



## Vehicle Emissions Inspection Program

# REPAIRCARE

### E10 Comes to Maryland

In May, fuel retailers in Maryland began selling ethanol-blended gasoline. This article describes ethanol and some potential issues that could affect motorists and repair technicians.

Ethanol is an alcohol-based fuel derived from fermenting and distilling agricultural crops. In the United States ethanol is primarily produced from corn. Newer production methods allow barley, corn stalks, grasses, paper/pulp mill wastes, basically any type of cellulosic, high sugar biomass to be converted to ethanol.

E85 and E10 are the two main ethanol fuel mixtures commercially available. The E85 ethanol mixture consists of 85% ethanol and 15% gasoline, while the E10 mixture is 10% ethanol and 90% gasoline.

The E85 blend is only useable in a vehicle that is designated "flex-fuel". This designation indicates the vehicle will operate on E85, gasoline, or any combination of the two. These vehicles have been manufactured since the mid 1990's. To see if a vehicle has the flex-fuel designation, check the

owner's manual or look on the fuel filler door to see if it can run on E85. A flex-fuel vehicle has some modifications to the engine and fuel system (different seals and fuel sensors) that allows switching between E85 and gasoline. A non flex-fuel vehicle **cannot** run on E85.

Maryland uses oxygenated / reformulated gas (RFG) as part of its air pollution control strategy. Prior to the spring of 2006 Maryland had been using fuel blended with the oxygenate MTBE. This changed when President Bush signed the Energy Policy Act of 2005 (EPACT2005). The Act did two things: removed the oxygenate requirement for RFG, and mandated the increased use of renewable fuels, primarily ethanol and biodiesel. What EPACT did not do was offer oil companies protection from MTBE related lawsuits. MTBE was found to contaminate groundwater around leaking storage tanks and is a suspected carcinogen. Since MTBE lawsuit protection was not part of the final EPACT2005 bill, many oil companies have switched to using E10 as the fuel oxygenate

instead of MTBE. As a result, E10 is now widely available in Maryland.

Older vehicles may see a slight drop in fuel economy when using an ethanol blended fuel, but newer model year vehicles should not see any noticeable fuel economy or drivability problems. Due to pollution control equipment and regulations, all other types of vehicle emissions should not increase in a properly maintained vehicle. In addition, a vehicle might experience a slight sluggishness when first using an ethanol mixed fuel. This is due to ethanol's tendency to mix with any water that may be in a vehicle's fuel system. This sluggishness should go away within the first few days. Also, the use of dry-gas should resolve this problem as well.

There might be an increase of clogged fuel filters with the E10 blended fuel due to the solvent nature of ethanol cleaning the fuel tank and fuel lines. These problems should be resolved after a few fill-ups with E10.

### For more information,

U.S. Department of Energy,  
Energy Efficiency and Renewable Energy  
[www.eere.energy.gov/afdc/altfuel/ethanol.html](http://www.eere.energy.gov/afdc/altfuel/ethanol.html)

Ethanol Producers and Consumers  
[www.ethanolmt.org/index.html](http://www.ethanolmt.org/index.html)  
American Coalition for Ethanol  
[www.ethanol.org/](http://www.ethanol.org/)