

# THE FUEL RETAILERS ETHANOL GUIDE

2006

Volume 2



## INSIDE

- Checklists for Preparing Pumps for E10 and E85. (pages 2 & 5)
- Promoting Your Ethanol-Blended Fuels (page 2)
- Answering Questions about E10 Unleaded (page 3)
- State, Federal Incentives Pay Up to 70% of the Cost of Adding an E85 Pump (page 4)
- Ethanol in the News (page 6)
- Ethanol Resources (page 6)

## Kansas Fuel Retailers & Drivers Pick Ethanol

On July 1, 2005, the law requiring labeling of fuel containing up to 10 percent ethanol was repealed. This gave fuel retailers new flexibility to consider ethanol, a fuel additive that increases octane, burns cleaner and is good for engines. Ethanol could even help you offer a higher quality fuel at a lower price to your customers. Sales of ethanol-blended fuels skyrocketed in late 2005. More and more retailers are finding ethanol-blended fuels are a good match for their operations. Figures from the Kansas Department of Revenue show the dramatic increase in E10 Unleaded sales from July through October.

### KANSAS E10 UNLEADED SALES COMPARISON

Month	2004	2005	% Increase
July	2,941,000	21,391,000	727%
August	2,801,000	21,902,000	782%
September	2,966,000	16,826,000	567%
October	1,498,000	16,085,000	1,074%

## ***Want to Add Ethanol at Your Station?***

# **Checklist Ensures Smooth Transition**

No modifications are required to add up to 10 percent ethanol to fuel tanks. However, retailers need to follow the simple checklist below to make certain that water is removed from the tanks before adding ethanol.

## **E10 CHECKLIST: Cleaning Tanks for E10 Unleaded:**

Service station underground storage tanks (USTs) are subject to accumulations of water and/or sediment over time. It is important to deal with these factors before introducing ethanol into your retail fuel system. If the water is not removed from the system, the solubility limit of water in gasoline may be exceeded, and it is possible for the fuel to undergo phase separation. When phase separation in a tank has occurred, the alcohol has essentially dropped out of the fuel and now resides in the water bottoms layer of the tank. There is no “fix” for phase separation. The tank’s contents including the top fuel and bottom water/alcohol layers must be removed.

### **Preparation:**

1. Pump out gasoline from UST.
2. Clean out all product/water/sludge from the bottom of the tank.
3. Then fill the UST as close to capacity as possible, to minimize the effect of any remaining moisture.
4. It is recommended to change the filter at this point, and a couple of times throughout the first few days of usage.
5. Water present at time of clean out indicates a problem and the source should be located and repaired to avoid future problems.

## **Promoting E10 Unleaded**

While Kansas retailers are not required to label E10 unleaded, many customers are seeking out ethanol blended fuels. This may present a marketing opportunity for your station. Many fuel retailers find adding ethanol to be an excellent sales tool. After all, ethanol-blended fuels are cleaner burning, higher octane and are competitively priced.

### **Promotional Materials Available**

- Pump Stickers for voluntary E10 labeling
- General E10 information Brochure
- Brochure with automakers statements on E10 Fuel
- Brochure on the use of E10 Unleaded in small engines
- Other promotional items may be available for ethanol promotions.
- Make copies of the Ethanol Q&A on the next page for a quick handout *(printed in black and white for easy copying)*



**For promotional and informational materials for E10 Unleaded fuel, contact us at 800-489-2676**

This newsletter is funded by a grant from the Kansas Department of Commerce and compiled by the Kansas Corn Growers Association and Kansas Grain Sorghum Producers Association to provide information on ethanol fuels and the repeal of labeling regulations for fuels containing up to 10 percent alcohol (ethanol)

# Ethanol Q&A

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## **Q: What is E10?**

**A:** E10 Unleaded is gasoline with 10 percent ethanol. It can be used in any gas-powered car.

## **Q: Does E-10 make engines run hotter?**

**A: No.** The ethanol in E-10 Unleaded actually helps keep your engine cooler, since the ethanol in the fuel combusts at a lower temperature. In fact, many high-powered racing engines use pure alcohol for that very reason.

