1,000+ hp Turbo Challenger Build

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Clan O'Doherty Makes BIG Power In Alabama

By: Sean Yoder

Several months ago I decided to stop into our local speed shop and catch up with a few friends. Nothing could have prepared me for what was sitting in their work area that day. Speed South has been around for a long time and they have a strong reputation

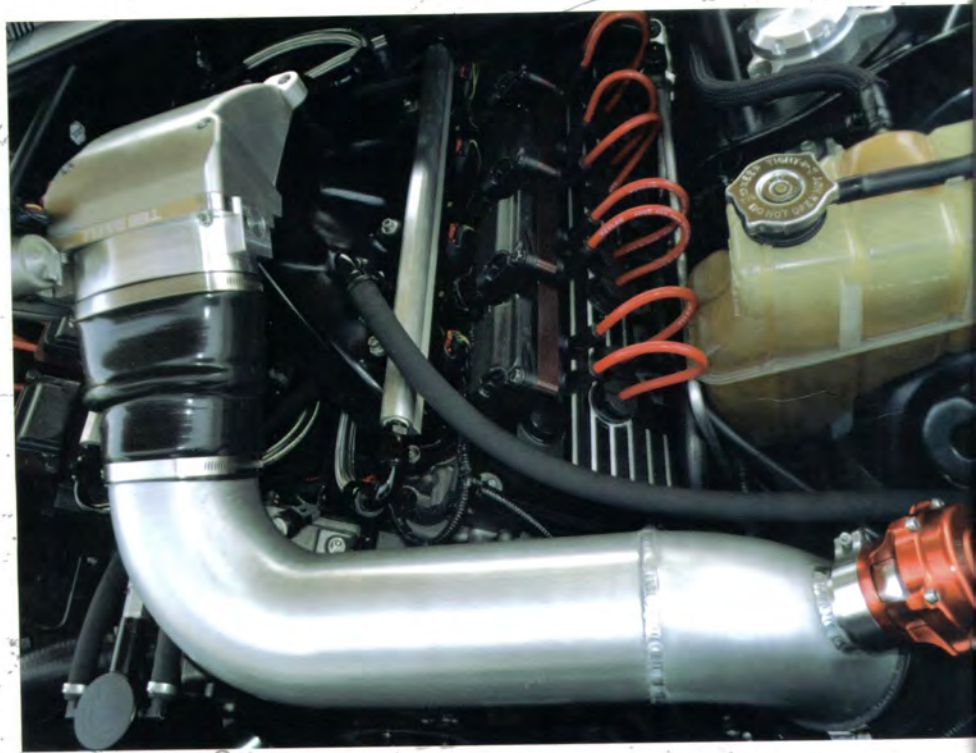
in North American road racing. Not exactly the place I expected to find a monster custom single rear mount turbo Challenger build going on! When you think about it though, it kind of makes sense. These guys really know their way around engines, electronics and chassis. Their fab work is second to none and new challenges are always a great way to stay on top of your game. This build is an ever-evolving bit of engineering. It has been on the road for a while now, but there are always plans for making it even more impressive than it currently is. Thus is the nature of all project cars. They are never truly finished. I sat down with the principle engineer (Stan Levine) on the project and Patrick and Seamus O'Dohertv (the car's owner and son) to get some insight into this very special Challenger.

