Should I buy Porsche tires with or without N - NA code?

Beitrag von „Albert Motorsport“ vom 26. Juni 2022, 13:31

dear all,

We are very often asked whether an #N - #NA #code is really necessary when buying #Porsche #tires.

Many customers want to save when buying tires and are therefore looking for cheaper alternatives, because after all, the use of tires without a Porsche N - NA identifier is also legally permitted by the EU, we hear that again and again.



Hence a fundamental question: what does the N code mean for Porsche #tires?

The N - identifiers: N0, N1, N2, N3, N4, N5, N6 and the following ... indicate the development status and the release of the ideal tire type for your Porsche model.



Together with the leading tire manufacturers, Porsche develops the ideal tire type for each individual Porsche model, so that the special #performance #requirements, tailored exactly to your Porsche type, are also met.

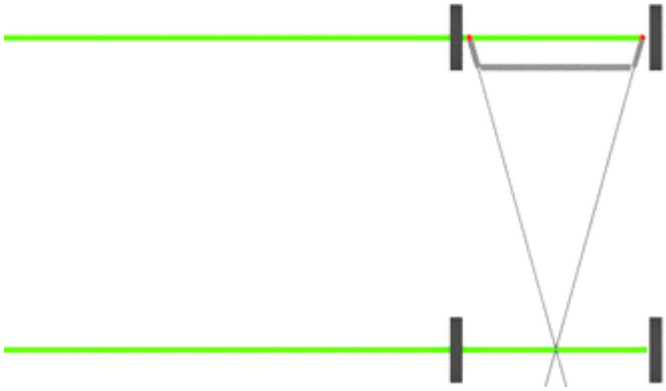
The N marking alone shows that the tires have been thoroughly tested and approved by Porsche. Because the N identifier stands for "Nürburgring", because testing of the N tires takes place on the Nordschleife of the Ring and this is documented on the Porsche tires with the letter N for Nürburgring.

Anyone who has ever attended a tire test by Porsche at the #Nürburgring knows that nothing is left to chance here. During development, the Porsche N tires are really tortured beyond all speeds and temperature ranges, so that in future you can rely on your Porsche N tires on all occasions.

Are other tires less safe, or why should I still buy Porsche N tires?

Yes, of course, many will think, there are similar safety requirements for other vehicles, because the many other manufacturers don't sleep on trees either and also want their customers to get from A to B safely ... but why should I still buy expensive N tires for Porsche?!?

The answer lies in the technical design of the Porsche front axle:



Almost all series vehicles have a steering system whose steering geometry works according to the Ackermann principle.

With the #Ackermann #steering #trapezoid, the INSIDE wheel describes a smaller turning circle than the OUTER wheel.

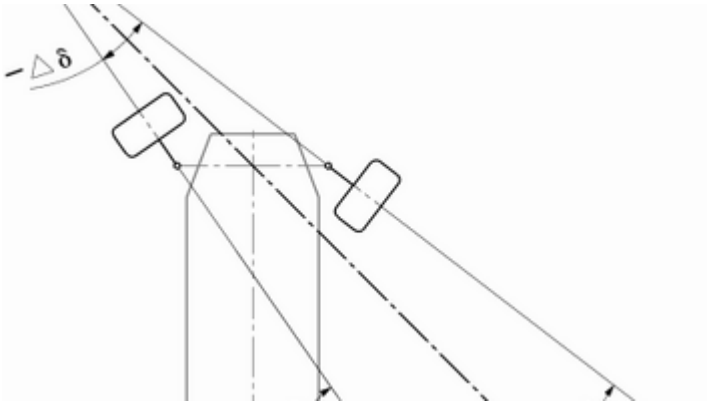
The wheel on the inside of the curve is therefore turned more strongly than the wheel on the outside of the curve. This different turning of the wheels enables the tires to roll in curves with as little friction as possible in normal series passenger cars.

This is realized by the #mechanical #specification in the #steering #trapezoid, which results as a geometric figure between the wheels, the steering column arm and the tie rods. Here on top of the moving picture by P. Balzer you can clearly see what happens to the wheels in curves with the steering trapeze according to Ackermann.

However, this is not desired with Porsche steering systems! But why not ?!?

In many Porsche vehicles, the opposite of Ackermann's steering is required in order to compensate for the uncertainties when cornering.