## **Q: Is E-10 bad for fuel injectors?**

**A: No.** Ethanol and E-10 Unleaded have never contributed to burning or fouling of port fuel injectors. Some components in gasoline, such as olefins, have been identified as causing deposits that can foul injectors. Because ethanol burns 100% and leaves no residue, it can't contribute to the formation of deposits. The ethanol in E-10 actually helps fuel injectors cleaner-helping improve engine performance. It does not increase corrosion, nor will it harm any seals or valves.

## **Q: Does E-10 cause vapor lock?**

**A: No.** Vapor pressure specifications of gasoline continue to be lowered by state and federal statute, virtually eliminating the vapor lock problems that were reported in the past. The vapor pressure of gasoline is set by state law, and is lower in the spring and summer than in the fall and winter. Vapor lock usually occurs when a winter grade of gasoline formulated for cold weather starts is used under summer-like conditions. (Remember: 90% of E-10 Unleaded is gasoline, so the formulation of the base gasoline has a dramatic effect on performance.) Also, all major auto manufacturers now have in-tank fuel pumps which are not subject to vapor lock like the older in-line fuel pumps.

## **Q: Does E-10 plug fuel lines?**

**A: No.** Today occurrences of plugged fuel filters are virtually non-existent. The cleansing nature of E-10 can actually keep your fuel system cleaner and lead to improved performance. In the case of dirty fuel systems, contaminants and residues that have been deposited by previous gasoline fills can be loosened. That residue can get caught in the fuel filter. In older cars, especially those made prior to 1975, replacing the filter solves the problem, and once your fuel system is clean, your car's performance should improve as well.

## **Q: Does 10% ethanol reduce gas mileage?**

**A: No.** Many variables affect fuel economy, including seasons, the weather, the state of your car, road grade, tire pressure, and the use of air conditioners. Most drivers using E10 see an increase or no difference in fuel economy.

## **Q: Why do some auto mechanics tell people not to use E-10?**

**A:** A mechanic who says not to use E-10 simply does not have correct information—particularly since every major automaker in the world approves the use of 10 percent ethanol fuel.

## **Q: Can E-10 be used in older cars?**

**A:** The formulation of gasoline has changed dramatically over the past few years without affecting the performance of older cars. Many older cars were designed to run on leaded gasoline, with the lead providing necessary octane for performance—and the lead oxides that were formed during combustion provided a cushion that reduced wear on non-case-hardened valve seats. When lead was phased out of gasoline, oil companies added chemicals to raise the octane rating—and other additives to replace the "lubrication" value of lead. The ethanol in E-10 raises octane in gasoline by three points using a natural, renewable additive that works well in older engines.

## **Q: Can I use E10 in small engines?**

**A: YES!** E-10 is perfectly acceptable in lawn mowers, snowmobiles, and other small engines. Manufacturers of this equipment know that more than 40% of the gasoline sold across the U.S. contains oxygenates such as ethanol, so they've made certain that their engines perform on these clean-burning fuels. E-10 may be used anywhere that unleaded gasoline is used—from ATVs to chainsaws, from lawn mowers to personal watercraft. Virtually every small engine manufacturer approves the use of E-10 in its equipment.

## **Q: What is E85 and Can I Use It?**

**A:** E85 is the term for fuel blends of 85 percent ethanol and just 15 percent gasoline. E-85 fuel can be used in flexible fuel vehicles that are designed to use any combination of gas and ethanol up to 85 percent ethanol. Today there are over 6 million FFVs on the road made by several leading manufacturers. Visit [www.e85fuel.com](http://www.e85fuel.com) to see if you have an FFV and to find E85 fueling locations.