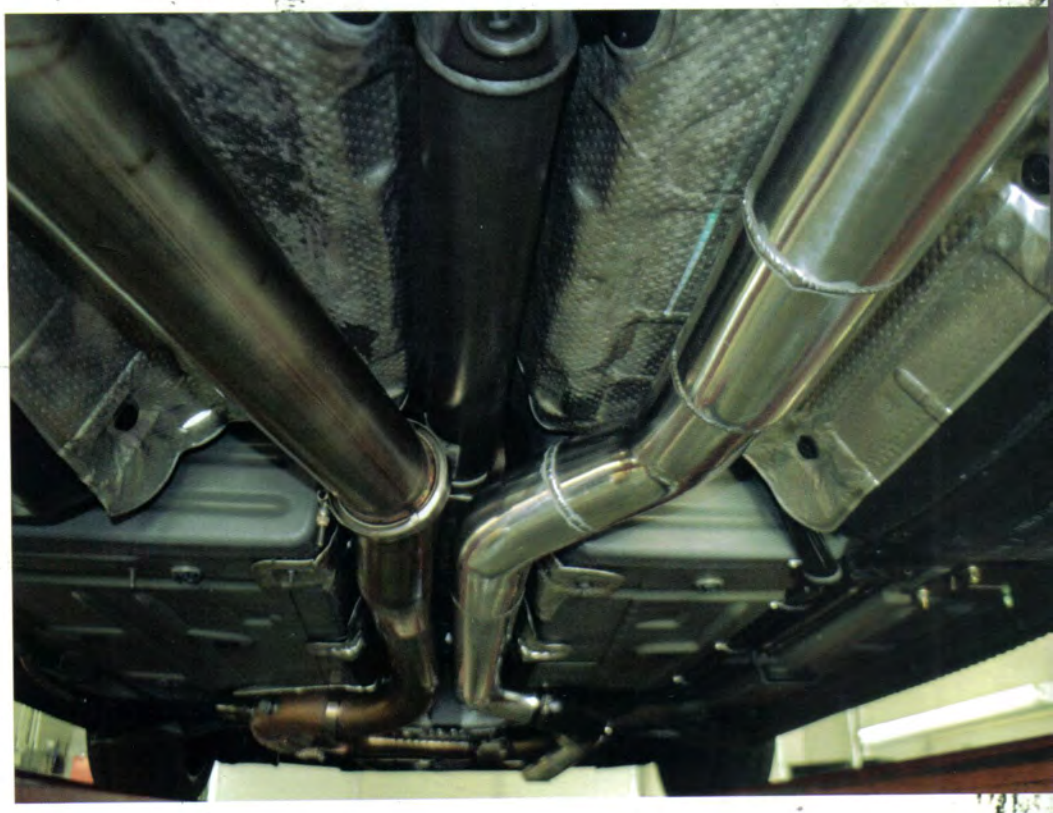
The Challenger started life as a 2010 5.7 liter VVT car. Patrick quickly realized that more power was needed and a Kenne Belle blower along with forged internals by PWR were ordered up. After another upgrade to the cam and some methanol injection, the Challenger was putting about 630hp to the ground. In Patrick's words this was "Respectable, but not enough". Nobody thinks of a spun bearing as a gift, but sometimes gifts come in the oddest packaging. The 5.7 decided it didn't want to live and as a result PWR stepped up for Patrick, putting together a 426c.i.

package for the same price they would have done a 5.7. Not a bad deal!

Upping the cubic inches meant the current Kenne Belle setup wasn't the right size for the power levels they were shooting for and there was talk of a ProCharger setup for a while. It's not like 700 to 800hp isn't a lot, it just wasn't enough for the Clan O'Doherty! The quest for bigger numbers led them back to Speed South and Stan for a very serious discussion revolving around BIG TURBOS.

The debate over utilizing the ProCharger or a turbo was put to rest by Patrick not wanting to wait for the blower. Evidently, they had been going back and forth regarding ProCharger vs. Turbo for more than a little while and during a moment of clarity, Stan realized exactly what he needed to do in order to get the Turbo project rolling. Patrick asked him how soon they could get rolling on a turbo setup. The

