

How Safety Led Me to Club Racing

By Peter Carroll

I have been doing performance driving schools for more than 10 years now. It all started when I purchased an early Porsche Turbo from a friend. He wisely suggested that I take a performance driving school so I could experience the car in its natural habitat.

Once I tried, I was hooked. I signed up for every track day available. Some years I was doing as many as 50 track days per year, traveling all over eastern Canada and the US. Shortly thereafter, I also bought his yellow M3. The Porsche wasn't much good in the winter.

Through most of my driving career, if you had asked me if I was interested in racing, I would have said no. I loved driving for sure, but I didn't feel the need to compete. Chasing my friends on a race track was all the fun I needed.

Neither did I want anything to do with the overhead of maintaining or transporting a race car. I loved driving too much. It seemed all the racers drove pickup trucks. Pickups were not for me.

The M3 was a blast to drive. Right out of the box it was a terrific track car. I could not resist making it better. Over time I installed a coil-over suspension, better brakes, and just for fun a Euro M3 engine and 6-speed transmission. In many cases, the car was as fast as or even faster than some race cars. And I

could still drive it to work. Life was good.

Then things started to get complicated. As I went faster and faster things started breaking. Not catastrophic failures, but things just wore out faster and faster. Tires didn't seem to last that long. Brake pads and rotors didn't last either. I repeatedly broke sway bars—ripping the mounts off the chassis or the suspension. And in many cases, I could hear the car creak and groan as the chassis flexed in corners. That wasn't good.

At the same time, the car was becoming more of a pain to live with on a daily basis. The race seat was not that comfortable. The brake pads made so much noise that pedestrians covered their ears. And driving a car with two inches of ground clearance is stressful—especially in the snow.

But ultimately the problem came down to safety. It is a tribute to BMW that these cars can work as well as they do on the track yet still get you to work. But the activities on the track significantly exceeded what the cars were designed to do in terms of safety.

If I am rocketing through a corner at 180K/h and something breaks, what protection do I really have? At 120K/h I'm not worried. But cornering at 180K/h with minimal safety equipment is just plain dumb. As



an instructor, I also needed to think about the safety of the student sitting beside me. Safety comes first.

So, with that in mind and some serious encouragement from my girlfriend, I decided it was time for some safety equipment. A bolt-in roll bar could have provided some protection. But given the speeds my M3 was carrying through the corners, I didn't think that was enough. I gave the car to RAVEN Performance for a cage and a serious safety upgrade.

Installing a properly designed cage is actually pretty destructive. It is best to remove the interior and get the cage tubing up close to the roof. You want the tubing as far away from your head as possible.

If you are driving on the street and get in an accident, having a steel cage so close to your head is seriously dangerous. This issue alone pretty much makes it a race car whether you like it or not. Its street days are over. With a cage in the car, you must also use a six point harness. Those are not legal for the street either.

If you are building what is effectively going to be a race car anyway, you might as well do it properly. That means giving careful consideration to where it might be raced and build it according to the rules for the appropriate class. That way if you do decide to race it, you have a reasonable chance of being competitive. Since I wasn't sure how far down the rabbit hole I wanted to go, I decided to build it to BMW CCA prepared rules.

In BMW Club Racing, there are basically three major classes: Stock, Prepared, and Modified. Within each class are subclasses based on the specific models, weights, engines, etc. Stock class is basically a stock street car with minimal changes to enhance safety. Since my M3 was already well beyond what is allowed under stock rules, I had to skip that one.

Prepared was next. Prepared classes allow for important safety and performance enhancements while still keeping the racing budget under control. The cars are classed by model and power to weight ratio. They also have to make a minimum weight

Safety (cont'd)

(including the driver). Extreme modifications are not allowed. This prevents the guy who spends the most money on his car from winning all the time. This is a great place to start.

Finally there is Modified (and Super Modified). The cars are classed by engine size and not much else. The guy who spends the most money (and doesn't break his car) usually wins. If you want to be competitive in this class, it's not going to be cheap. Required safety equipment includes a FIA certified race seat, racing harness, window net, interior net, electrical cut-off switch, and new this year a central fire system. You also need some personal safety equipment - a motorsport rated helmet, Nomex fire resistant shoes, socks, gloves, and a racing suit. I am pleased that BMW CCA also requires every driver to use some kind of head and neck restraint device (e.g. the HANS device).

Finally, if you want to go racing, you need to get a racing license. You need to pass a thorough medical examination. You also need to be recommended by the chief instructor from your club. You might also want to take a club racing school offered at certain driving events. A racing school can be interesting even if you do not plan on racing.

As you can see, in club racing a lot of emphasis has been put on safety equipment. The same goes for driver conduct. Club racing runs under a 13/13 rule. This means that any driver that comes in con-

tact with another car, or is otherwise involved in a crash, is investigated. If the driver is deemed to be "at fault", then they are placed on probation for 13 months. If during that probation period they have another incident, they will be excluded from racing for another 13 months. That's a strong incentive to race safely.

Last year was my first full year racing my BMW. It has been a fabulous experience. I raced in the H-Prepared class and managed to finish 3rd in North America. As a rookie driver I was extremely pleased.

Prepared class was a great place to start. It allowed me to gain some experience, and really helped me formulate a longer term plan.

I did make the mistake of starting to build the car without fully considering the rules. That euro engine meant I had to weigh 3200lbs (with the driver). That's really not much lighter than it was as a street car. With a slightly different engine, I could have been 300lbs lighter. And with all that weight, the car still consumed quite a lot of parts.

There were also things I would have liked to do to improve the car but many were not allowed under the rules. I decided that for my next season I would upgrade to the C-Modified class. This would allow me to make the car as light as possible while also allowing tremendous freedom in other areas.

I still didn't want to spend tons of money. I really didn't

expect to win. But I thought I would have a lot more fun driving a lighter car. And there is always someone to race - even if they are not in your class.

Last winter RAVEN stripped the car down and dipped it in acid to remove the undercoating etc. After that they spent a week in the car with a plasma cutter removing all the parts that were not needed, then they welded all the seams tight. They also extended the cage even further, making it both safer and stiffer. Finally it got a fresh coat of really yellow paint.

Once reassembled, the car weighed in at a bit under 2200lbs. That's 800lbs lighter than the previous year. Driving a car this light is quite a different experience. It took me half the season just to figure out what I could ask the car to do.

With my relatively stock engine and super light weight components, the car has proven to be extremely reliable, which is important because in order to finish first, first you have to finish. I'm also saving money on parts. The tires and brakes are last-

ing at least three times as long.

Modified cars are also allowed to run on full racing slicks. With the new lightness, grip, and reliability, the car has become quite competitive - even against people who spend a lot more money.

The end of the season is approaching and I am really surprised to find myself in second place for the North American championship. And that's in C-Modified class, which is one of the most competitive classes in club racing. There is still one race left in Georgia in December. I know I said I didn't care about competition and didn't want the hassle of hauling a trailer. But maybe I can load it up just one more time and take another quick trip south. Okay. Maybe I am a bit competitive.

By the way, I still don't drive a pickup truck. I find that my BMW 540 Wagon and open aluminum trailer do an excellent job of towing.

For more information on club racing, visit www.bmwccaclubracing.com.

