Project: Top Gas Hayabusa Part II

The original Project Top Gas Hayabusa article was left with me at the second race of the 2006 AMA Prostar season in Atlanta finally going Top Gas numbers after 3 months of struggles. The bike was set up with a stock motor, Wiseco 83mm piston kit, MTC multi stage lockup clutch, a MPS wet nitrous system, Schnitz 2 dial progressive controller and a rider still not used to a big tire Top Gas bike.

Currently, Project Top Gas Hayabusa has morphed into a contending Top Gas bike and has even won a few events. It has been used as a guinea pig for all sorts of new parts and ideas at MPS. It has 3 different motors all with vastly different parts. Its best ET so far has been a 7.91 with a 60 foot of 1.17. It has run as fast as169 mph all with small .028 nitrous jets and a 700 lb bike and rider weight. So, let's go roll back the clock to the end of part I and continue the story.

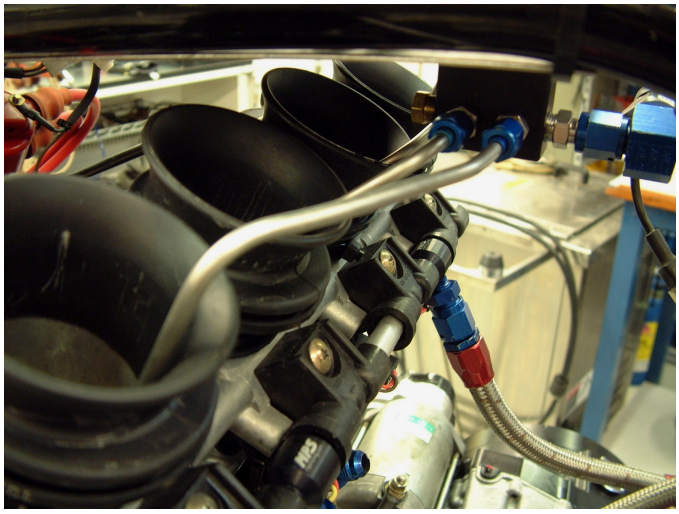
The rest of 2006 I competed in all the SEMDRA and selected AMA Prostar events. I ran the bike with no nitrous in Pro ET and sprayed it to run Top Gas. I won the Pro ET race at the SEMDRA Finals that year for the first win on the bike.

At the first Prostar race of 2007 and after logging better than140 runs the tired original stock motor gave out dropping an exhaust valve in number 4 cylinder. Luckily, I caught it quickly and little damage was done to the cylinder head. I had

already bought a couple of core motors and had sent a head to Jerry Cooper at Cooper Performance to do a “good” head. It had APE springs, Kibblewhite stainless steel 34mm intake valves and 28.5mm exhaust valves opened and closed by Web Cam 415/395 cams. I used 84mm JE 12.8:1 flat top pistons inside the Millenium plated bores. Crower rods, APE studs, Cometic gaskets and a stock crank rounded out the combination. I used the same 1-2 auto trans from R&D Motorsports out of the old motor. We went to Atlanta and I ran my first 7 second ET. I had also changed the nitrous system to test using fuel rail pressure for the fuel side of a wet system. This gives better fuel atomization but makes a 1 jet size change a very big jump. It worked fine for Top Gas, but using it to tune for max HP requires adjusting fuel pressure for finer adjustments. I just left it richer than it needed to be.

Trying to run the bike with two different combinations was starting to be frustrating. The bike would bog with the gearing and clutch setup for nitrous and Top Gas when I ran Pro ET. Gee, it’s good to be 260lbs in leathers! I really love ET racing so I decided it was time for a change. I changed gearing and clutch setup to run with no nitrous. I ran Super Comp and Pro ET for the rest of the 2007 season.

For 2008 I decided to just run ET and get the bike right with increasing doses of nitrous. I wanted to work my way back to Top Gas numbers and use the bike in both Top Gas and ET eventually. Tuning the 2 stage clutch was a challenge. I learned an awful lot about clutches. I really don’t think anyone who runs sportsman classes changes their bike more than I do. Most guys get them the way they want them and leave them alone. That is probably the best plan if you are only a racer. I am in the parts business and race because I love it and because I want to develop parts and learn new things. I won the first ever AMA Dragbike Pro ET race at SGMP in 2008 running 8.50 numbers.