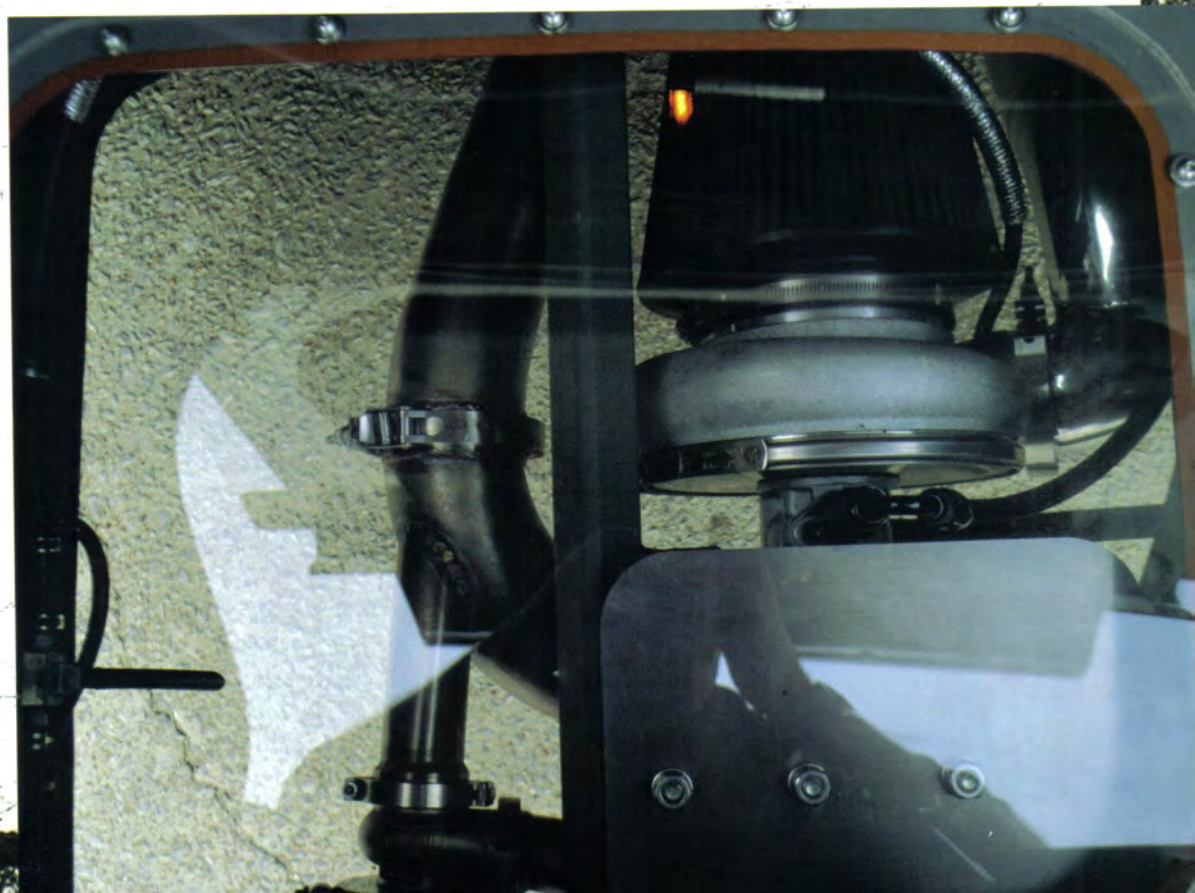


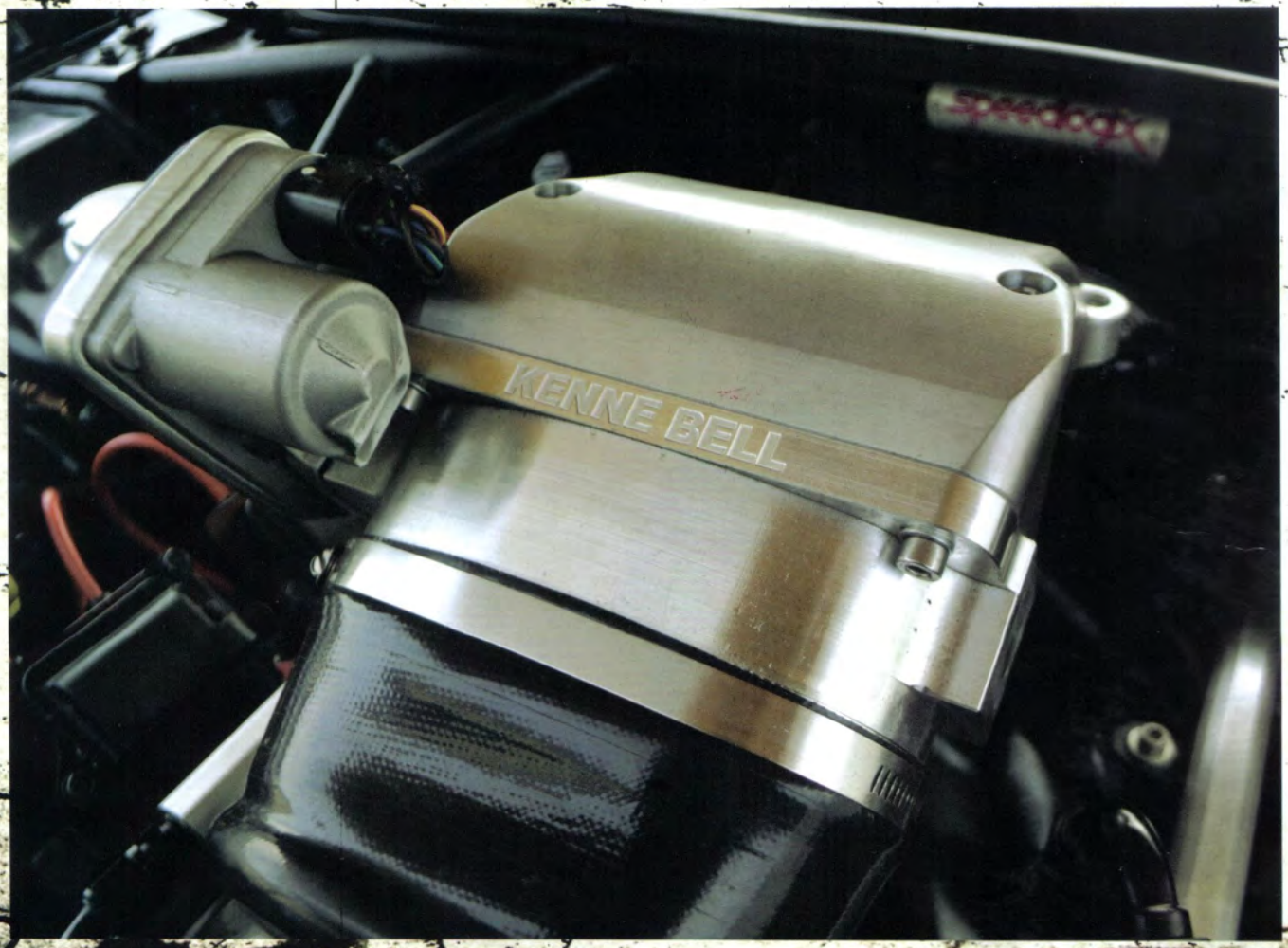


next words out of Stan's mouth were "TODAY! Can I cut the trunk out?" Without hesitation Patrick's reply was "Do whatever you want." It took about fourteen seconds to cut the truck out of the car. If the floor is gone, there's no going back!

There were many reasons for going with the rear mount turbo setup and most of them centered on the goal of making big power in a street car. It is driven all the time and in all kinds of weather. If you aren't from Alabama, it's hard to comprehend what 108 degrees and 97% humidity feel like. A street car without air conditioning in this area of North America typically means you have a street car that doesn't get driven 5 months of the year. This was not an acceptable scenario for Patrick. The rear mount turbo configuration allowed Stan to keep the stock radiator and air conditioning. Not all that important if you are in the car an eighth or quarter mile at a time, but very important on long drives in the south!

Moving on to what takes this particular Challenger from being just another high horsepower ride to some-




KENNE BELL

thing completely unique. We wish everyone reading this could have the chance to look at the finished build from all angles in real life.Pictures truly do not do it justice. The brackets and braces were first laid out in CAD and then laser cut to assure proper fitment and that all components were going to stay exactly where Stan wanted them. The attention to detail spills over into the placement of the turbo itself. A special rig was designed to hoist the giant Precision Turbo 8891 unit in place and construct the mounting brackets with perfect accuracy. Even the oil return system received extra attention. There is no reservoir at the back of the car to catch excess oil. The flow is regulated by a series of check valves skillfully put together in order to keep the system from belching smoke because of excess oil sitting in the turbo on restarts. This isn't a huge thing, but it's attention to detail like this throughout the car that makes it truly special. A quick walk to the front of the car reveals one of the trickest intake setups we have ever seen. Take one