



Weekend Warriors

Taking your Porsche to the track for the first time

Porsche's advertising has always been very clear: Their cars are meant to be *driven*. This philosophy has everything to do with the company's long history of direct involvement in motorsports and how the knowledge gained in racing has been fundamentally engineered into every Porsche model.

Many owners get to explore this performance potential of their car just briefly, on those rare occasions of finding the right road, at the right time. However, for those who would enjoy the opportunity to better know their car's inner character, consider taking it to the place where your car's DNA was first woven, on the track.

Driving your Porsche on the track is like no other experience. Everyone knows how to drive fast (you'll get run over on today's highways if you don't), and most of us who read *Excellence* are inclined to stretch our cars' legs once in a while.

However, being quick on the track is a whole other deal. Do you know how and where to set up the car for a turn? How do you carry speed through the corner using correct braking and turn-in points? Can you read and hit the turn's apex, feeling the car's balance change through the seat of your pants, knowing how to correct it, then find the correct acceleration points while using every inch of the road when exiting the turn? Do you know when to use trail braking? Can you do all that, and more, while concentrating on nothing else for lap after lap?

We call it pure fun.

In this month's "Tech Forum," we take your Porsche to the track for the first time so you know what to expect at the mandatory tech or safety inspection. If your car can't pass this first test, it's not going on the track.

Getting Started

There are many opportunities to drive your own Porsche in organized track events. If you're daunted by the very prospect, remember that *everyone* starts as a beginner, and there's no pressure to drive above your skill level. Some programs are clearly intended for first-timers and are typically referred to as a Driver Education (DE) or Driver Clinic (DC) event. Safety should be the primary focus of any organized driving event you will want to attend. They are generally well organized and staffed, and there should be corner workers and trained emergency personnel and equipment on hand. Also realize going in that event organizers have zero tolerance for those who do not pay attention to the rules.

You will typically first go through a few hours of classroom training that begins with safety, including learning the mean-

ing of the various flags thrown by the corner workers, and getting familiar with the layout of the track. The class will also cover such driving dynamics as oversteer, understeer and weight transfer — basically a primer on how to get through turns properly without losing time and speed or upsetting the balance of the car. The class instructors will be very experienced, and some may be professional drivers, so be sure to ask questions.

Then it's time to get in the car. Most events will put an experienced club member or instructor in the passenger seat alongside you. Cars will typically go out on the track single file, at moderate speeds, following the chief instructor driving the lead car. The idea is to take the same driving line around the circuit as the car in front. Your in-car instructor may begin to provide further guidance and critique your driving performance at this point, but the goal your first time out is to learn the track and how to set up and get through each turn as smoothly as possible. Speeds will begin to increase as everyone gets comfortable, and you'll begin to brake harder and start to feel stronger side loads as you carry more speed through the turns.

Some will find that this activity provides as much action and excitement as they are looking for and will participate in DE events a few times per year. For others...well, let's just say the experience can become addicting. For those who wish to feed the hunger, seat time is readily available at events that cater to the quicker drivers among us. Whether your ultimate goal is to participate in timed solo events and compete for the best lap time, or run wheel-to-wheel against other addicts, keep in mind that higher levels of competition require a lot of experience and spe-

cial licensing, plus professional safety gear and significant modifications to your car. The costs, of course, will be proportional to the commitment.

Where to Start

One of the best places to start is your local chapter of the Porsche Club of America (PCA). The PCA has 13 zones that cover the continental United States, plus Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands and Canada. Each zone is then broken down into smaller chapters within specific areas. Most PCA chapters will host DE events throughout the year, usually during the better weather from around April to November, and these events also can offer the opportunity to drive on a world-class track.

On the West Coast, the Porsche Owner's Club (POC) was created by a group of hardcore racers who wanted to maximize their track time. The POC usually offers two DC training events per season, usually at the beginning and the end of the season.

The Porsche Driving Experience, conducted by Porsche Cars North America, is a wonderful place to start. Located at the beautiful Barber Motorsports Park in Birmingham, Alabama, it provides late-model Porsches for driver training and does not offer instruction in your own car. Highly talented students can even progress into a GT racing program.

Porsche also plans to open two new Driving Experience locations, one at PCNA headquarters in Atlanta and one

in Southern California sometime during 2014 or shortly thereafter.

Consider, too, the Sports Car Club of America (SCCA), a long established national club that also holds DE events. They are not exclusive to Porsche but have competition classes for nearly every make and model of car.

If you're really serious about going faster, or are even a beginner who'd like specialized instruction, there are professional driving schools, and some of these, such as Allen Berg Racing Schools in Southern California and Canada, offer opportunities to train in and drive your own car. The cost of a professional driving school is significantly higher than the club experience; however, the driving school staff is usually made up of pro race-car drivers. Working with a driving school will especially benefit those wanting to enter the ranks of professional racing, when a customized, one-on-one program is needed to sharpen your skills.