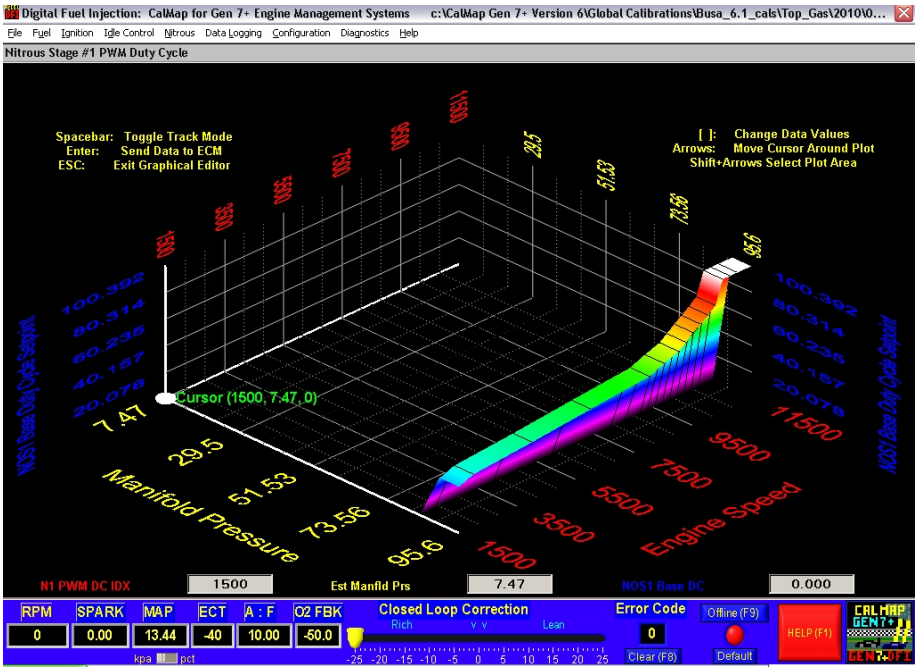


Spyder Dry Nitrous

P/N 1-0449

62 lb Injector Kit

We had just developed the Spyder Dry Nitrous Kits for fuel injected street bikes and I thought it would be a big improvement over the wet system that was on the bike. So I installed the Spyder along with our 62 lb. fuel injectors and fuel system. I also started using the progressive controls built into the Accel Gen 7 ECU. This system is awesome! I will never have another wet nitrous system, just like I will never have another set of carburetors. The controls in the Accel Gen 7 are spectacular and the injectors will support 450 plus HP.

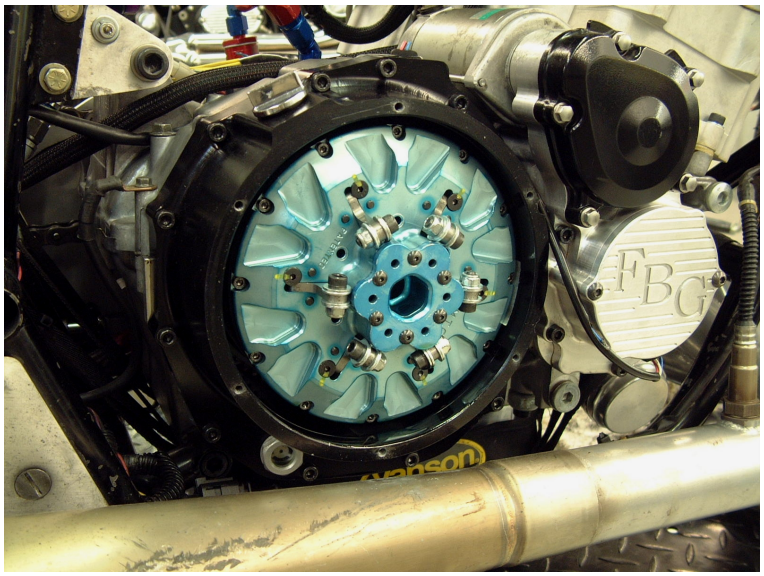


Nitrous Progression Graph From Gen 7

While tuning the new package we played around with some bigger jets and made 357 HP at the rear wheel with .036 jets. You can even run the system in closed loop so it will maintain the desired target air fuel ratio while going down the track.

I was runner up in Pro ET at Memphis and was now really in the hunt for the Pro ET #1 plate.

Then at Indy I decided to try the new MTC Gen II clutch.



