

From Daily Driver to CURVE CARVER

HOW TO TURN YOUR STARSHIP INTO A TRACK CAR ON A BUDGET

This all started innocently enough when I accompanied my son to Road Atlanta for a Porsche Club Driver's Education event in July 2007. We've always had a Mercedes in the family, but I managed to slip a Porsche 944 into the mix during the early '80s. The lease expired prior to John Jr. obtaining his driver's license but he was hooked. The rest, as they say, is history.

I was along for track support and encouragement as I watched him accelerate his 996 Twin Turbo up to 167 mph on the back straightaway before hitting the braking zone at turn 10A. As a parent, I felt a certain amount of trepidation watching that much raw horsepower, even though a seasoned instructor accompanied him.

However, by the end of the weekend, I could see why he was so enthusiastic after getting the equivalent of 200 miles of hot laps under his belt. When he asked me if I wanted to come along for the next DE event, I said sure, but not as an observer. "Well, Dad," he asked innocently, "what are you going to use for a car?" At which point we looked at my daily driver, a venerable 1999 C230 Kompressor.

I'm the third owner of this car. We picked it up through my son's shop (He owns an independent Mercedes/Porsche facility) with 146,000 miles and needing a new transmission, which the former

owner could not afford. Up to this point, it had been a great daily driver with excellent fuel economy. Because of its even weight distribution and super-charged engine, Junior had always said it would be a great track car if we wanted to make a project of it. I must also admit to a certain amount of perverse appeal to "tricking out" a family sedan, a stealth car to run against other German nameplates. And so it began.

The first order of business was getting accepted into the next event. The Peachstate Porsche Club runs these three to four times per year and through Junior's membership, this did not



prove to be a problem. In fact, they encourage family participation. While the majority of the field is Porsche, there are a wide variety of nameplates ranging from Vettes and BMWs to Lotuses and Ferraris with the field limited to 160 cars. PCA is an equal-opportunity car club, they're happy to humiliate anyone: no pressure here.

When it finally sank in that I would actually be on the starting grid in less than two months on one of the premier motorsports courses in the United States, I suddenly wanted more horsepower, stiffer suspension, greater braking power, and a professional stunt double who could substitute for me. Because none of that was going to occur, we decided to make one modification to the C230. We replaced the stock springs with a set of H&R sport springs. These dropped the car by approximately 1.3 inches for a lower center of gravity. Because they are about 30 percent stiffer than the stock springs they also provided better transient response as the car shifts from one direction to another, and more stable, predictable cornering at high speed limits, not that I expected to get anywhere near those limits.

As I'm writing this in spring 2009, suffice it to say that I survived that first event in October 2007. I was paired with a great instructor who helped me unlearn all the bad habits accumulated over 42 years of driving. I learned that driving "the line" was key. Slow and smooth leads to increased speed. Friends don't let friends apex early. After watching a number of the lower-horsepowered cars challenge their bulked-up brethren through the turns, I realized that I was driving a starship with potential, a momentum car. What to do for the January event?

Despite the sport springs, my wannabe momentum car wallowed miserably through the

turns. To address that problem, we installed H&R torsion bars and Koni adjustable shock absorbers. The adjustable shocks were in recognition that this was still my daily driver. In their fully open position, the ride is reasonable. Additionally, we realized that we were restricted in how much we could fully adjust caster, camber and tow-in. To solve this problem, we replaced the front upper and lower bushings as well as the rear bushings with camber, caster, and toe kits from K-MAC out of Australia. These long-life urethane bushings allow for single-wrench precise adjustment under load. The rear tires can be adjusted to a negative camber that cannot be achieved with stock bushings. All of this leads to improved straight line and high-speed directional stability, reduced tire squat, and improved traction. I was ready to rock!

Unfortunately, an unusual snowfall for Georgia forced cancellation of the January event,

All pictures illustrating this article were taken at the Porsche track day at Road Atlanta in August, 2008.



“I suddenly wanted more horsepower, stiffer suspension, greater braking power, and a stunt double who could substitute for me.”



Road Atlanta, August 2008

so we didn't get back on the track until March. This time, we changed venues to Barber Motorsports outside Birmingham, Alabama. This is an extremely challenging track with shorter straightaways and more turns than Road Atlanta. It is also the home of the "Porsche Driving Experience." While I had to learn a new track, I could feel the differences our modifications made in the car's handling. By the end of the weekend, I was anxious to get back to Road Atlanta for the June event.

