

The Porsche 718 Spyder got spanked by GT3s at Barber, I thought physics explained it, but it was history!

By Jim Cambron

You want some tech? I say, you want some tech? You can't handle tech! But here goes!

Suki encouraged me to buy a 2002 Boxster for my 50th Birthday and I went to the track for the training required for a SCCA Solo-II (one car at a time) racing license. I agree with Ferry Porsche: *You can't tell what makes a Porsche great by only driving it around the block!* Porsches are great cars, engineered with high limits, and the safest way to explore those limits and enjoy their full capability is on a racetrack, not on public roads. Still, that racing license eventually caused me to lose my USAA automobile insurance for five years; they didn't like my lifestyle, even though the car I raced wasn't insured by them.

Every Porsche deserves its trip to the Porsche Parade and likewise every Porsche deserves its trip to the track, from my '88 Targa to the '20 Spyder, neither dedicated track cars, but both genuine Porsches. I completed my 320th track-day in October: nine Porsches on 14 tracks over 22 years, while instructing 142 students in the art of high-speed driving. That's my gift to the PCA, a contribution that'll survive long after I hang up my helmet. I now maintain four different automobile insurance policies for the diverse lifestyle I live.

IF YOU WANT TO RUN THE TRACK, YOU NEED A PORSCHE GT3.

Since its introduction in 2004, the Porsche GT3 RS has been the *King of the Track*. There have been several versions of the turbocharged GT2 and the GT2 RS, but their cost and limited numbers prevent attendance at the average track event; they're not driven by the best drivers; and never run near the front of the pack of fastest cars in the top run group. Just like the other exotics (Ferrari, McLaren, Lamborghini, etc.) or the Corvettes or BMWs, they just fill in the run groups and can't challenge the top Porsches.

Each new GT3 generation is noticeably faster than the previous: 996.2, 997.1, 997.2, 991.1, 991.2, and the 992 with small improvements in power, larger improvements in downforce, plus improvements to the transmission, brakes, suspension, and tires. The latest GT3 being faster than the previous generation GT3RS, for each of the six basic models.

I modified my 2002 Boxster S for the track until I realized it was never going to beat the GT3s designed for the track, and it was becoming uncomfortable for the street. That's when I realized I needed a track Porsche, a Concours Porsche, and a comfortable driving (and wife-riding) street Porsche. This led to my purchase of a variety of dedicated track Porsche GT3s.

Being a "car guy," I modify each of my new Porsches, to "be all it can be," then take it to the track to see where it fits into the "*track dominance pecking order*" between the 996.2 GT3 and the latest 992 GT3. Of course, other Porsches also fit into that same order, Coupe, S, C4, C4S, GTS, Turbo, and Turbo S spread across the 996, 997, 991, and 992 models.

Considering the multitude of BMWs, Corvettes, other cars on the track, the list is endless, but the likelihood of encountering many of those cars is small at Porsche High Performance Driver's Education (HPDE) events. While those cars are welcome at PCA HPDEs, most don't want to be embarrassed by the faster and more durable Porsches. It takes a lot of time, effort, and money to upgrade BMWs and Corvettes to run with stock Porsches.

Now to the point of this article: putting my latest Porsche, the 718 Spyder 4.0 on the track to see where it fits in the "*track dominance pecking order*."

THE 718 SPYDER'S COMPETITION, GT3/GT3RS SPECIFICATIONS:

996—the first GT3, and the 997. The 15-18-year-old 996.2 3.6L and 997 3.8L GT3s are seldom seen on the track, with the exception for the remarkable 2010-11 997.2 GT3RS with (450PS) 444bhp/317lbft, manual 6-speed transmission, 410mm/ 390mm PCCB rotors, 3,020lb curb weight, riding on 245/35-19 and 325/30-19 tires. Its improved aerodynamic rear wing (compared to the 996.2 RS)

produces 132 lbs of downforce at 200 kph (124 mph), the same downforce as the 996.2 RS without its flat wing drag reducing top speed 10mph.

