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Tire(less) Pursuit

In its tireless effort to match driving pleasure with road safety, Porsche conducts rigorous tests to determine which tires are suitable for classic models.



Dieter Röscheisen is pushing it. On a wet track, he's driving the ruby Porsche 356 at its limits. At times, the 52-year-old sports car oversteers, swinging out with the rear axle; sometimes it "pushes" over the front axle. It's hard to control. Test-driver Röscheisen is far from satisfied: "Normally, the car drives much better ..."

In the test log, he writes, "The tire set on this vehicle is out of balance. A lot of steering corrections are necessary as the rear is much more agile. The loss of traction sometimes occurs much too abruptly. It does not conform to what we consider a well-functioning series production tire." The judgment, then, is as follows: Failed in wet-surface handling.

These tires will not be approved, notwithstanding their better performance in other categories. In dry conditions, they're perfectly drivable, with adequate safety reserves. But a tire for an over 50-year-old Porsche that works only when the roads are dry is a poor choice, in Röscheisen's opinion.

Porsche goes to great lengths to test tires for classic models and to create lists of approved tires on the basis of the results. Comparing fourteen new tire models on ten different classic Porsche models kept six employees busy for a good two weeks. Countless times they moved about 6.5 tons of material, changed tires 288 times for the various test-drives, and talked themselves blue in the face about what works and what doesn't. But they always kept cool heads and the cars on the tracks—tire testing does not include flying off the pavement. Not even on wet roads, with tires that are no good for the purpose.



Porsche 356 B Super 90, 2015, Porsche AG

Why all the trouble? Because some 70 percent of all Porsches ever built are still on the road, the company takes great care of its classic models. On the basis of the tire tests, Porsche Classic currently recommends 184 different summer tires for the model years 1949 to 2005, while another 126 recommendations for winter tires round out the list. The current selection can be downloaded from the Porsche Classic homepage at www.porsche.com/classic. The approved lists are updated every two years, in ongoing testing. The tire models recommended by Porsche bear the designation N on the sidewall, always in conjunction with a number (N0, N1, N2, etc.). For decades this seal of approval has stood for the special developments that the tire industry pursues for Porsche. The number after the N indicates the different approval series. For example, a tire was available in an earlier version, say with the dimensions 195/65 R15, for the Carrera model lines of the 1970s with the seal number N0. If a new series of the same tire of the same make and build is created as a spare part and approved, it receives the next higher sequential number.

At the age of five or so, a tire might not yet have reached the undrivable stage

Beyond handling, tire aging is also an issue; this factor was also assessed in the current test. Tires, after all, are not unlike bread and butter: if you store them for too long, they become much too hard. The effect is particularly pronounced when a car that's getting on in years is only seldom used, and sits in the garage much more than it is driven.

Owners who leave the same tires on the rims for years and do little more than check the tire pressure produce (entirely unintentionally) what are known in German as "wooden" tires. As time goes by, the rubber becomes brittle and gradually loses traction. At the age of five or so, a tire might not yet have reached the undrivable stage, but its capacity to provide the smooth ride that once distinguished it becomes increasingly compromised with advancing age.

A tire's age is revealed by the DOT number on its sidewall. The number ends with a four-digit number composed of the week and year of production. DOT 1302, for example, stands for week 13 in the year 2002. A tire thus marked has by now reached a practically biblical age. To illustrate the characteristics of aged tires, one such set was recently put through the paces in the latest round of tire tests.



Porsche classic cars, 2014, Porsche AG

After a decidedly squirrely drive with much sliding and swerving on the wet-handling test course, our tire expert Röscheisen rated the twelve-year-old tires rather critically: "In wet conditions they demonstrate very little traction, have poor braking performance as a result, and are therefore especially tricky to drive in cars without ABS due to the high locking tendency of the front wheels. In corners, they are slow to react. This leads to an uncomfortable degree of understeer, which is completely atypical for the standard setup of a Porsche. In the course of the corner, it does then somewhat suddenly establish traction, which in turn unsettles the rear.

"The driving behavior of a Porsche 930, for example, is thereby thoroughly turned on its head and, especially in wet conditions, requires a skillful hand to avoid a spin-out. It is difficult, indeed nearly impossible, to drive a clean line with pace." The sudden transition to oversteer described in the report is particularly hair-raising. Experts refer to a car demonstrating this behavior as being "loose," and it's enough to make many drivers of this classic car more than a little uncomfortable.

Some models have as many as five to seven recommendations

A completely different impression was left by a 185/70 x 15 tire for the Porsche 356 of the model years before 1963: "Even on the 356, with the narrowest 5.0 J x 15 rims, this set of tires makes a great impression. It demonstrates great traction and the balance is right on. The tendency to over- and understeer is minimal and the loss of grip is not too abrupt. Overall, the rear is somewhat more agile. The tires allow fast and precise driving and feel safe under all conditions. The tires have very great safety reserves and no notable weak points."

Never mind that the 356 B Super 90 from the Porsche Museum collection itself demonstrates more balanced driving characteristics with the new tires than it did when it was bought. Here, too, a Porsche is like a good wine: with expert handling, it gets better and better. There's no shortage of options: of more than three hundred approved tire models, some models have as many as five to seven recommendations depending on the rim size.

Simply mounting newly developed tires on the rims of the older models has proven problematic at Porsche. There have been cases in which the classic models have become all but uncontrollable when driving at the limits with randomly selected tires. For that reason alone, the tire industry's new developments for older cars are put to the test time and again. Remember: the N on the sidewall indicates that the tire has been tested and approved.

Treating tires right

Counteracting the aging process: Tires are best kept like old wine

The effect of tire aging can be slowed down by applying due care in the storage process—as with good wine: tires age more slowly in a dark location with low temperatures. The best move is to store your tires for upcoming pleasure jaunts in the cellar while your finely tuned Porsche is waiting in the garage on a pair of—perhaps well-worn—storage tires. Porsche Centers are happy to assist with the

tire-changing process.

There's no need to throw out old tires as long as they still have some tread-depth. Driver training at the Porsche Sport Driving School (www.porsche.com/sportdrivingschool) instructs drivers in proper handling—and also how to prevent flat spots in the tires of your sports car. They form when the Porsche sits too long in one place without very high tire pressure. With vehicles in storage, it is advisable to inflate the tires to the maximum permissible pressure, which is generally 4.5 bar. Tire cradles or tire blocks from the auto parts store can be put to good use here. These implements are concave supports, made of rubber, plastic, or wood, that are placed under the tires to prevent flat-spotting. The concave shape distributes the surface pressure across a much larger area and thus prevents the tire from becoming unusable.

Info

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