

## R Compound Tires

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### Do You REALLY Want Race Tires at DE Events?

So, like many others, you have taken your Porsche to one of NER's DE events and have been bitten by the high performance driving bug. The capabilities that Porsche has built into each model is nothing short of amazing and learning to use more of your car's performance potential can be very addictive. Along with this enthusiasm usually comes a desire to increase the performance of the car even further by installing things like stiffer springs, roll bars or wider wheels. Some will also want to fit competition tires along with other modifications. There are some tradeoffs to be made when using competition tires and so there is some controversy about whether it is a good idea for a beginning driver to install competition tires for DE use. Some of our instructors have expressed concern about teaching a novice student whose car is equipped with these tires. The purpose of this article is to examine the reasons you may or may not want to use this sort of tire at our DE events.

What are competition tires anyway? {In:nw:<http://www.tirerack.com/tires/types/comp.jsp> 'The TireRack web site} says they are tires which are designed "to provide the ultimate in acceleration, cornering and braking traction for track and competition use." Some of these tires are legal for use on the street (DOT approved) and some are not. To provide this maximum performance, they use special high-grip materials, tread designs and sidewall construction. Most engineering designs involve balancing trade-offs and the design of competition tires is no exception. The material that helps these tires achieve their high level of traction also wears out very rapidly. The tread pattern and material in these tires means that they perform quite poorly when the road is wet or cold. Finally, these tires may have a narrow range of temperatures and pressures at which they work well and performance may deteriorate rapidly away from the optimal values. So, while they can provide extreme traction for race track use, one must be aware of all the characteristics of these tires to avoid the liabilities.

You might be asking why someone would want to install competition tires for DE use. The obvious reason is that because of their design characteristics these tires can offer much higher cornering limits than might be obtained by even high performance street tires. In addition, for cars that are used on the street it is convenient to have a second set of tires to use for track events so that your street tires are not subject to the punishment of track driving and remain quieter and smoother in street use.

What are some reasons that might not make competition tires the best choice for a novice track driver? First, there is cost. You will need to purchase a new set of tires which cost as much or more than the high performance street tires that are standard equipment on your Porsche. And the fact that the competition tires will wear out much more quickly means that cost of using these tires will be much more expensive than just using your street tires at DE events. Competition tires typically have much less tread than a normal street tire which means that driving to and from the track on competition tires can be downright scary (and dangerous) if the road happens to be wet or even cold. So, more money must be expended to transport either an extra set of tires or the entire car on a trailer, necessitating the acquisition of a tow vehicle and trailer. The second issue is that competition tires are not as "user friendly" as standard street tires. As mentioned above, competition tires have greatly reduced performance when the road surface is wet. Drivers with greater experience will be able to sense the reduced capabilities and adjust their driving on the track accordingly while more novice high performance drivers may not with potentially unfortunate results. Another factor is that competition tires only deliver their maximum performance when they are fully warmed up. Usually, one must drive several laps at reduced speed for them to warm up. Your Porsche's standard street tires, on the other hand, attain their maximum performance capabilities much more quickly. The largest advantage of street tires over competition tires for the less experienced track driver is they provide much more feedback when they approach their limits. The feedback is both audible and tactile; as you get closer to the tires' limits you will hear progressively louder squeal and you will be able to feel the car's response to your inputs gradually change from their normal behavior. On the other hand, competition tires break away much more abruptly with much less noise and more subtle feedback, making them more suitable for use by advanced track drivers. With street tires, a beginning driver can learn to approach the limits of his/her tires by responding to the more gradual feedback and without undesirable consequences. Thus, using street tires can help one become a more advanced driver more quickly. The novice driver needs to concentrate on driving the line, developing smoothness and learning such skills as threshold braking and heel/toe downshifting. As is true of any sport of skill, the only way to become proficient in these skills is practice, practice and more practice.

What is most important, then, in progressing quickly in high performance driving skills is to concentrate on the basics and to get as much seat time as possible. Porsche has built tremendous performance capabilities into each of their models and the cars in stock form are so good that it takes lots of work for a driver to acquire enough skill to even approach their limits. So first work on the most important performance part in your Porsche-you, the driver! Resist the desire to upgrade the car until you reach the point where you are accessing a significant portion of your car's capabilities. Remember that most F1 drivers started developing their skills on karts and worked their way to the top of the racing

world over many years. By delaying the acquisition of competition tires until you have advanced to an upper run group, you will save yourself money, speed up the development of your high performance driving skills and keep yourself safer.

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