The Tech Inspection

Every car taking part in a club or driving school event will be required to pass a technical inspection to validate the condition of the car and ensure any mandated safety equipment is installed. The club or organization running the event will have a tech form that will list all the items to be checked by a technician during an inspection. Clubs will often require that certain inspections be performed based on the type of event taking place to determine that the car meets a specific standard of preparation and safety.

A club or driving school will have an established network of local technical inspection stations where your car can be checked prior to the event. The inspection

Checking proper torque of the wheel hubs; values vary by model. Technician also should perform a random check for any loose fasteners.





stations are usually local independent Porsche repair shops, as they are more likely to be familiar with your model of car. It is a good idea to call ahead. Many shops perform these inspections by appointment, and there is often a small cost to cover the labor involved.

Most organizers also offer tech inspections at the track the morning of the event. This may sound like a great way to save time by having the tech done at the track; however, in reality it may not work out that way. You can get tied up in a long line of cars needing an inspection and lose valuable track time while waiting for your turn. Also, if for some reason your car does not pass the tech inspection, there may be no way to repair the problem at the track. In this case you may lose the opportunity to participate in the event altogether.

The best solution is to make an appointment at the local inspection station a few weeks prior to your driving event. If your car has some issue(s) that need to be corrected, then there will be adequate time to have the corrective repairs performed.

Checking Over the Car

The Tech Inspection will usually take about one half to one hour to complete and is mainly focused on discovering any impending issues or current problems. The technician will drive the car to observe if any running, handling or braking anomalies are present. The technician will usually fill out the tech form as the inspection takes place; if applicable they may add notes or comments. Always provide the tech inspection station with the required documentation for your event.

Tires: The technician checks the condition of the tires thoroughly. This will include the age of the tire, tread depth and any physical damage from punctures, cuts

Above left: Brake pad gauge in use. Green means good to go. Above right: Mirror allows look at inner brake pad. Backing plate is red.

or damage to the sidewalls from having been run while low on air. The manufacturing date is identified on the tire by the last four digits of the DOT number: For instance, 3412 equates to the 34th week of 2012. Tires that are more than six to ten years old may look okay on the outside, but the rubber may be compromised. The tread depth needs to be a minimum of 2/32 in. above the tire's wear bar, and the wear pattern from the outside to the inside tread block should be even. Aggressive negative camber suspension settings may wear the tires significantly more on the inner tread block while the outside tread block may look great.

Wheels: The wheels are checked for physical and structural damage, obviously cracked or bent rims. The wheel's lug nuts or bolts are checked for adequate thread engagement; a few threads will not suffice here. Some track series require the use of steel lug nuts; check your local rules. The wheel center caps must be taped in place or removed from the wheel. The wheel fasteners must also be installed with the correct torque settings.

Suspension: The suspension should sound solid; no clunks or other noises over bumps or through dips. With the car off the ground, the wheel bearings are checked for excessive play with a push/pull rocking motion. There should be no lateral movement or play. If there is, the wheel bearing should be adjusted or replaced as needed. While not common, a worn-out spindle can present similar symptoms to a loose wheel bearing.

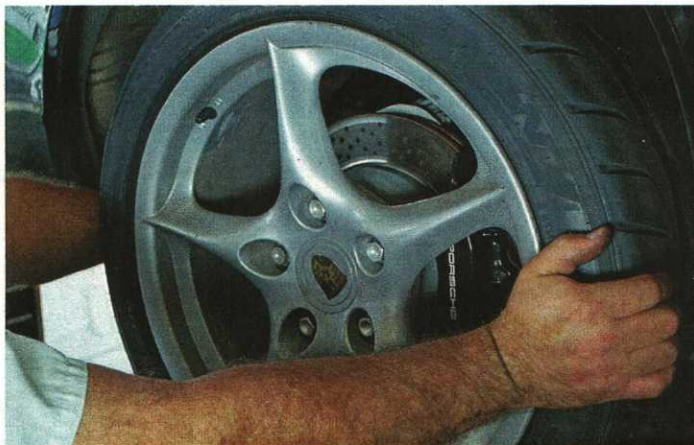
All tie rods and ball joints are checked in a similar way for tightness; any move-

ment or play needs to be diagnosed and worn components replaced. The 944 models with aluminum front lower control arms must have their ball joints checked carefully. U-joints and Constant Velocity Joints (CVJ) on all cars should be checked to ensure the fasteners are tight and there is no unusual play or wear present in the joints. The struts/shocks are checked for damage and any fluid leakage; these should provide firm resistance to any deflection.