991 - the most common GT3 at track events. These days the 991.1 and 991.2 GT3/GT3RS are the most common GT cars in the fastest HPDE run group (Group 4 or 5 depending on the Region). The most important feature of these Porsches is their PDK dual-clutch transmission. The PDK advantage is not just its shifting speed but the advantage it provides the driver to concentrate on steering a precise line and tying threshold braking with PDK downshifts, contributing as much stopping capability as the brakes themselves.

992 GT3 just appearing at track events. In addition to the generational improvements mentioned (power, downforce, transmission, brakes, and tires), for the first time a GT3 has a totally new and substantially improved front suspension, greatly increasing speed of negotiating track features like curbing while aiding driver confidence during turn-in and track-out.

GT3 Power. The 996.2 GT3/GT3RS officially has 381 bhp but strapped to a dyno they usually generate 400bhp computed crank bhp. The 997.1 GT3RS has 409 bhp (415PS-bhp is 98.6% PS metric horsepower) and the 997.2 GT3RS 444 bhp (450PS) with the Euro Club Sport model 488 bhp (495PS). The 991.1 GT3 has 469 bhp, the 991.1 GT3RS and 991.2 GT3 493 bhp (500PS), the 992 GT3 503 bhp, and the 991.2 GT3RS 513 bhp (520PS). The not-yet-for-sale 992 GT3RS specifications are not included in this article (power is 518 bhp (525PS)).

GT3 Curb Weights & Power-to-Weight Ratios. Starting with 2,990 lbs for the 996.2 GT3, 3,031 lbs for the 997.2 GT3RS, 3,153 lbs for the 991.1 and 991.2 GT3 as well as the 991.2 GT3RS. The 991.1 GT3RS weighs 3,131 lbs and the 992 GT3 3,164 lbs (the 992 GT3RS curb weight is 3,268 lbs). These weights yield power-to-weight ratios of 7.84 for the 996 GT3, 6.82 for the 997.2 GT3RS, 6.72 for the 991.1 GT3, 6.35 for the 991.1 GT3RS, 6.39 for the 991.2 GT3, 6.14 for the 991.2 GT3RS, 6.29 for the 992 GT3 (6.30 for the 992 GT3RS).

GT3 Torque & Torque-to-Weight Ratios. The 996.2 GT3/GT3RS has a 3.6L engine, the 997.2 GT3/GT3RS have a 3.8L, and subsequent GT3/GT3RS are 4.0L

with the torque increased according to engine size. The 996.2 GT3RS has 284 lbft of torque, the 997.2 GT3RS has 317 lbft, the 991.1 GT3, 991.1 GT3RS, and 991.2 GT3 has 339 lbft, with the 991.2 GT3RS and 992 GT3 having 347 lbft. This results in Torque-Weight Ratios (TWR): 996.2 GT3RS 10.53; 997.2 GT3RS 9.53; 991.1 GT3 9.7; 991.1 GT3RS 9.2; 991.2 GT3 9.3; 991.2 GT3RS 9.09; and 992 GT3 a 9.12 TWR.

GT3 Static Weight Distribution is about the same, 39.9% front and 60.1% rear for all nine GT3/GT3 RS Porsches. While the RS models have more dynamic downforce at the rear, that force is balanced with additional downforce at the front, resulting in about the same percentage of dynamic weight front and rear for all nine models. Analyzing this data is beyond the scope of this article.

GT3 Frontal Area & Drag Coefficients. Frontal areas are smaller for the narrow-bodied 996 Porsches and drag coefficients are higher for the GT3RS Porsches. Most track time is spent braking for corners, circumventing those corners, accelerating from those corners onto straightaways usually below 200kph (124mph). Few tracks in the U.S. allow speeds beyond 200kph (124mph) where frontal area and drag coefficients are most important and there are no tracks in the U.S. where terminal speeds are driven (184mph for the 992 GT3RS). Regardless, analyzing this data is beyond the scope of this article.