Drag Pack intake replica, add in a custom designed billet injector hat and bolt on a massive oval throttle body and you have something truly special. Numbers don't lie and Mustang Dynos have a reputation for reading a bit lower than others.Having typed that, the numbers on this car were anything but low … 1066hp at 6,300 rpm and over 920 lb. ft. at 5,400 rpm isn't too bad considering that was on the first pull! All of the engine management duties are being handled by a tuned 2010 SRT ECU. They were tracking down gremlins that were not allowing the throttle body to close. The troubleshooting took a while and as a result some folks had to be in other places. When they finally realized what was going on and fixed the problem, those numbers popped up and Patrick said, "Get it off the dyno, I'm going for a drive!"

While there are long term goals for the Challenger the current stage of the car's life started after a conversation Patrick had with his father. Mr. O'Doherty put the big picture into perspective for Patrick after telling him "It's okay to do something for yourself. I've worked hard and done

well for myself, but I've never put a vehicle in my garage that made me happy." After this conversation it wasn't long before Patrick's father passed away. Patrick took his father's advice and started making the Challenger into the car he had always wanted it to be. With the level of power this car is making there are steps being taken to make it quicker through the quarter mile and maintain its street drivability. His first goal is getting it into the 9's, then the progression into the 8's and eventually putting the car into the 7's is even on the table. Considering the 1066hp number was made on 17 pounds of boost and the system is more than capable of 23 pounds, there is probably another 300hp on tap with minimal tuning needed to get there.

This Challenger was built to be driven and Patrick intends to enjoy it every chance he gets, so if you see a sinister black Challenger making uber evil noises, chances are Patrick will be at the wheel.

Like any project, this Challenger is always evolving. Stay tuned for a video interview later in 2015 with some quarter mile passes and an update on changes made to the build. M