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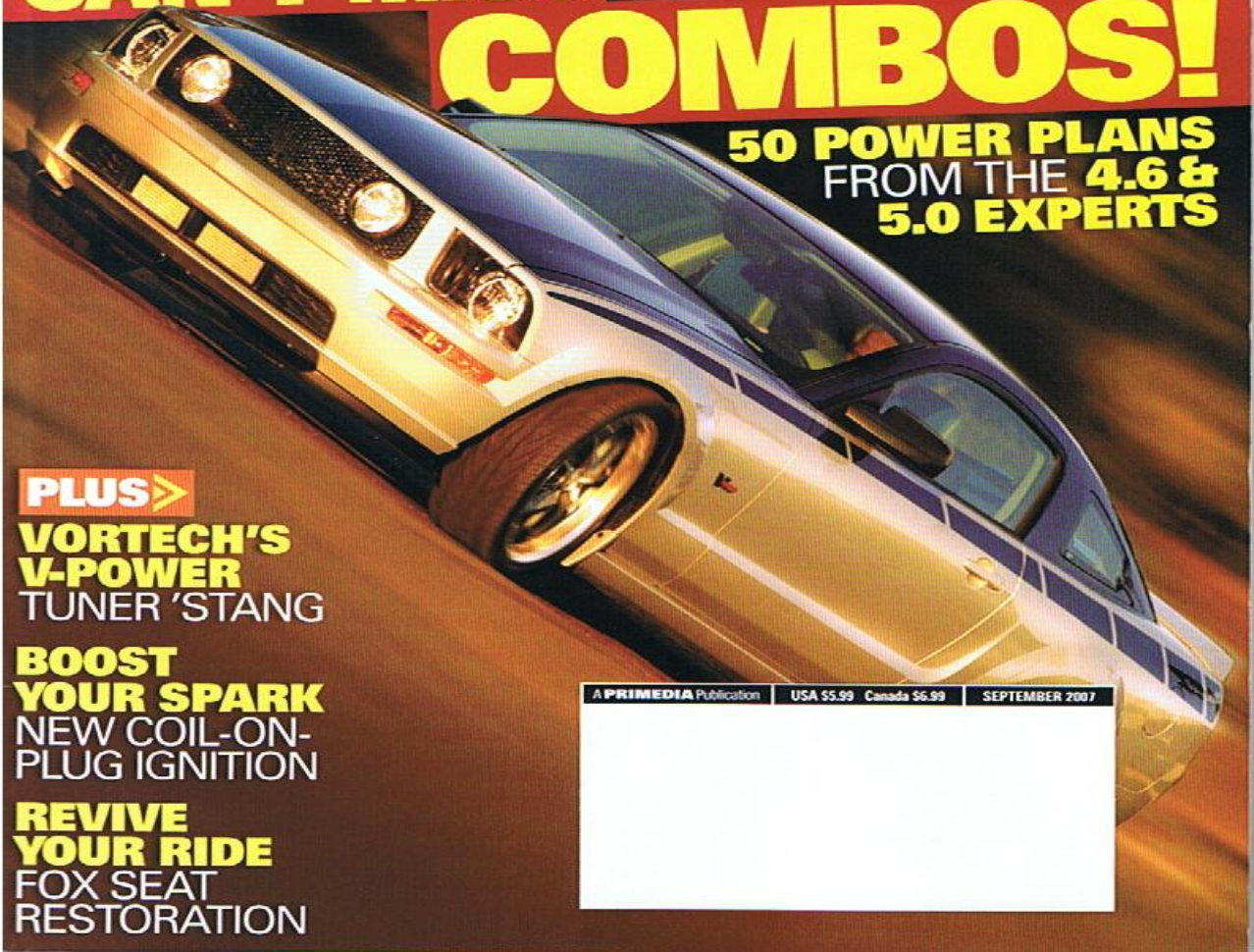
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BY KJ JONES

Fitch Fuel Catalyst

We're going to assume that most 'Stang enthusiasts who read *5.0 Mustang & Super Fords* have a strong affinity for the performance side of our hobby. Sure, the bling of chrome and pop of brilliant paint are two aspects of 'Stangbanging we definitely enjoy, but it's raw-dog horsepower—achieved by any means necessary—that really gets us open.

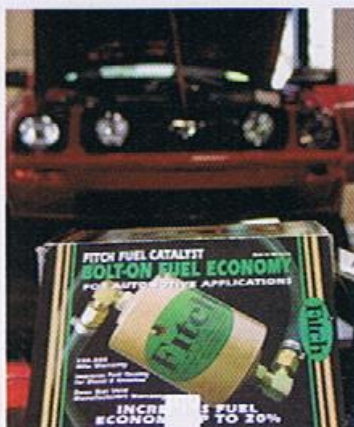
Engines under the hoods of all types of serious racing Mustangs are usually dependent on high-octane gasoline (race gas) for optimum performance. Racing fuel is refined to a point that enables it to promote maximum combustion in an engine. The "big bang" of efficient combustion is what we're after when we want our 'Stangs to move, and the combination of pure, high-grade racing gas and timing are its key ingredients. Street 'Stangs, on the other hand, operate on low- (87), medium- (89), and high-octane (91/California/oxygenated, 92, 93, 94) fuel blends that we commonly refer to as pump gas.

While it's pure when it's refined, pump gas undergoes a change in its molecular structure over time. Believe it or not, it's often oxidized and contaminated with bacteria and molds by the time it reaches your Mustang's tank. The impurities limit fuel's combustibility, affecting the engine's performance. This shows the importance of making sure your fuel-filter is clean.