GT3 Downforce is measured at 200kph (124mph) and increases with each new GT3 generation from the 996.2 GT3RS 77lbs, to the 997.1 GT3RS 18lbs (less downforce but also without the drag of the 996.2 GT3RS flat wing), the 997.2 GT3RS and 991.1 GT3 132lbs, the 991.1 GT3RS 158lbs, the 991.2 GT3 152lbs, the 991.2 GT3RS 317lbs, and the 992 GT3 282lbs (the 992 GT3RS 902lbs (1,895lbs at 177mph which is more than the GT3 Cup Race Car!).

GT3 Tire sizes. An interesting aspect of tire sizes is the ground contact patch. The size of the ground contact patch is proportional to the vehicle weight, NOT the size of the tire. The shape of the ground contact patch is relative to the width of the tire. A wider tire driven through a curve at high speed produces a wider ground contact patch, elongated from the inside of the tire to the outside of the tire, even though it is not as wide from the front to the back of the tire. A narrower tire

driven through the same curve at the same speed shows a ground contact patch not as wide from the inside of the tire to the outside of the tire, but longer from the front to the back of the tire. The narrow tire is more likely to lift from the outside of the tire and slip in a curve.

Tire sizes for eight GT3 models are listed, ranging from 235mm (9-1/4") width front tires to 275mm (10-13/16"), and from 295mm (11-5/8") width rear tires to 335mm (13-3/16"). Wider is better!

996.2 GT3:	235/40-18 front	295/30-18 rear
997.2 GT3RS:	245/35-19 front	325/30-19 rear
991.1 GT3:	245/35-20 front	305/30-20 rear
991.1 GT3RS:	265/35-20 front	325/30-21 rear
991.2 GT3:	245/35-20 front	305/30-20 rear
991.2 GT3RS:	265/35-20 front	325/30-21 rear
992 GT3:	255/35-20 front	325/30-21 rear
992 GT3RS	275/35-20 front	335/30-21 rear

GT3 Tire Types. GT3s are production Porsches driven on the street so delivered with DOT compliant tires. While many owners have a second set of wheels with track-only tires, most owners use OEM street tires. The 996.2 GT3 was delivered with Michelin Pilot Sport Cup tires and their grip was very much inferior to Hoosier track tires. The issue with the Cup tires was their low operating pressure (25psi cold/38psi hot) requiring several warmup laps to reach a minimum operating temperature before you could start applying much power. Then, Cup tires hot and greasy at 38psi and slide all over the track. Compare that to starting Hoosiers at 36psi cold and them being ready for full power at the end of the warm-up lap and continuing to run them all the way up to 45psi without a problem.

The 997.2 GT3/GT3RS, 991.1 GT3/GT3RS and 991.2 GT3/GT3RS were delivered with Michelin Pilot Sport Cup 2 tires, a much-improved tire, and the 992 GT3/GT3RS using the best yet Michelin Pilot Sport Cup 2 R; the *current ultimate DOT-rated track tire*. An equally comparable tire, the Pirelli P Zero Trofero, has also been spotted on the 992 GT3RS.

GT3 Brake. The top-of-the line GT3/GT3RS use PCCBs with six-piston front and four-piston rear Monoblock Forged Aluminum Calipers on the same-sized discs. Although no other braking system surpasses the PCCB for braking or capability or longevity, most track users prefer steel grooved brake systems for much lower cost.

GT3 Suspension. There is a sprinkling of the new 992 GT3s on the track with the *substantially improved double A-arm front suspension* taken from the 991 RSR, swan-neck larger rear wing, the same PDK with revised faster accelerating gear ratios, and *downforce nearly double the previous GT3/90% of the previous GT3RS*. Power is only down 10 bhp and the curb weight increased by 10 lbs.

MODIFYING THE 718 SPYDER

Stock 718 Boxster Spyder. The Spyder 4.0 engine is derived from the 992 3.0L twin turbo-charged engine (379bhp @ 6,500rpm and 331lbft of torque @ 1,900rpm with a 7,500rpm redline) sans turbos and stroked to 4.0L resulting in the stock Spyder's 414bhp @ 7,600rpm 309lbft @ 5,000rpm with an 8,000rpm redline (109% of the 992bhp/93% of the torque). The OEM weight with heaviest components (required method of computing curb weight) is 3,205lbs.

