

Halderman: Last week we discussed E85 and while it costs less per gallon, the fuel economy is 20% to 30% lower so using it may not save money. Another alcohol, methanol, made from natural gas has been used as a fuel. However, methanol is very corrosive and transporting it would require that it is stored in corrosion proof storage tanks and require special pumps and lines at stations. While there were vehicles built in the 1980s and 1990s that were designed to use M85 (85% methanol and 15% gasoline), there are no vehicles built today that are designed to operate on methanol.

Wheels: What other fuels could be used?

Halderman: Propane, also called liquefied petroleum gas (LPG), is commonly used in fleet vehicles. Propane is actually a mixture of gases, including:

- 90% propane
- 5% propylene
- 2% butane
- 1.5% iso-butane
- 1.5% methane

The energy output of propane is about 91,000 BTUs per gallon compared to gasoline which has about 114,000 BTUs per gallon. This means that it requires more propane to travel the same distance compared with using gasoline. Propane also has to be stored under pressure in a large tank, usually located in the trunk.

Wheels: If I convert my vehicle to operate on propane, where can I get fuel?

Halderman: This is a good question because very few if any places that have propane are setup to fill vehicles. Propane is therefore best used by fleets, such as taxis or commercially where they can be refilled at a common location. Therefore, due to the lack of filling stations, I do not think propane will become a major alternative to gasoline. The distance that can be driven (range) is also very low compared to the same vehicle using gasoline. The good thing about using propane in the engine stays cleaner inside and has less carbon deposits due to the use of a gaseous fuel compared with a liquid fuel. The tanks needed to store propane take a lot of space from the trunk or passenger compartment.

Wheels: Can my vehicle be converted to operate on propane?

Halderman: Propane conversions were made many years ago, but the cost involved, plus the problem of locating a place to fuel the vehicle, makes a conversion very unlikely. See next week's column on compressed natural gas (CNG) as another alternative.

