

A silver lining to high gas prices

Seems like everyone across the country has been complaining about gasoline prices consistently exceeding \$2 a gallon. This price is about 30% more than what we've become accustomed to. Just about every night, the local news airs Joe Citizen's take on the escalating prices.

People in lower income brackets have a legitimate beef — especially if they have to commute long distances to and from work. For them, the money they shell out for gas can consume a substantial portion of their income. So a 30% increase in the price of gas means they'll have to cut back on some other necessity (probably cigarettes or lottery tickets, but that's another matter).

If a TV reporter shoves a microphone in my face, for once I'll have little to complain about. Why? Because we've gotten away with paying less for gas than other consumers throughout the rest of the world. But as with the many other luxuries Americans have enjoyed, we've gotten used to low gas prices.

The fact of the matter is, for the last few decades the price of gasoline has increased at a slower rate than the general cost of living. With the exception of electronics, the price of just about everything else has gone up substantially, especially

the main consumers of gasoline — cars. So let's just say we've benefited from low gas prices for years, but now the party's over.

More importantly, though, as the price of gas goes up, it becomes more practical to produce domestic fuel. Furthermore, it adds incentive to develop alternative fuels and drives. And who knows, there may even be something in this for hydraulics. Case in point: A new design for variable-displacement hydraulic pumps and motors its inventor, Tom Kasmer, calls the *Hydristor* — a combination of hydraulic and transistor.

The Hydristor is a vane pump or motor that uses two pairs of pistons to vary the shape of a flexible pumping chamber. Kasmer claims his first prototype Hydristor boasts an overall efficiency of 95%, and that production models should achieve efficiencies of 97%. He says that coupling a Hydristor pump back-to-back with a Hydristor motor forms a continuously variable transmission. Kasmer explains that he retrofitted a Ford Expedition with a Hydristor, and the vehicle's fuel economy jumped to about 50 mpg — but at the same time, the Expedition could accelerate from zero to 60 mph in 5 seconds.

Kasmer says he is working with representatives from a variety of industries about potential applications and licensing. Look for coverage on one of these projects in next month's issue. But if you just can't wait to learn more, go to www.hydristor.com.

So putting my skepticism aside, even if the Hydristor gains only moderate acceptance, it will expand the application of hydraulics tremendously. And if it lives up to its potential, it will — to use Kasmer's words — change the world. Either way, in 20 years people may be complaining about the cost of hydraulic fluid.



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