
More Driver Education Thoughts...

BY FRED PACK PCA INSTRUCTOR

I am back from four days at Watkins Glen, and I want to share some thoughts. Some of what I'm writing about has been discussed in my earlier articles about DE, and some is new.

There are a few things which you **must** check regularly as part of your DE routine. Check your oil level at least once every day and take a glance at your oil pressure when you have a moment on a long straight. Check your brake pads for sufficient material at least every other day, and bring a spare set to the track. (The rule of thumb is to replace them when they are half worn.) Check your tire pressures at least every day – the time to do this is as soon as you come in from a track session. You don't want them getting too much pressure since this reduces their grip, and the pressure does increase quite a bit during a track session. (Each tire type has its own characteristics, so you should find out what are good running pressures for your tire type and adjust accordingly.) When you arrive at a hot temperature which is good, wait for the tires to cool and measure the corresponding cold temperature; then use this figure each morning.

It is a good idea to move tires from side to side periodically. Most tracks typically have more right than left turns, and this puts extra load on the left-side tires so they will wear out before the rights. Switching the rights and lefts is a simple way to even out the wear. Also (**this is important**), you should visually inspect your tires every day. At Watkins Glen I did switch my left and right tires after the second day and I looked at them carefully for wear and also for debris, nails, etc. When I removed them **at the end of the fourth day I saw that the inside of both rear tires was worn through the rubber, down to the cords!** (I have an aggressive suspension setup with considerable negative camber.) This could have been very dangerous. **The moral is check your equipment, often!**



Visually inspect your tires every day!

At every drivers' meeting, Dorothy Buxbaum, our Chief Instructor, encourages everyone to invest in safety equipment; I completely agree. Of course we all have fire extinguishers and up-to-date Snell-approved helmets or we aren't allowed on the track at all, but as we progress in our DE careers we should consider doing more. Track brake pads are an easy upgrade and they do stop the cars better from high speed. Another set of upgrades to consider is track seats, belts and roll bar. (Of course these put you well on the way down the *slippery and expensive slope*, but the driving experience is much more enjoyable [and safer] when you are solidly held in place by a racing seat and harness.) And remember, you will not be allowed on the track if you have stock seats with racing belts. You must either use stock seats with standard 3-point (stock) belts, or track seats, belts and roll bar. And you must use the same restraint system for both driver and passenger – so if you ride with an instructor both of you must have the same.

If you do have harnesses in your car give some thought to a HANS (or similar neck protection) device. They are certainly expensive, but they may pay you a big dividend some day

Next I want to discuss the car itself. Any Porsche can be very successfully driven on the track and provide a full fun quotient. It is not necessary to have the newest or highest horsepower model. In fact it can be more useful to have a lower-performance model. My own P-car ownership path, while not planned in advance, gave me an excellent progression. In 1985 I bought a 944 with 145hp. I did absolutely nothing to it and took it to many DE days. I sold it in 1990 and got a 944S2 with 208hp. I installed track brake pads and utterly loved the car on both street and track. Other than the track pads it was fully stock. In 1994 I went the 2-tier route: I used the 944S2

only for the street and for \$3000 bought a 1973 4-cylinder 914 with 95hp to be my track car. (I later sold the 944S2 and got a Boxster as my street car.) I had the 914 fully outfitted for the track – a full cage, track seats, belts, race suspension and track tires. I left the engine in stock condition.

A 914 with 95hp gives new meaning to the expression “momentum car.” The car had just about no acceleration at all, but it sure could corner! As a learning tool, a low-powered car is much better than a more powerful one because either you go through the turns well or you go very slowly, and right away you know which one it is. More power at your disposal can mask the fact that you aren’t really driving well. I kept the 914 for about 6 years and then moved up to an ‘84 911 with 200hp. Again I outfitted it for the track and installed seats, full cage, belts, suspension, etc. Along the way I sold my street Boxster and got a 2004 GT3 which I used for street only. Then in 2006 I sold the 911 and have been using the GT3 for street and track ever since. (I have installed a roll bar, track seats and belts in the GT3, as well as upgrading the suspension for track use.)

