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WHICH IS BETTER—A PUMP-GAS/METHANOL MIXED DRINK OR STRAIGHT-UP RACE FUEL?

BY MICHAEL GALIMI

C ALL IT the modern-day Gasser Wars. When it comes to high boost and big timing curves, there are only two fuel choices that will keep your Mustang alive—high-octane race fuel, or a mix of pump gas and methanol injection. Of the two, race gas has been around for years, while the meth mix is much newer and all the rage. Both, however, have pros and cons when it comes to cost, making power, and running safely.

Valve combination. As different as meth/pump gas and race fuel are to each other, the outcome was strikingly similar on the chassis dyno. It's your wallet that gets affected differently for each.

We employed Dez Racing's shop car for this test—those who checked out the September issue of MM&FF are familiar with this Two-Valve terror. A quick overview for those who don't remember this ride is in order, though. The '01 GT sports a built short-block (stock displacement), TEA-ported Two-Valve heads, a Fox Lake P-51 intake manifold, Anderson Ford Motorsport F-42 camshafts, and a ProCharger mid-11s on pump gas. Of course, we wanted more, and we decided to turn up the timing. We wanted to crank up the boost, too, but the P1SC head unit was nearing its capabilities. Ultimately, we decided that adding timing was the best course of action.

We wanted to see what was better for our street car: race fuel or adding methanol injection. Cutting right to the chase, both techniques made nearly identical power. It makes sense because we started off with 16 degrees of ignition timing on pump gas, and then bumped it up to 23 degrees and 26 degrees on both meth and race fuel. For race fuel, we used VP C16 (117 octane), and to inject the meth, we added a Snow Performance methanol injection system. Think about it: We kept the airflow the same since the blower was fixed at 11 psi of boost. The timing curves were identical, so the car...
the intake charge. You’re not pulling out as much heat when running solely on race gas. I added some more fuel to cool down the cylinders (when running on race fuel—Ed.),” says Mike Dezotell of Dez Racing. The output was nearly identical, with the Snow Performance-enhanced runs making 470.22 rwhp and the C16 stuff helping the engine make 469.92 rwhp.

Torque saw a reversal of roles as the C16 had one more lb-ft with 455.70 rwtq, while the Snow kit showed off a best of 454.97. The results were so close, we called it a draw. Our baseline pump gas runs were 437 rwhp and 420 rwtq. It was down from our previous runs in the 450 range, but we wanted to conduct same day comparisons. Our original dyno runs were made in the cool, early spring air; this time around it was hot and muggy. Same day testing and adding timing netted us 32-33 more rear-wheel horsepower.

We made several observations while the car sat and cooled down between dyno pulls. First was Dez’s comments about meth injection. “It’s a performance enabler,” he proclaimed. Adding meth, or race fuel, won’t add power; it just lets you push the parts you have to the limits. We were definitely at the limit with this Two-Valve combination. Dez went from 23 degrees up to 26 degrees, and the output remained identical in both meth and race-gas trim. That meant we were out of airflow. The engine needed a D1SC with more

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**DEZ** created a baseline that morning, and the Two-Valve terror made 437 rwhp and a max of 420 rwtq. The timing was locked in at 16 degrees and boost was a paltry 11 psi. This same combo has made nearly 20 more rwhp, but that was in much cooler weather conditions. The car was down a little on the boost gauge compared to the cool-weather dyno pulls.

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**A NOZZLE** is screwed into the blower tube.

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**THE CONTROL box** receives a boost signal from the manifold. It then starts spraying the methanol, based on boost and what the user has set on the controller. You can adjust the start of the meth injection and set the time in which it takes to get to full spray.
boost or better flowing induction. Considering we had killer TEA heads on there, a Fox Lake intake, and a healthy set of carbs, we figured more boost would have made even greater gains over straight-up pump gas.

“Race fuel and meth do the same thing, they both keep detonation away,” Dez says. “They enable you to make more horsepower. It’s amazing the timing you could put into these engines safely. We just ran 26 degrees of timing, and while it didn’t pick up any horsepower, the engine was still very safe from detonation.”

We made a couple of dyno runs and just sprayed meth with the same 11 psi of boost and the baseline timing of 16 degrees. The only differences were that Dez tuned to get the proper air/fuel ratio. The results were interesting. Horsepower increased by 6 rwhp, while torque jumped by 9 rtwq. It’s all about adding more timing and boost—safely. Running meth alone won’t create gains.