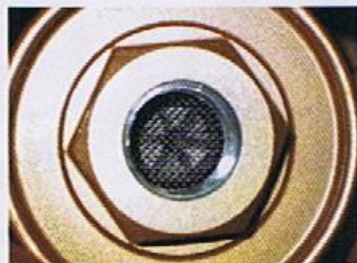
For street-Mustang enthusiasts, one of the serious consequences of stepping up performance is the oftentimes negative effect that upgrades have on fuel consumption and mileage. The bottom line is that miles per gallon are miles per gallon, and fuel economy usually gets hit hard when we turn up the wick.

Engineers at Advanced Power Systems International have developed a device called the Fitch Fuel Catalyst. It's a permanent, inline fuel treatment that's said to improve fuel economy for performance-oriented street Mustangs by changing the way pump gas ages.

Gonzolo Topete's '06 Mustang GT is still in its early stages of modification with March underdrive pulleys, a Gibson after-axle exhaust, a Steeda cold-air kit, and a DiabloSport Predator tune. It's driven the same route every day between his home and business (GTR High Performance in Rancho Cucamonga, California). We've decided to use it for our evaluation of the Fitch Fuel Catalyst.



▲ Here are the contents of the Fitch Fuel Catalyst system we installed on Gonzolo Topete's '06 Mustang GT. The kit (PN F4424B; \$224.45) includes everything needed for a quick and easy installation, save for Teflon sealant for the quick-connect fittings and a fuel-line disconnect tool.



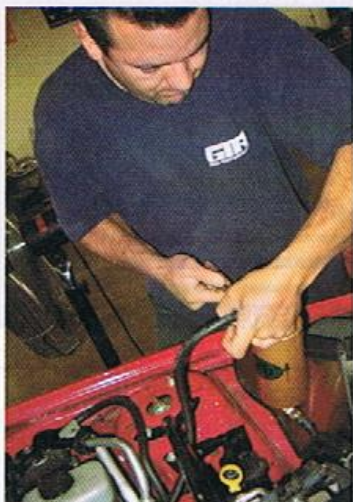
▲ Fitch's proprietary catalyst elements are a series of alloy discs mounted inside the canister that react with fuel. A process we'll call re-refining—for lack of a better term—of fuel takes place before combustion. Advanced Power Systems International says the elements change the molecular structure of gasoline and purge it of contaminants and foreign elements. The cleansing is also said to increase the fuel's efficiency, enabling use of lower octane without a negative impact on performance and promoting improved fuel economy.

Our exhaustive test was a combination of pre-Fitch dyno hits and a three-tanks-of-fuel time period in which Gonzolo calculated his Pony's fuel economy. At the end of the third tank of fuel, his brother, Ricardo Topete, installed the catalyst. It plumbs directly into the 'Stang's factory fuel-line schematic. We hit the dyno again to see if there was any noticeable power gain at the rear wheels. Finally, another round of daily driving through three more tanks of 91-octane fuel closed out the test.

We asked Gonzolo whether he noticed any significant difference in seat-of-the-pants performance (torque gain) and fuel economy with the catalyst in place. While the catalyst didn't provide a dramatic increase in zoom, Gonzolo saw a fuel-mileage increase of roughly 0.25 miles per gallon and a smoother idle with each tank of gas run through the catalyst. The monetary gain from this mileage boost will be better assessed at the end of a longer time period, but Gonzolo might be able to pocket a few extra cents per gallon, thanks to the fuel catalyst.

The Fitch Fuel Catalyst could prove itself a good addition to a hopped-up

◀ Here's something to think about the next time you pull up to the pump and see these prices—or higher—for your favorite blend: After the refining process, fuel sits in a holding tank for X number of days at the refinery until it's shipped. When the fuel is delivered to your local gas station, it sits in a holding tank until the next time your Pony needs to be fed. During the sometimes-lengthy time period that new fuel sits from refinery to time of purchase, it has nearly degraded to its original crude-oil state. How uncool is that?



▲ Once the '06 'Stang's negative battery cable is disconnected and the fuel cap is cracked open to equalize pressure, Gonzolo's brother, Ricardo Topete, attaches the supplied quick connectors and high pressure lines to the fuel catalyst. The main fuel line from the tank is plumbed into a supplied line that feeds the catalyst. Fuel is then routed out of the catalyst to the fuel rail via the other high pressure hose that's included with the kit. It's important to use Teflon thread sealant on each quick-connector before placing them in the catalyst as a precaution against potentially dangerous fuel leaks.

'Stang when lower-octane fuels are used. Increased fuel mileage without a negative impact on horsepower is one of the greatest



▲ Ricardo bolted the Fitch Fuel Catalyst against the side panel of the 'Stang's cold-air kit's heat shield. Two aircraft-style canister clamps secure the canister against the panel. These retainers make the overall installation look clean when it's finished. Determining a good mounting location/position is probably the most time-consuming detail in the installation process. Note how Ricardo has routed the fuel lines away from sharp edges and heat sources. When completed, a quick pressure check—cycle ignition On and Off—is performed to make sure there are no fuel leaks. Then it's on to another round of tests for Gonzolo's GT. Our dyno tests didn't show a power gain, but Gonzolo did pick up 0.25 more mpg.

best-of-both-worlds scenarios there is for a true performance enthusiast.

These photos offer detail on installing a Fitch Fuel Catalyst. It's a simple process and Ricardo had it handled for us in no time.

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SOURCES 5.0

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