My purpose in telling you about the cars I’ve owned is to explain that incrementally over 20 years as I moved to more powerful cars I have tried to extract the most I could learn from each car before moving on to the next one. I was barely if any faster in lap times at Lime Rock in the 200hp ‘84 911 than the 95hp ‘73 914 for more than a year after I got the 911. It took me quite a while to make the adjustment. The extra power and speed made it more difficult for me to drive as fast as its puny little 95hp sibling. So, to repeat, don’t feel like you need the newest and fastest. In fact, very often you will see fast cars creating a long train of cars behind them on the track because their drivers aren’t skilled enough to drive them well in the turns, but then they blast off down the straights without letting the (slower) cars which are lapping more quickly pass them. Don’t do this! Be courteous and let faster cars pass you.

Adigression about track tires: there are a few things you should know. They definitely have more grip than street tires, allowing you to corner faster and brake later, but they wear out much more often – I corded the rear tires after only 5 track days on my GT3, so track tires are expensive! And they usually have less “forgiving” characteristics than street tires near the limit of adhesion – meaning that they provide less auditory and other feedback

to the driver before losing their grip, so they are not advisable for novice track drivers.

And there is another big issue with them: how do you get them to the track? Since they wear out quickly and the tracks are usually far from home most people do not drive to the track on the track tires. (Besides, what would you do if you got a flat tire on the way to the track?) I had a simple answer when I had my tiny 914. You could put 4 tires in the car, and still have room for some clothes, etc! (One each in the front and rear trunks, and 2 on the passenger seat.) With a 911 or Boxster this solution is not available – there simply isn’t enough room. I have seen 944s with track tires in the cabin.

Many track junkies solve this and other problems, such as how do you get home if you have a mechanical problem or track ‘incident’, by towing the track car behind a tow vehicle. This solution requires both the tow vehicle (such as an SUV, van or station wagon) and a large trailer, as well as storage space for the trailer at home. (One of my track buddies has a ‘dolly,’ which is like a trailer but it lifts the front of the car in the air behind the van and the car rolls on its own rear tires. This approach is less costly than a full trailer and requires less storage space.) Others have come up with creative approaches like roof racks for the tires.

When I migrated from the 914 to the ‘84 911 I took another route: I got a trailer hitch for the 911 (you can find suppliers of these online) ...



and I bought a mini-trailer which was large enough to hold 4 track tires and a storage bin, into which I put all my tools, spares, etc. I continue this approach with the GT3. I go to the track towing

the trailer. These trailers are readily available from Harborfreight (in kit form), Trailex and others.



Finally, I want to discuss the driving itself. Make sure your helmet is strapped on before you enter the track! (For some reason I forget this crucial step sometimes.) In fact, you should develop a ritual of all the things you need to do before entering the track, such as: seatbelts tight, helmet on and strapped, sunglasses (if any) on, gloves (if any) on, etc. As I have stressed in earlier articles, the correct **line** through each corner is the first essential. You must be able to understand the concepts governing the turn-in, apex and track-out points. Cones are usually placed on the track at these locations and your instructor will guide you, but understanding the concept yourself is paramount. Decreasing radius turns (like Turns 6 and 9 at Watkins Glen and the second part of Big Bend at Lime Rock) are particularly tricky to do properly: Stay wide at the entrance on these and make a late apex. **Drive smoothly** and don't be abrupt with any of the controls. Practice making smooth gearshifts, particularly downshifts – learn

how to match the revs so there is no jerkiness when letting out the clutch. I once had the extreme pleasure of riding with Derek Bell (5-time Le Mans winner) in my 911 at Lime Rock. The car felt like it was on ice skates! We seemed to glide over the surface by magic – the ride was so smooth, yet very fast. **Always look ahead** and develop situational awareness of your surroundings. **Stay calm.**

A suggestion: Even if you are checked-out to drive solo, every now and then ask an instructor to ride with you. Yes, I know that once you are solo-qualified you may feel it is a “demotion” to have an instructor on-board, but it isn't, and you likely will learn more advanced techniques from the instructor; after all, when you were a beginner, of course the instructor didn't talk about advanced techniques. By the way, I rode with an instructor at Watkins Glen.

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Have fun out there. 



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