The modified Spyder. Every possible improvement was made to power, torque, weight, tires, and safety. The suspension, downforce, and brakes (PCCB) were left stock.

281 lb Curb Weight Reduction. The Spyder was optioned with the 53 lb lighter Porsche Ceramic Composite Brakes (PCCB) and 52 lb lighter Lightweight Carbon Fiber Reinforced Plastic (CFRP) (GT3/GT4) Full Bucket Seats. A 70 lb lighter Kevlar fuel cell replaced the steel fuel tank, 36 lb lighter Akrapovič titanium headers and muffler replaced the stock stainless exhaust system, and the European required exhaust filter was left intact even though it could have been excluded without causing a Check-Engine Light (CEL), but having heard several Spyderys so fitted, I considered the sound obnoxious. 27lb lighter Champion forged Aluminum track wheels were fitted with Michelin Pilot Cup 2 R tires in upgraded sizes which reduced 4lbs over stock Cup 2 tires. Simpson 5-point shoulder harnesses added 11lbs, a Bray-Kraus Halon Fire Extinguisher added 5lbs, and the Rennline

Aluminum track mats weighted about the same as carpeted floor mats. With a half tank of fuel (8.5gal (less 55lbs) it weighs 2,923lbs, a reduction of 281 lbs compared to the OEM Spyder. The average weight for the eight listed GT3/GT3RS is 3,130.

76 bhp & 38 lbft Power/Torque Improvements. The 4.0L engine was Cobb-tuned for 93 octane fuel and 98 octane race fuel resulting in calculated 454 bhp @ 8,400 rpm and 339 lbft torque @ 6,100 rpm on 93 octane (stock U.S. Porsches are tuned for 90 octane) and 490 bhp @ 8,400 rpm and 356 lbft @ 6,100 rpm on 98 octane with an 8,400 rpm redline.

Tire Size and Type Improvements. Other modifications included upgrading the stock tires from Michelin Pilot Cup 2 tires to Michelin Pilot Cup 2 R—full competition tires. Tire sizes were increased from the stock Spyder/Spyder RS/GT4/GT4 RS 245/35-20 front and 295/30-20 rear to 265/35-20 front (from 9.6” to 10.4” wide) and 315/30-20 rear (from 11.6” to 12.4” wide). The front tires weighed the same, the rear weighed four pounds less. Porsche DMEs require tire diameters within 5% of stock. These 20mm wider front and rear tires had diameters 1/ 2” taller (1.87%) taller than the stock tires which was well within the 5% maximum allowance. I tried larger diameters once and it set off all sort of bells and whistles. Of course, you must confirm mounted tire suspension, brake, and fender clearance.

Aerodynamics. The 718 Spyder is the first Boxster that generates sufficient downforce to cancel the vehicle lift, the net effect is zero downforce/zero downforce—the vehicle is aerodynamically balanced.

Transmission and Suspension. The 718 Spyder is equipped with the 6-speed manual transmission and traditional Boxster suspension.

Safety. A 2020 Simpson Helmet, Hans Device with the Simpson shoulder harness hard-mounted to the vehicle. Rennline 2.5lb Halon Fire Extinguisher with Brey-Krause Quick-Release Mount.

ANALYTICAL COMPARISON of the 718 SPYDER and the GT3s

Two aspects of track power: acceleration and terminal speed. Since tracks have a lot more curves than straights, terminal speed isn't nearly as important as acceleration. While terminal speed is a product of horsepower and aerodynamics, acceleration is a product of torque and weight (expressed as the power-to-weight ratio (PWR) and torque-to-weight ratio (TWR)). Aerodynamics play a small part on the track, since it only starts to affect speed about 60mph, is much more important above 124mph (200kph), but speeds exceeding 200kph are seldom seen on most tracks and never for very long (seconds not minutes).