MTC Gen II Clutch

This hybrid, half slider, half lockup clutch, seemed like just the ticket and I could still ride the bike to the starting line and back from the other end. It worked well right away, but with a few small glitches. The best part was my reaction times got way quicker. I had to put an extra .040 to .050 in my box. I really never had a problem running Top Gas numbers, but I could never do better than .040 or so lights. Now .040 lights may get you a round or two but you will never win a Top Gas race with them. That was one reason for not worrying too much about Top Gas. Now, with the new Gen II weapon nestled behind our new billet quick access clutch cover, I'm thinking I may have to try that Top Gas thing again. I started thinking more about reaction times again and wanted a better switch for my launch.

MPS Holeshot Button

I changed to a much quicker switch with the contacts at the bottom of the switch throw. I made a mount that would bolt right to the existing holes in our Pro Pushbutton with air ports that I had been using. This became our new Holeshot switch assembly and was worth about .010 in reaction time over the micro switches I had been using.

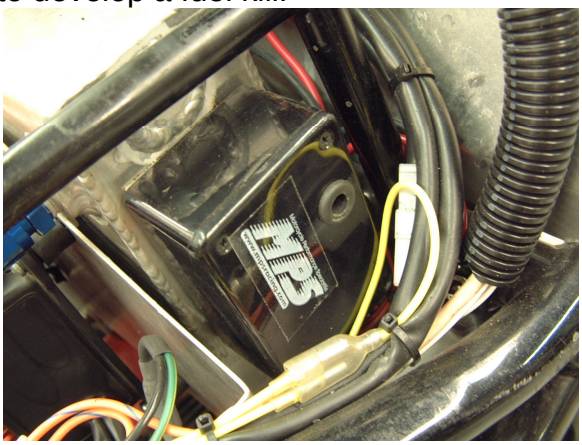
2008 SEMDRA Top Gas Win

At the next SEMDRA race I entered Top Gas and won for the first time! Next, we were off to AMA Dragbike in Atco, NJ where it dropped another exhaust valve in number 4 cylinder. This time I didn't catch it so soon and it destroyed the top end. This really sucked because I am the kind of guy that works on bikes at the shop and expects them to run right at the track. Normally, I would have put the bike in the trailer and helped customers, but we were actually battling for the Pro ET championship. So, I put back in the old faithful 1360 that I had rebuilt with a stock head, Kibblewhite stock size stainless steel valves, APE valve springs and studs, Web cam .395/.378 cams, Crower rods and a new 1-2 Auto Trans from R&D. The bike ran nearly identical numbers to the other motor and we came away with a runner up to Ronnie Reagan that day.

Next race was Norwalk, where I broke the transmission and had to change motors at the track again. I put in a motor that we had originally built to run Pro Mod. It had another Cooper head with all the goodies, stock bore tall deck JE pistons, 08 crank, and a 1-2-3-4 trans from R&D. It went 7.96 right out of the box. It was so smooth with that 1-2-3-4 auto trans. Then the clutch drag issues started. This was eventually solved with lower launch rpm and most importantly a second generation thrust bearing for the Gen II clutch. Unfortunately not in time to do me any good at Norwalk. Back at the next SEMDRA race at SGMP we found metal circulating in the engine after the 3 passes we made at Norwalk.

Out comes the motor again. Man, this is getting really old for a guy that hates working on the bike at the track. We put the 1360 back in again for the last two races of the year. I lost out on the Pro ET plate to Andy Baumbach, but overall it was a good year.

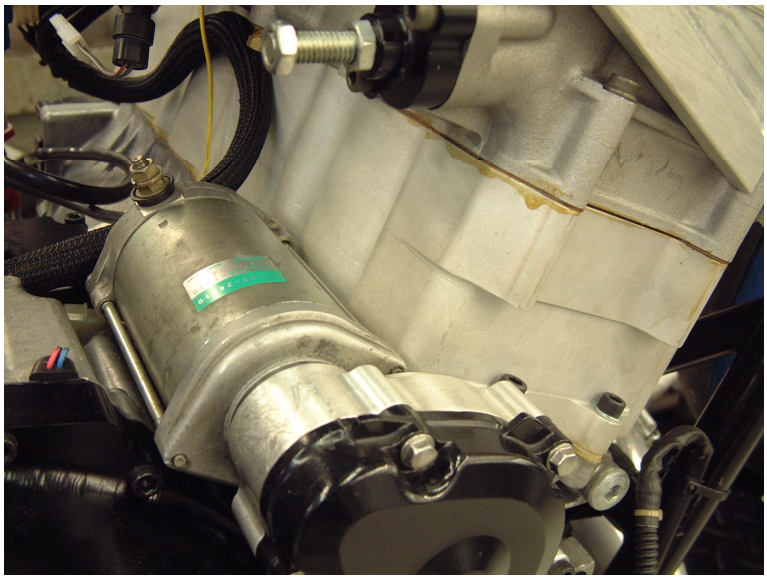
Over the winter I put together another bigger motor for 2009 with 84mm JE pistons and a 08 crank to give me a 1440cc motor. I used Web Cams .445 intake cam as well. I ran the motor for the first time at Orlando Speed World at one of their Bike Bash events. It went 7.92 first pass and showed a lot of promise for going way faster. By the 4th pass it had a little miss but was still running 7.90s. I won the Quick 16 event against Scott Delong in the final, but knew something was wrong. When we got back to the shop I found another exhaust valve ready to drop. The keepers were barely hanging in there. I was lucky that motor survived. Now it had me thinking that all these exhaust valve issues were related to something I was doing. I decided that it had to be pulses from the explosion in the exhaust from the ignition kill. All the extra fuel with the nitrous made this explosion more violent and was causing the valve to lose contact with the cam and allowing keepers to come out of their grooves. I decided it was time to develop a fuel kill.