**E85—Motor fuel blends of 85 percent ethanol and 15 percent gasoline.** (E70 is the winter-blend, normally offered from October 15th through March 15th. The additional gasoline helps with cold starts in the cooler months.) E-85 fuel can be used in flexible fuel vehicles (FFVs). The FFV system allows the driver to use any combination of gasoline or ethanol - from 100 percent unleaded gasoline to 85 percent ethanol. GM, DaimlerChrysler, Ford, Mercedes, Mercury, Mercedes and Nissan all produce vehicles that can run on E85. Consumer interest in E85 is growing rapidly.

The Kansas Corn Commission, United Bio-Energy and National Ethanol Vehicle Coalition (NEVC) are collaborating in an effort to add at least 20 E85 stations in Kansas this year. Interested? Contact Robert White at NEVC at 877-485-8595, ext. 5.

### ***WANT TO ADD E85?***

## **State, Federal Incentives Cover Up to 70% of Cost**

State and federal incentives can now pay for as much as 70 percent of your cost of adding an E85 pump to your station. The new federal incentive was part of the Energy Bill passed by Congress in 2005. The bill, and the incentive went into effect January 1.

### **Kansas Incentive Offers 40%**

A retailer can add E85 to their product line and become eligible for an income tax credit equal to 40% of the total amount expended on adding that product. According to the statute, “Any taxpayer who makes expenditures for a qualified alternative-fuel fueling station shall be allowed a credit against the income tax imposed by article 32 of chapter 79 of the Kansas Statutes Annotated, as follows: Any qualified alternative-fuel fueling station placed in service on or after January 1, 2005, an amount equal to 40% of the total amount expended for each qualified alternative-fuel fueling station, but not to exceed \$160,000 for each fueling station.” The form can be downloaded at: [www.ksrevenue.org/taxcredits-altfuel.htm](http://www.ksrevenue.org/taxcredits-altfuel.htm)

### **Federal Incentive Offers 30%**

A new Federal tax credit included in the Energy Bill took effect Jan. 1, 2006. A fuel retailer can claim a 30 percent tax credit, up to \$30,000 for the cost of installing clean fuel refueling facilities, including E85 fuel. The credit applies to property placed in service between Dec. 31, 2005 and Dec. 31, 2009.

Additional information and links to tax forms can be found at [www.ksgrains.com/ethanol](http://www.ksgrains.com/ethanol)

*For all ethanol blends:*

## **VEETC—51 Cents per Gallon Ethanol Tax Credit Is Important Tool**

The Volumetric Ethanol Excise Tax Credit, also known as VEETC, is a Federal tax credit that went into effect on January 1, 2005. This is a credit of 51 cents for every gallon of pure ethanol blended into gasoline.

### **VEETC Details**

- Credit of 51 cents for every gallon of pure ethanol blended into gasoline.
- E10 would have a credit of 5.1 cents per gallon.
- VEETC is sometimes referred to as the “blenders credit”. A registered blender is the only individual eligible for the credit.

## **State Tax Credit to FFV Owners Who Use E85 Fuel**

People who buy FFVs and use E85 can claim a state tax credit. An individual who purchases a new FFV has from the date of purchase through that calendar year and the next calendar year to purchase 500 gallons of E85. They can then submit those receipts with their taxes and receive a \$750 tax credit. Visit the Ethanol Retailers page online at [www.ksgrains.com/ethanol](http://www.ksgrains.com/ethanol)



## E85 for Flexible Fuel Vehicles

### CHECKLIST OF INSTALLING OR CONVERTING EQUIPMENT TO DISPENSE E85

- Notify your licensed installer and the state underground storage tank program of your intent to dispense E85. Your installer should determine if the age, composition and condition of your tank and piping are safe for E85 use. **For assistance, contact the National Ethanol Vehicle Coalition (NEVC) toll free at 877-485-8595 or visit [www.e85fuel.com](http://www.e85fuel.com).**

