is the term for motor fuel blends of up to 85% ethanol and 15% gasoline. E85 is considered an alternative fuel under federal and state laws designed to increase our domestic energy security and reduce vehicle emissions. Government tests have shown E85 vehicles reduce harmful hydrocarbon and benzene emissions when compared to vehicles running on gasoline. Ethanol fuel also reduces carbon dioxide (CO₂), a major contributor to global warming. Although CO₂ is released during ethanol production and combustion, it is recycled as a nutrient to the crops used to produce ethanol. Ethanol is also non-toxic, water-soluble and biodegradable.

E85 looks and “fuels” just like regular gasoline; however, ethanol does not contain many of the harmful carcinogens and other toxic chemicals



found in gasoline. Public fueling locations sell 85% ethanol in many cities across the country. For a current listing of stations that sell E85 (and all blends of ethanol), please see our website at:

www.E85Refueling.com.

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HANOL



Flexible Fuel Vehicles (FFVs) FFVs are

specially designed to run on regular unleaded or any ethanol fuel blend up to 85 percent. Special on-board diagnostics “read” the fuel blend, enabling drivers to fuel with E10, E20, E30, E40, E50 or any ethanol blend up to E85, or regular unleaded if E85 is not available. Therefore, any part of the engine which comes in contact with the fuel has been upgraded to tolerate alcohol. Normally, these parts include an upgraded fuel system with alcohol compatible parts. Today, Chrysler Corporation, Ford Motor Company, General Motors, Nissan and Toyota all offer flexible fuel engines as standard equipment in certain vehicles—at no additional cost to consumers. Each FFV comes with the same factory warranties as gasoline vehicles.

2010 FLEXFUEL VEHICLE BADGING

Chrysler



Ford



GM



Nissan



What are the differences between an FFV and a regular gasoline-only model?

The significant difference is the fuel sensor which detects the ethanol-to-gasoline ratio. A number

of other parts on the FFV's fuel delivery system are modified to be E85-compatible. The fuel tank, fuel lines, fuel injectors, computer system and anti-siphon device have been slightly modified. Alcohol fuels can be more corrosive to certain metals than gasoline; therefore, fuel system parts have been upgraded for high level ethanol use.

What happens if E85 is not available?

The FFV system allows a driver to use any combination of gasoline or ethanol—from 100% regular unleaded gasoline up to 85% ethanol. Therefore, drivers can use unleaded gasoline if E85 is not available. This is completely transparent to the driver and there are no switches or other necessary changes.

What is the range of an FFV?

E85 has a lower energy density than conventional gasoline. However, E85 also has a much higher octane rating (100+) than gasoline. FFVs are “flexible” and not dedicated to high level blends of ethanol. When using these high level blends, some drivers may experience up to a 15% - 20% drop in fuel economy. One will find the economic, environmental and energy security benefits of E85 outweigh any variation.

The fuel economy of any vehicle varies with temperature, road conditions, driving habits and other factors. For comparison purposes, aggressive driving habits can result in a 20% loss and low tire pressure can reduce mileage by up to 3%. Fuel economy will decline, but this is offset by the typical lower selling price of E85.

What happens if I accidentally fuel my gasoline-only powered vehicle with a high level blend of ethanol?

If your automobile is not manufactured to run on blends of ethanol above 10 percent, no problems should occur if you mistakenly fuel with it once. As mentioned, one difference between an FFV and a gasoline-powered vehicle is their computer modules are meant to recognize different amounts of oxygen. High level blends of ethanol contains a higher



2010 yellow fuel cap

amount of oxygen than gasoline and FFVs are designed to recognize the high oxygen and adjust the air:fuel ratio. When E85 is used in a gasoline-powered vehicle, your “check engine light” may appear.

Keep topping off with gasoline when you refuel and run the E85 through the system. The “check engine light” should eventually disappear.

What is the price of E85?

E85 prices vary by the market being considered. In order to address the lower energy content, E85 SHOULD BE PRICED AT LEAST 15% to 20% below regular unleaded gasoline at the pump. However, as is the case with all forms of fuel, the larger the network of fueling outlets, typically, the more competitively the fuel is priced.

Answers to your frequently asked questions, a listing of E85 fueling locations, all updated FFV information and more can be found at

www.EthanolRetailer.com



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GROW WITH US. DEFEND THE FUTURE OF AGRICULTURE. JOIN GROWTH FORCE.

Join us today. Help us shape America's farming future and our homegrown energy potential. Please fill out the contact information below and mail it back to the address indicated.

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Company/Organization: _____

Address: _____

City: _____

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