Dez further proved his point by showing off a customer’s car that has a stroker Two-Valve combination. Adam Secour’s 01 Mustang GT has a 300ci engine, Fox Lake Stage 2 heads, a Fox Lake-spec camshaft, a Logan sheetmetal intake, and a ProCharger F1A blower. He said on race fuel and meth/pump gas, they were able to coax 695 rwhp from the street-driven Stang. That was done with 21 psi of boost and 17 degrees of timing. On straight pump gas, the maximum output was 635 rwhp with only 14 psi of boost and 12 degrees of timing. That was the maximum boost and timing that pump gas would allow and still be safe. Dez could have beat it up more on pump gas, but the car would have been on the edge and ready to pop at any moment on the street.

Collectively, the no-brainer conclusion is that adding higher octane or meth injection will enable you to make more power thanks to advanced ignition timing and greater boost levels. Both of these work to increase cylinder pressure and that, in turn, creates a bigger push on the pistons. The increased octane of either fuel allows for greater lead time in terms of flame front.
So, which is better for your Pony—meth or race fuel? It comes down to dollars and cents. The Snow Performance Stage 2 Boost Cooler will set you back $439. You spend the money up front; maintaining the system is easy. The refills are at most $30 for 4 gallons of Boost Juice. Or, you can use the cheap windshield-wiper fluid; it works almost as well as the Boost Juice. What’s nice is that the installation is simple, and the Boost Cooler is only activated under boost. You can spray a lot of meth into the engine before the tank runs dry, and to fill it up is rather inexpensive.

According to VP Racing Fuels’ website, C16 carries a 117-octane rating, which is more than enough to handle the boost and timing of this combination. Once you commit to race fuel, it has to be constantly run in the tank—unless you back off the combo for the street. That can get costly fast, as C16 lists for about $13.50 per gallon. The stroker Two-Valve combo mentioned earlier gets around 15 mpg when cruising on the highway, which isn’t that bad for a 695-rwhp combo (on meth). It would get quite expensive to continue running high boost and high timing curve and rely solely on the race fuel in the tank. At that price tag, it would only take 32-33 gallons of C16 to equal the cost of the Snow Performance kit. At the rate of 15 mpg, that would be around three tanks of straight race fuel.

A green light was installed next to the pillar-mounted boost gauge. It turns on when the meth spray has been activated.

The intake was chilled to help keep the car at a lower temperature.
But wait, there's more: First, the Internet throws around a lot of statements, one of them being the reliability of the meth pump. Dez said he has installed more Snow kits than he can remember and never once had a pump-failure complaint. The race fuel is nice because you never have to worry about running out of meth in the middle of a pass, though Snow Performance's safe-injection upgrade eliminates that fear. Dez pointed out that the price tag of the race fuel is a large factor as to why he pushes some customers to run meth injection and pump gas.

Dez did say that meth isn't for every combination, suggesting high-octane use for Mustangs that are more strip-oriented with limited street use. Case in point: A pair of supercharged Fox-body Mustangs rolled into the shop for dyno work while we were in town. Each pumped out over 20 psi of boost and made 700-plus rear-wheel horsepower. Both cars also ran in the nine-second zone at the track. Because of the limited street time, Dez said it's better for them to run on the VP C16.

Cost aside, both high-octane and a meth/pump gas mix will allow your Mustang to ingest more boost and run much higher timing. It all leads to more power from your equipment, and it can be done safely. Those with street-driven Mustangs should look at methanol injection, and those with limited street time would benefit from race fuel.
LEFT: All dyno testing was done on Dez Racing's Dynojet chassis dyno.

COST ASIDE, BOTH HIGH-OCTANE AND A METH/PUMP GAS MIX WILL ALLOW YOUR MUSTANG TO INGEST MORE BOOST AND RUN MUCH HIGHER TIMING.

IT MAY sound as if race fuel is a thing of the past, but it isn’t. Dez doesn’t recommend it for every combination; it’s meant for street machines that see a lot of street miles. That way, the customer can drive around and get the most out of the parts he bought. There are instances where race fuel is the preferred drink, such as the more racy combos like the one pictured. This combo consists of a 305ci stroker with a Vortech YSI-Trim blower, Edelbrock Victor Jr. heads, a TFS intake, and enough boost to push the 3,300-pound LX deep into the nineties. The car sees limited street use and a lot of track time, so Dez says running straight C16 is the way to go.

TO FURTHER prove the point that meth injection and race fuel require higher boost and high timing is Adam Secour’s ’01 Mustang GT. It has a stroker engine and a ProCharger F1A blower. On pump gas, the maximum boost and timing was 14 and 12, respectively. Pump gas/meth and racing fuel allowed the boost to go to 21 and the timing to 17 degrees. That made for a Cobra-slaying 696 rwhp! You can’t do that on pump gas.

**DYNOMETER RESEARCH**  
CPI SAE Smoothing: 3

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**SNOW PERFORMANCE**