Comparing Power-to-Weight Ratios: The modified Spyder with 98 octane has a PWR of 5.96 (2,923lbs/490bhp), 24% better than the 996.2 GT3RS, 12.6% better than the 997.2 GT3RS, 11.3% better than the 991.1 GT3, 6.1% better than the 991.1 GT3RS, 6.7% better than the 991.2 GT3, 2.9% better than the 991.2 GT3RS, 5.2% better than the 992 GT3, and *7.6% better than the six listed GT3 average*.

Comparing Torque-to-Weight Ratios: The modified Spyder 4.0L TWR with 98 octane has a TWR of 8.21 (2,923lbs/356lbft), 22% better than the 996.2 GT3RS, 15% better than the 991.1 GT3, 14% better than the 997.2 GT3RS, 10.7% better than the 991.2 GT3, 10.7% better than the 991.1 GT3RS, 10% better than the 992 GT3, and 9.6% better than the 991.2 GT3RS. This means *the Spyder TWR is 13.2% better than the seven GT3/GT3RS TWR average*, however, under acceleration, for those GT3s equipped with the PDK, they have a substantial shifting advantage which offsets the various Spyder PWRs and TWRs.

Braking Capability: The same-sized PCCB brakes are fitted to the 718 Spyder as the listed GT3/GT3RS. The Spyder has a substantial braking advantage being more than 200lbs lighter.

Tire Widths & Downforce: All the GT3RS (997, 991.1 and 991.2) and 992 GT3 have wider 325mm rear tires, than the modified Spyder's 315mm rear tires, plus the upcoming 992 GT3RS 335mm. While the Spyder has a 10mm width advantage over the 991.1 and 991.2 GT3 305mm rear tires, those *GT3s downforce*

at speed give their rear tires more grip, at least equal to or surpassing the Spyder's rear tire grip.

Likewise, the Spyder's 265mm front tires are equal to the 991.1 and 991.2 GT3RS front tires and wider than the four GT3 front tires, but with the help of those four GT3's front downforce, the *GT3s narrower tires also offer equal or more front grip than the Spyder*

Tire Grip: Switching to the better grip of the Michelin Pilot Cup 2 R full competition tire is a substantial advantage, but *this option is open to every vehicle on the track, as well as switching to Hoosiers, or even full-race rubber.*

ANALYTICAL SUMMARY

Regarding the GT3/GT3RS over the last 19 years:

Engine displacement increased from 3.6L to 4.0L (11%): improves torque.

Redline increased from 8,200rpm to 9,000rpm (10%): improves power.

Torque increased from 284lbft to 347lbft (22%) (w/the same 93octane): improves power.

Power increased from 381bhp (400) to 518bhp (30%) thanks to the previous three.

Tire width increased from 235mm to 275mm (front) & 295mm to 335mm (rear) w/corresponding grip & weight increases.

Downforce at 200kph increased from 180 lbs to 902 lbs (500%): results in tremendous grip.

Weight increased from 2,990lbs to 3,268lbs (9.3%) thanks to the previous five.

The Modified Spyder's 490bhp and 200lb average weight advantage yields a Power-to-Weight Ratio about 7.6% better than the GT3/GT3RS average and a Torque-to-Weight Ratio about 13.2% better, all due to tuning for the use of 98 octane fuel.

More power and torque propelling less weight should allow the Spyder to outrun the GT3/GT3RS down the straights. Having the same tires on the Spyder with

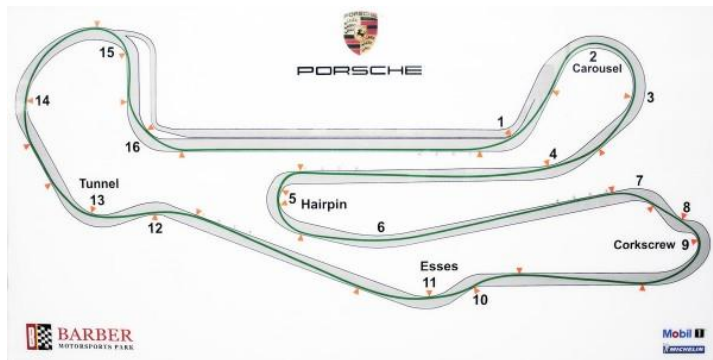
equal or better widths and that 200lb weight advantage should allow the Spyder to out-brake the GT3/GT3RS. Lastly, the quicker to rotate mid-engine Porsches usually turn into a curve 10-12 mph faster than a rear-engine.