- In the case of a conversion, the tank must be cleaned of all water and sediment.
- Ensure no water is present to protect the quality of your ethanol-blended fuels and your customers' vehicles.
- Ensure all visible fittings and connections at the top of the tank are tight (no vapors escape and no water enters).
- Ensure the sump and spill containment covers will prevent water from entering the system.
- Use **only** 1-micron dispenser filters or a comparable E85-specific filter with E85 blends. Do NOT use 10-micron gasoline or 30-micron diesel filters. Cim-Tek is a popular brand of alcohol-compatible filters.
- Use **only** an alcohol-compatible hose with E85.
- Use **only** steel or nickel-plated swivels, connectors and nozzles with E85. Do NOT use aluminum gasoline nozzles.
- Identify the E85 fill port and paint the access cover according to API RP 1637. Make certain transport drivers cannot make fuel deliveries to the wrong fill pipe.
- Calibrate the dispenser liquid meter at time of conversion or new installation and two weeks later to verify meter accuracy with E85. More frequent calibration (API RP 1626) may be required to ensure the retailer is receiving proper compensation for the sale.
- Label dispenser with all E85 logos, cautionary and trade commission decals. Use nozzle covers identifying E85 is not gasoline or diesel. Consider using hangtags, pump toppers and other signage to educate your customers. Price sign inserts, curbside signs and the above decals and materials are available from the NEVC.
- Tank should be filled to 80% of capacity and kept as full as possible for 7 to 10 days.
- Conduct a precision test of the tank system (0.1 gallon/hour leak rate) with ATG system within seven days after tank is filled to confirm the integrity of the system and that the leak detection equipment is operating properly. Report any "fail" results immediately.
- Ensure no water is allowed to contaminate your fueling system. If water is suspected or detected, track down its source and fix the problem immediately. The best way to guard against contamination is to properly clean and maintain the fueling system. Confirm no leaks exist in tank fill cap and containment reservoir before beginning your E85 operation. Water-detecting pastes, suitable for E85, may be available in the near future.
- If product seems to pump slowly, check and replace filters. Persistently clogged filters could indicate moisture or another source of contamination.

## Ethanol In the News

More and more consumers are talking about ethanol and seeking it out as a domestically produced fuel.

- President Bush made significant references to ethanol as part of the solution to reducing our dependence on foreign oil.
- General Motors debuted a commercial touting E85 and flexible fuel vehicles during the Super Bowl. The new campaign, Live Green, Go Yellow can be found at [www.livegreengoyellow.com](http://www.livegreengoyellow.com)
- Kansas Governor Kathleen Sebelius is chair of the Governor's Ethanol Coalition.
- The first flexible fuel Ford F150s rolled off the assembly line in Kansas City in late 2005.
- Ethanol production continues to grow in Kansas, with our production more than tripling in the past five years.
- In 1980, the U.S. produced 179 million gallons of ethanol. In 2004, we produced nearly 4 billion gallons.

Find more ethanol resources at the  
Kansas Ethanol Information website  
[www.ksgrains.com](http://www.ksgrains.com)

## Ethanol Resources

**Kansas Ethanol Information Website**  
[www.ksgrains.com/ethanol](http://www.ksgrains.com/ethanol)

**Kansas Corn Growers/Grain Sorghum  
Commissions and Associations: 800-489-2676**  
[www.ksgrains.com](http://www.ksgrains.com)

**National Ethanol Vehicle Coalition**  
[www.e85fuel.com](http://www.e85fuel.com)

**American Coalition for Ethanol**  
[www.ethanol.org](http://www.ethanol.org)

**Renewable Fuels Association**  
[www.ethanolrfa.org](http://www.ethanolrfa.org)

**Ethanol Producers Information Council**  
[www.drivingethanol.org](http://www.drivingethanol.org)

**E10 Unleaded Web Site**  
[www.e10unleaded.com](http://www.e10unleaded.com)

**Petroleum Marketers and Convenience Store  
Association of Kansas: 785-233-9655**  
[www.pmcaofks.org](http://www.pmcaofks.org)

**Kansas Association of Ethanol Processors**  
[www.ethanolkansas.com](http://www.ethanolkansas.com)

Special thanks to:  
**Kansas Department of Commerce**  
[www.kansascommerce.com](http://www.kansascommerce.com)

**LOOK INSIDE**  
Helpful information  
for fuel retailers

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