Now that the suspension issues were under control, I gave thought to other improvements that could be made prior to the June event. The next logical step was increased torque and horsepower. Short of changing out the engine (which was not in the budget) the next step was "chip tuning." All modern engines are controlled by a computer, better known as an Engine Control Unit (ECU). This electronic computer sets ignition timing and quantity of fuel to be injected, depending on a number of parameters like surrounding temperature, density of the sucked-up air, the number of revolutions of the engine and so forth. All this data is saved in one or more memories, called EPROMs or "chips" for short. When an engine is "chip-tuned," the chip with the original data is replaced by one with optimized data.

With several alternatives available, we opted for a solution that reprogrammed the existing ECU, and sent it to Inmotion Tuning. Once the ECU was reinstalled, horsepower was increased from 193 to 232. More importantly, torque – the force that makes the car accelerate – was in-

creased from 200 pound-feet to 230 pound-feet.

I spent the events in June and August adjusting to these improvements. With the increase in speed, learning the nuances of keeping the car in balance and threshold braking became increasingly important. In the process, I was bumped up from the beginner class to the novice class.

For the October session we changed out the standard 15-inch wheels for 18-inch wheels for more stability and to increase the tire grip. Tire Rack made the process really easy. They drop-shipped four pre-balanced wheels with nitrogen-filled tires to our shop for installation. I'd been bumped up one class, so I challenged my better half of 39 years to participate in the beginner class because we could share the car. The weekend was a resounding success for both of us.

What's it like to drive at speed on a racetrack? At Road Atlanta, once you've gone through the 10A/10B chicane, you're headed to turn 11, uphill toward a bridge at full throttle. All you can see through the bridge in front of you is daylight. A fellow MBCA "track rat" described going under that bridge and the



John Herzler at his son's shop.

German Star

Parts and Accessories for Mercedes-Benz Automobiles

Toll Free: 800-377-6598 Fax: 480-837-2886

Internet: www.germanstar.net Email: ron@germanstar.net

*Knowledgeable staff *Fast Delivery *Competitive Pricing

COMPLETE LINE OF NEW, USED, AND REBUILT PARTS

subsequent downhill sweep through turn 12 at full throttle as comparable to "driving your car into a garage at 100 MPH." After more than 1000 miles of hot laps, I still feel goosebumps every time I go under that bridge.

As we grow older, we become more set in our ways and I've always felt that learning new things and trying new experiences keep you young in both mind and spirit. At the October 2008 running of the "Petite Le Mans," many of the cars were labeled with the initials "PN" in tribute to the late Paul Newman, who passed away earlier in the year at 83. One of the Speed Channel commentators remarked that when Newman last drove in the 2002 Petite Le Mans, he was the oldest person ever to have an active professional racing license, and drove his last laps on a race track only a week before he died. Now that's a man who stayed young in spirit.

So what's next? In terms of car improvements, we'll put a larger pulley on the supercharger to increase air intake and consequently horsepower, and maybe some Brembo brakes for those 18-inch wheels. While a great improvement, adding a complete Brembo package does take this out of the low-budget concept. To date, the total cost of upgrades has been a bit over \$5,000. Doing anything more also would take the car out of the comfortable daily driver category towards being a dedicated track car.

While we consider Road Atlanta our "home track," we're expanding to other Southeast circuits. We've got a number of events lined up this year, starting with Roebling located outside Savannah, Georgia. The highlight of the year will be HeimatFest on Memorial Day weekend, a joint event between MBCA and the National Lotus Club, at Barber Motorsports Park in Birmingham, Alabama. This four-day affair will include a concours, auto-cross, and a day of hot laps at Barber topped off with a trip to the big oval at Talladega.

As an officer of the Peachtree Section, I'm also hoping I can encourage our section to do more track events individually and as a club.



Engines (Used & Rebuilt)
Filters & Tune Up Parts
Body Parts
Exhaust Systems
Water & Fuel Pumps

Rebuilt Transmissions
Control Units (New & Rebuilt)
Weatherstrips
Catalytic Converters
Shocks & Brakes

Remanufactured

ACC Servo	\$535
Fuel Distributors	\$465
Steering Boxes	\$395
Steering Pumps	\$249
Turbochargers	\$525
Air Pumps	\$335



Climate Control

York Compressor	\$229
R4 Compressor	\$295
A6 Compressor	\$249
Nippon Compressor	\$475
AC Driers	\$39
Aux. Water Pumps	\$119
Expansion Valves	\$29
Push Button Units	\$219
Blower Motors	\$119

Accessories

Kleen Wheels	\$39/pair
Car Covers	\$139
Floor Mats	\$109
SL Hardtop Hoists	\$189
SL Hardtop Holders	\$149
Euro Headlights	\$495/pair
Dashboard Covers	\$129
Removable Hood Star	\$49

TOLL-FREE: 800-377-6598