Let's see, faster accelerating, out-braking, quicker turn-in, sounds like the Spyder should spank those GT3s! What could I be missing? Other than the primary advantage the rear-engine 911 has enjoyed since it first pulled onto a racetrack!

RESULTS OF THE TRACK COMPARISON

How to go about this . . . maybe just tell you what happened when I got on the track. The Spyder was ready, full of 98 octane, about \$13 a gallon. Harnesses on, the Hans in place, Helmet strap tightened, mirrors adjusted, thirty or so cars in Group 4 Advanced students and Instructors. A Corvette or two (No C8s), my Spyder, and the rest mostly 991 GT3s, with a couple of 997.2 GT3RS, maybe a 992 GT3 or two, hard to pick them out. One BMW racecar. Unusually small number of Vettes and BMWs this year.

There exist both 16- and 17-turn Barber Track Maps, this article references the 16-turn map here.



Lap 1 – The Run Group enters the track at T2 to warm-up the tires, the engine, and the drivers. Accelerating up the hill in T3 and cresting the hill at T4, the most dangerous point on the course. Hugging the right-side curb is critical to avoid a mid-track crest, then trying to turn right with a light front-end, resulting in a buttonhook into the ARMCO, like so many have done in the past. On the right side you continue full throttle downhill on the second straight to the 180-degree

T5, repeat braking to warm the tires, then continue around the double-apex turn to T6 and track-out onto the third straight toward T7-8-9.

This set of corners is technical and taxes your suspension. It's right-left-right, completely over the T7 curbing on the right, across the track to not quite as much of the T8 curb on the left, back across the track, and right on the edge of the T9 curb all around it applying as much throttle as you can until you can shoot-out of the curve to the kink. If you get it right, these three curves at the Museum will help accelerate you down the track and the amount of lifting off the throttle or braking for turns T10/T11 depends on how well the car is set-up and the nerve of the driver.

Get the turn-in point right for T12 you'll be in perfect position to line-up with the trees on the horizon for this blind hill, then drop-down for this fast section of the track with several markers on the curbing entering and exiting T13 along the way. Track wide for T14 and the right pace will set you up for a tight turn into T15, then it'll set you up for the most important curve on the track, T16, the last curve before the longest front straight on the track.

At the end of the front straight you only lift the throttle at T1, turn left then brake hard but short, at the small hill entering T2, completing the warm-up lap and with hot tires you start running for time.

Lap 2 – Front Straight & T1, T2: Wide-open throttle down the front straight as predicted the Spyder is eating the GT3s, gaining on every GT3 I encounter when approaching from behind at T16. With the Spyder it's just a slight lift over T1 with heavy braking at the little uphill entering T2. The Spyder's mid-engine balance is light on its feet and easy to modulate around T1, easier than my previous GT3s. Additionally, being lighter, better balanced, and with their brakes, it is a much better braking machine, as good as the GT4RS, braking from the rear with great rear-brake bias, instead of the strong front-brake bias of the GT3s which is always a handful.

T2-T3-T4 Sweeper: As T2 transitions into T3, I watch various rear-engine bias GT3s bite into the track and charge up the hill as the neutral-weighted mid-engine Spyder drifts to the outside of the turn. Speeds are not sufficient for the GT3s to

amass rear-end downforce, it's all rear-engine weight bias; true 911 history exemplified. The GT3s track true to the designated "line" cresting the hill on the right side of the track while the Spyder, driven at its drifting limit is painting a wide path up the hill and must lift throttle to gain traction and correct its path back onto the line to prevent tracking over the crest in a dangerous drift in the middle of the track.