The steering gear is checked for play and any component that may be loose or damaged replaced. There should be no fluid or grease leakage from any components, e.g. torn CVJ boots or faulty wheel bearing grease seals. The technician should also randomly check various suspension mounting fasteners for tightness. If it's discovered some are loose, it is advisable to spend the extra time and retighten all the fasteners to the proper factory torque specifications. Some fasteners may become loose through usage over time; retightening all the suspension fasteners should be done periodically on any car that is tracked.

Brakes: The brakes are checked for operation. There should be no pulling left or right when the brakes are applied, and the brake pedal should feel solid. The condition of the rubber brake pressure hoses are checked for cracking. Once again, no fluid leakage is allowed. The brake pads and rotors (or linings and drums on non-disc-brake cars) are checked for the amount of material remaining. It is not advisable to go on the track with brake pads worn more than 50 percent of their useful life. Worn brake pads allow more heat transfer to the brake caliper and thus into the brake fluid, and this can cause the brake fluid to boil more readily.

Brake fluid is hygroscopic; it absorbs moisture from the air and it's important



Above left: Technician checking for play in the ball joint of right rear diagonal link. Above right: Schroth seatbelt harness code and expire date.

it be checked for water contamination. As brake fluid gets very hot, the water in the fluid will start to boil and braking efficiency will become seriously compromised or lost completely. The driver may first notice additional brake-pedal travel and longer stopping distances. This is your clue to exit the track before the brakes fail completely.

Engine: No fuel, oil or coolant leaks are acceptable; if present these must be diagnosed and repaired. Hoses or metal lines must be tight, and all clamps should be in good condition and installed properly. All wiring must be secured in place; the engine compartment should be clean. The throttle return springs must be in good condition and operating properly without interference. These also should be checked at the pedal assembly to ensure there is no binding in the cable mechanism. The condition of the drive belts are checked for cracks or fraying, and they must be tight because loose belts can slip and cause the belt to overheat and become damaged. A loose belt can also cause a phantom misfire issue. The condition of the bearings for the drive-belt tensioner and/or rollers should also be checked, as a failing drive-belt roller will quickly destroy a belt.

Body: Confirm the tires have adequate fender clearance so as to avoid rubbing during hard cornering. All body parts like the hoods and doors plus exterior-mounted items including mirrors, emblems, bumpers, license plates, lights, etc., must be securely attached. The windshield glass should have no cracks and be properly installed. All brake lights must be operational.

Interior: The front driver and passenger seats will be checked for solid installation. Seat belts are required and must be securely installed. The condition of the belts must be good; no fraying or dam-

aged materials are allowed. DE events usually do not require a 10 BC fire extinguisher to be installed within the driver's reach, but any track event beyond a DE will, so confirm this with your event organizer. (If an extinguisher is required, a mount that attaches to the seat rails without drilling holes in the interior is available from Brey-Kruse Mfg.)

Safety: The battery must be properly fastened down and the terminals covered with tape. Helmets are required, but most DE events will have some available for rent on a first-come first-serve basis. If you're intent on buying a helmet, get a new full-face model; if borrowing one, make sure it is Snell SA2000 approved or newer unless the organizers will accept something else.

Additional Thoughts

You should be aware that if your Porsche is still covered under a factory or certified pre-owned warranty, it is recommended not to participate in track events. Read your warranty carefully: Porsche, or any other automobile manufacturer, will not warranty problems or failures incurred during racing or other organized speed events. However, DC and DE events are usually considered acceptable. While the risks are low, the possibility of experiencing a problem does exist, and there is a potential for significant cost to you.

Make sure your Porsche's maintenance services are up to date; if you are due for any fluid change (engine oil/gearbox oil/brake fluid/coolant), get it done *before* your DE event. Many racers have learned, some the expensive way, that if you're

going to drive your car like a race car, then you have to service it like it's a race car.

A four-wheel alignment should be performed and set to stock specifications for a DE. An alignment for aggressive street driving or racing will provide improved handling but at the expense of additional tire wear; consider this tradeoff when making your decision. The tire pressures need to be set to factory recommendations and checked periodically during the DE event. Adjusting tire pressures can change the handling characteristics of the car, but for a basic DE the stock settings will work fine.

All loose items must be removed from the car; this includes floor mats, the complete contents of the glove box, door pockets, center console, lost items under the seats, spare tire, jack, tools — everything. There's an old saying in racing: Anything loose in the car will end up at the pedal assembly.

We are often asked for our opinion on the best Porsche street car to take to the track. Short answer: Any year GT3 is an exceptional choice. The GT3 is about as close to a factory-made GT race car as you can get if you still prefer any creature comforts. However, we normally follow up by mentioning what many pro drivers say: Start off in a slow, boring car and learn how to drive it incredibly fast by developing sophisticated driving techniques that allow you to maintain speed and momentum through every turn on the track. As your driving skills improve, it will be fun, not frightening, to move up to a faster car.

Enjoy Your Porsche 🍷

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