

Porsche, Racing, and the Art of Stopping to Go Fast

Coming out of turn 7 at the historic Michelin Raceway Road Atlanta, the pedal is flat for over 4,000 ft or $\frac{3}{4}$ of a mile. As you come into the downhill braking zone of Turn 10a going 120 mph, a 90 degree left hander stares back at you. Wait...be patient...the braking markers are flying by. At the 3 board, or 300 feet from the apex, I jump on the brakes with 100% pressure. A slight reduction in speed and then the brake pedal goes to the floor, and I'm not slowing down. It's at this exact moment when you realize how important brakes are when trying to turn the fastest lap. A blown brake line

When people think of Porsche, they picture speed: the curvaceous 911, checkered flags at Le Mans... maybe even the smug grin of a driver correcting your German pronunciation... It not Porsch, It's PORSCHE. But here's the paradox: Porsche's greatest advantage has never been just about going fast or having the most horsepower. It's about slowing down.

You see racing is won not on the straights but in the corners. Corners reward late braking, precision, and control. In other words—the car that brakes best, wins.

Engines, horsepower and 0-60 times get the glory. Horsepower is how people like to brag about their car, but taking a 190 hp Boxster and being able to turn faster lap times and pass Corvette's with twice the horsepower tends to silence the braggarts. Braking and driver skill do the work. Finding the thin line of balance between when and how much to brake requires time in the seat and a trust in your car.

And Porsche has spent more than seventy years proving it.

Let's start with the early years. Porsche's racing story began humbly in 1948 with the 356 and the 550 Spyder. The 356 was the touring car that got raced, but the 550 Spyder was a purpose-built race car. One may remember one particular Porsche that claimed the life of James Dean. While driving his 550 Spyder, which he affectionately

called “Little Bastard”, to a race, he was hit head on by a Ford Tudor. (William.... you had one of these...correct?) He died as a result and the name proved to be accurate.

Back to the point, these weren't muscular Ferraris or Maseratis. They were small, light, and nimble. The 550 had just over 100 horsepower... but it weighed about as much as a sneeze. Each of you drove here with 2-3X as much horsepower as that race car arrived at the track with. While rivals thundered down straights, the little Porsche would sneak up in the braking zones. Its brakes didn't cook themselves after five laps. They didn't fade into mush. They just worked. Drivers quickly learned that in a Porsche, you could brake later, dive past bigger cars, and carry speed through the corner. Over a race distance, that meant trophies.

The Porsche 356 stands as the cornerstone of Porsche's racing legacy, transforming a modest post-war sports car into a global motorsport icon. Introduced in 1948, the 356 quickly became more than a stylish road machine—it was a precision tool for competition. Early versions, light and rear-engined, offered exceptional handling balance, allowing even small-displacement models to compete above their weight. In 1951, Porsche entered a 356 SL at the 24 Hours of Le Mans, capturing a class victory and announcing to the world that the brand had arrived. From that moment, the 356 became a fixture in endurance racing, rallying, and hill climbs. Privateers and factory drivers alike piloted the car to countless class wins at events such as the Mille Miglia, Targa Florio, and the Liège–Rome–Liège rally. These successes built Porsche's reputation for engineering excellence and relentless reliability, traits that would define the brand for decades.

Equally important to this success was the steady evolution of the 356's braking system. Early models relied on aluminum drum brakes—adequate for touring, but prone to fade under racing stress. As competition intensified and speeds climbed, Porsche engineers recognized the need for stronger, more consistent braking. The breakthrough came in the early 1960s with the introduction of annular disc brakes on the 356 B Carrera 2, a design that allowed calipers to grip the discs internally, improving cooling and bite. This innovation

Think of it this way: from the 550 Spyder's drum brakes... to the 917's glowing steel discs... to the 962's cross-drilled rotors... to the 919's regenerative sorcery—all of it leads here.

The racing truth, distilled:

- Accelerating is easy.
- Braking well is hard.
- And braking well is what makes you fast.

A better engine shaves tenths.

A better brake system saves minutes over a race.

And minutes win Le Mans.

Or—in my case—a national championship.

Brakes are the unsung heroes.

The secret weapon.

The reason Porsche has more Le Mans victories than anyone else.

Porsche's racing story is the story of brakes. Small cars out-braking giants in the '50s. The 917 conquering Le Mans by surviving the night. The 962 giving drivers unshakable confidence. The 919 turning braking into energy, rewriting physics itself.

And today, in the hands of drivers like me—carrying that same DNA into championships. So, the next time someone asks about Porsche's secret to speed, you can tell them:

It's not just power.

It's not just aerodynamics.

It's the paradox that has guided Porsche since 1948—sometimes, the fastest way forward... is knowing exactly how, and when, to slow down.

Drivers trusted the 956 and 962 like no other car. They were brutally fast, yes, but more importantly, their brakes worked lap after lap, hour after hour. The 956 and 962 did not just win Le Mans. It made it feel inevitable.

Fast-forward to 2014, and Porsche unveiled the 919 Hybrid, a spaceship in race car clothing.