Down the 2nd straight, into T5 & T6: Faster than the GT3s, out-braking them, and quicker on turn-in, the Spyder should track-out of double-apex T5 & T6, but the Spyder will never be sitting at the top of the crest, because the GT3s will be well ahead of the Spyder when it crests the hill. By the time the Spyder turns into T5 the GT3s will be tracking out. Here we repeat the previous scenario: as the GT3s start tracking-out in this low-speed turn, their rear-engine weight-bias enables them to hook-up and barrel-down the 3rd straight while the Spyder drifts wide and waits what seems like an eternity to hook-up and accelerate.

Down the 3rd straight and cutting corners in T7, T8, & T9 at the Museum Turn: This time I sense something new. The GT3 front suspension, no not the new 992 double wishbone suspension, even the 991 refined suspension seems to negotiate running the curbing of T7 & T8 at high speed better than the 718. As mentioned, it's a high-speed turn, probably 135mph and you take most of the T7 curb while still coming off trail braking, across the track, and catching at least half of T8, while going downhill, then back across the track, and dropping into T9 and following its line around the curb for maybe 45 degrees or so.

Such an advantage with PDK: At just the right time you are back on the throttle and depending on the car, its set-up, and grip, you are back on the throttle. This is one area where the PDK is very useful, having shifted down through the gears from 135mph to 20mph and now back up again, whereas manually it was from 4th gear on the straight, then down to 3rd at T8, then 2nd in the tight T9, then topping out in 2nd gear and back to 3rd and somewhere through the kink back to 4th gear. I remember how hard it was in the flexible chassis 996 GT3 how hard it was finding 2nd gear in the middle of T9.

Driving out of the Museum Turns through the T10/T11 Kink: The Spyder should really live for this part of Barber, except as you are aware, while the GT3s are

hooking-up their rear tires out of T9, the Spyder is drifting wide and counting some seconds wasted waiting to start chasing them down. The lighter Spyder flies through the kink, but the GT3 downforce provides an advantage in T12 where the Spyder is light in the turn.

T13, T14, T15, and T16 are very demanding technical parts of the track and vehicle placement offers huge advantages and I was never able to master this to the point of defining advantages or disadvantages of the Spyder vs the GT3, not until I can get a few more track days in the Spyder. While T13 and T14 are pretty fast, they should provide some downforce advantage, whereas T15 and T16 being slower should be an advantage to a lighter mid-engine car if well driven.

During my four track sessions, 120 minutes total, I developed these thoughts about the Spyder at the Barber Motorsports Park:

The Spyder can close on every car on the track, the PWR and TWR are accurate; but Barber has few threshold braking zones, so the Spyder's lighter speed and superior braking offers little advantage.

GT3 rear-engine weight-bias allows them to power out of tight curves (T2-3-4, 5-6, 7-8-9) while the mid-engine Spyder drifts at those points and loses momentum. T7-8-9 is a high-speed combination and it seemed like the Spyder front suspension was at a disadvantage working over curbing to straighten the three short curves into one straight line that dumps you into the tight chute at the Museum Curve (T9).

It seemed the high-speed Kink at T10/T11 and maybe T12/T13 should be an advantage for the lighter and quicker turn-in of the powerful Spyder.

I realized a few lessons about life with the Spyder:

It's fast, it will chase down the 997 and 991 GT3/GT3RS, but BMP is so tight, and the straights so short, you never get the chance to use its power on those straights. Road Atlanta's longer front and back straights might be another thing.

It's light weight and powerful brakes will probably be a great asset at Road Atlanta turn 10A, turn 1, and turn 6, but not so much at BMP.

The GT3 991 and certainly the 992 improved suspension appear to be an advantage negotiating BMP turns 7-8-9 and maybe turn 13. I don't see them as much of an advantage at Road Atlanta which is smoother with turns more separated.

The newer GT3's increased downforce should be a major advantage at Road Atlanta's high-speed turns like 12, 1, and maybe 5.

That one last thing I mentioned earlier, the primary advantage the rear-engine 911 has enjoyed since it first pulled onto a racetrack! It's the weight of the engine sitting over the rear tires, the ability to get on full-throttle coming out of a curve, sooner than the front or mid-engine competition!