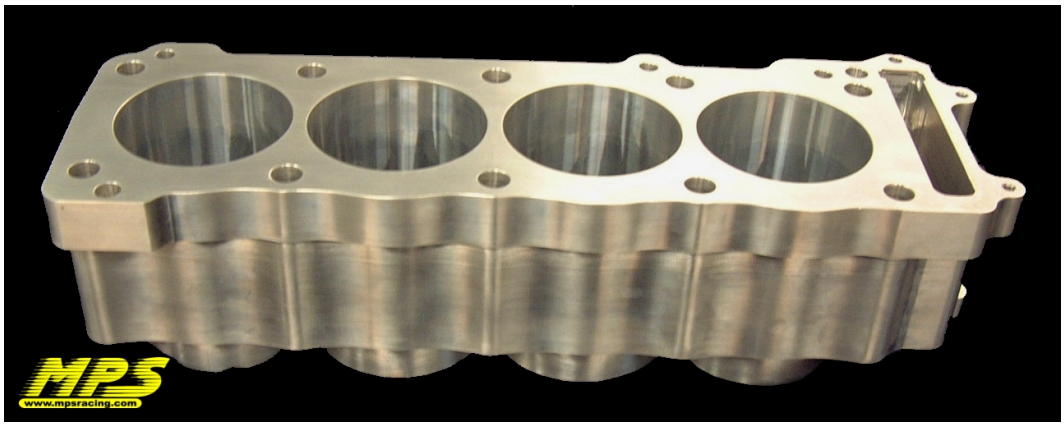
MPS Fuel Kill

I'm happy to say that at least so far I have had no more valve issues since going to the new fuel kill set up. I put the Pro Mod motor back in after finding the metal issue was the cam chain hitting the valve cover. I had used an APE roller cam chain conversion and the chain was too tall to use the stock chain guide on top. So, in my infinite wisdom I decided to not use the top guide thinking that in the 3 inches of cam chain run between the cams it couldn't go very far. Wrong! It's amazing how much slack can be there, probably on deceleration. Picture the drive chains you see in pictures of a launch. I machined down the stock guide the appropriate amount and re-installed it. This motor stayed in all year in 2009. We bought our new shop and with all the construction stuff going on I skipped one SEMDRA race. If I would have known that one race would have cost me the Top Gas championship I may have gone! I wound up 7th, but the competition is so close in SEMDRA that the points I would have gotten just for entering and qualifying at that race would have made me #1. And just like everyone else, I got

runner up to Mike Konapacki in Top Gas at the AMA Dragbike Finals. I was pretty happy with my results in 2009.



Prototype Block Installed



MPS Billet Hayabusa Block

Development had actually started in early 2009 on our new Hayabusa billet blocks. Over the winter I freshened the Pro Mod motor with new bearings and rings along with the new billet block. Maybe I can get that SEMDRA Top Gas Championship in 2010. I also built Andy Baumbach a clone of my bike to run in Top Gas. His first outing at the AMA Dragbike season opener was a semi final. The bike was way too fast, even with .016 jets it went an 8.14. Even old school Andy likes his Busa with fuel injection and dry nitrous! We also installed a Gen 7 and Spyder dry nitrous system on Steve Klemme's Hayabusa powered Top Gas bike. I think these guys will help prove just how well these systems work and how easy they are to operate.