Under braking, the 919 not only slowed down, but harvested energy—turning slowing down into speed for later. Every hard stop charged the batteries that unleashed electric power out of corners. 60% of the harvested energy came from the front brakes. The advancement in materials allowed for smaller brakes, less brake duct cooling, meaning less drag, and increased acceleration out of the corners with the electric motors. Braking wasn't just about slowing anymore. It was about going faster. The 919 won Le Mans in 2015, 2016 and 2017. In 2018, its unrestricted "Evo" variant, meaning it didn't meet race parameters, set a Nürburgring lap record so absurd—five minutes, nineteen seconds—that people are still picking their jaws up off the floor. This record hasn't been broken as of yet. The secret? You guessed it.

Brakes that didn't just stop the car—they turned every corner into a slingshot.

And that brings us to today—and to me.

Because Porsche's racing legacy isn't just the domain of factory teams in Europe. It's alive most weekends in PCA Club Racing across the country, the largest single-marque racing series in the world. My old 1999 Porsche Boxster that went through the gravel trap at Road Atlanta is part of that legacy. Mid-engined, balanced, and deceptively modest compared to Porsche's monsters of history, it embodies the same philosophy: light, agile, and brilliant on the brakes.

And winning a national championship in Class D is no small feat. It meant mastering not just the throttle, but the brakes—the same truth Porsche engineers hammered home with every car they ever built. It rewards consistency. It punishes sloppy braking.

And I proved—just like Porsche has for decades—that the one who slows best, goes fastest.

In 1970, the 917 carried Porsche to its first overall Le Mans victory. It wasn't just horsepower that won. It was horsepower married to brakes that didn't melt before dawn. The Porsche 917 achieved legendary status by combining massive power, advanced aerodynamics, lightweight construction, and unwavering reliability. But a key component enabling that performance was its braking system—large, ventilated brake discs, high-spec calipers, lightweight construction—engineered to cope with extreme demands. In the high-stakes world of endurance racing, where reliability under stress is everything, the 917's brakes were a silent but essential hero of its success.

By the late '70s, Porsche discovered turbocharging, and things got truly unhinged. The 935 "Moby Dick" looked like a 911 on steroids and made upwards of 800 horsepower. It blasted past everything on the straights... but slowing it down was like stopping a freight train with oven mitts. The braking hadn't kept up with the speed and the 935 had a short-lived racing career. It was retired to the museums, and unfortunately became what we commonly call today, a Garage Queen.

The real breakthrough came with the 956 and 962 in the 1980s. These Group C monsters combined ground-effect aerodynamics with advanced braking systems: cross-drilled rotors, stronger calipers, and brake fluids that did not boil into vapor at 180 miles an hour. Porsche continued to refine and improve the braking system. Adding brake cooling ducts to decrease temperatures helped, while using 2 calipers to help stop the beast was important in their success. In 1983 Porsche competed in the 24hr Le Man's endurance race with 51 total entries and fared well. So well in fact they created an advertising campaign showing that nobody is perfect. First - Porsche 956, Second - Porsche 956, Third - Porsche 956, Fourth - Porsche 956. Do you see a pattern forming? Fifth - Porsche 956, Sixth - Porsche 956, Seventh - Porsche 956, Eighth - Porsche 956, Ninth - was a BMW, and another 956 finished out the top 10. See, Nobody is Perfect!

culminated in the 356 C, which featured four-wheel disc brakes as standard equipment—a revolutionary step for its class. The improvement not only enhanced stopping power but also inspired greater driver confidence and consistency in racing conditions. And in an era of drum brakes that faded faster than a politician's promises, that consistency made Porsche the clever assassin of endurance racing.

Then came the 917 in the late 1960s, and Porsche abandoned subtlety. This was no longer David versus Goliath—it was Goliath with a flat-12 engine throwing down over 600 hp. The 917 could hit 240 miles an hour down the Mulsanne Straight at Le Mans. Which sounds thrilling... until you remember physics. If you go 240, eventually you have to stop. 1969 was the first year the 917 debuted at Le Man, and it proved to be deadly. This was the last race that featured the traditional style “Le Mans” start, where the drivers would lineup against the track wall and run to their cars, start the engine and take off. Many drivers didn't bother with their seat belts until late in the first lap as they battled position. John Woolfe, a wealthy British driver, was driving his 917 on the first lap and lost control. He wasn't wearing his seatbelt, and its thought that contributed to the fatal crash. It was so violent that the gas tank was torn from the chassis and ended up in the middle on the track in the path of an oncoming Ferrari. The early 917's struggled early on, but by August they begun winning. These cars enjoyed the first internally vented brake discs and high-performance calipers that moved from the inside of the disc to the outside like we see today. This helped harness and control the abundance of power, leading to a successful racing history.

Steel brakes in the 1970's weren't exactly eager volunteers to stop something going that fast. Discs glowed, cracked, and occasionally made drivers question their life choices. One quip went that the brakes glowed so brightly at night you could read a newspaper by them. Which was handy—because you were about to see your obituary if you weren't skilled in knowing when to apply them.

But Porsche persevered. They ducted air for cooling, balanced the car's handling, and taught drivers to manage their brakes like precious gems. Driver's learned by others mistakes on how best to manage the balance of power and slowing down...consistently.