What uncertainties?



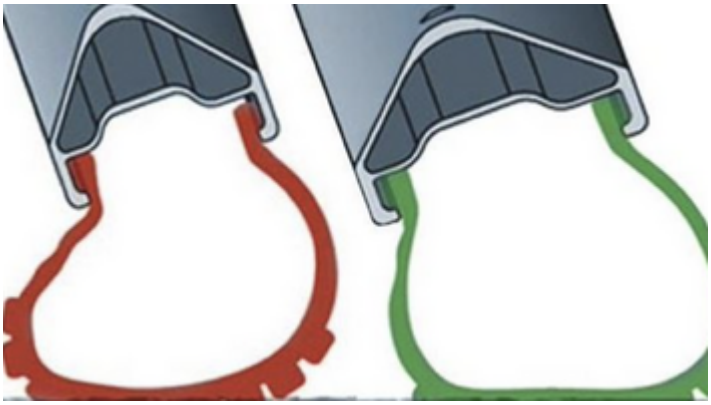
The Porsche 911, for example, has the main vehicle weight on the rear axle with the rear engine and the gearbox, which means that the Porsche 911 tends to oversteer when driving quickly through curves.

This oversteer, also known as tail skidding, is difficult or even impossible to control for inexperienced pilots and is therefore very dangerous!!

In order to compensate for the resulting dangers as much as possible and thus make drivability noticeably safer, the OUTER CURVES wheels of the Porsche 911 are steered more than the INSIDE CURVES wheels.

Yes, you read that correctly - the OUTER CURVES wheels turn more!

This is done so that the car pushes over the front wheels rather than throwing the rear out of the curve, which makes driving much safer.



This technical measure means that the narrower Porsche front wheels and tires are subjected to a noticeably greater load and the car is stimulated to understeer, thus provoking the vehicle to be pushed over the front wheels (understeering) in a targeted manner.

With this #provoked #understeer, NON-N tires tend to flex (bend on the rim) which can result in overuse, e.g. on circuits or in the mountains with many bends, as the tires burst.

In order to make our Porsche-N-NA tires suitable for this safety-related measure, stronger flanks are incorporated into the tires at the factory.

The flanks, as the outside edges are called on the right and left, are reinforced by targeted material storage of steel and cord or other material that strengthens the tires. As a result, the vehicles are safer and better on track and the tires do not flex as much as without reinforcements.

The respective vehicle-specific development statuses of these tire reinforcements are marked on the tires with the consecutive N - NA markings. The higher the N marking, the younger the development status of the Porsche N tires.

In earlier years the development statuses were

specified with: #N0, #N1, #N2, #N3, #N4, #N5, #N6 ... etc.



Nowadays, for example, the tires for the Porsche 992 are specified with the marking "NA", which indicates the following:

N - approved by Porsche, A - developed for the Porsche 992

Porsche tires with the N label differ from other tires provided with the #EU #label primarily in terms of geometry, the rubber compound and the test methods.

The test of the Porsche N - NA tires includes 3 core areas:

1. Subjective outdoor criteria, such as road holding and driving comfort

2. Objective outdoor criteria, such as braking behavior and durability

3. Indoor criteria, such as rolling resistance and high-speed behavior

In particular, the tire geometry and the rubber compound are tailored to Porsche vehicles during the development phase.

Whether all-season, summer, winter or sports tires:

Porsche tires with the N mark #ensure #excellent #driving #stability and the greatest possible, safe driving #pleasure.

They also ensure that your vehicle retains its original handling and safety margins even when new tires are fitted.

Unfortunately, this is not the case with tires with an EU label!

The scope of the new EU tire label makes the aforementioned Porsche developments completely "ad absurdum".

In my opinion, for purely economic reasons, this is being operated against proven and tested Porsche security.

The criteria specified in the EU tire label for information relating to the

Snow and ice grip are by no means a substitute for the Porsche N marking.

In my opinion, there is another disagreement with the criteria of the EU label, such that a tire with particularly low rolling resistance will always have significantly poorer grip, especially in the wet. Surprisingly, the EU label decision-makers accept this with such approval.

Porsche, however, doesn't compromise on safety with its N tires, and that's a good thing.

In its tire tests, Porsche rates adhesion – both on wet and dry roads – higher than fuel efficiency.

The savings potential of a tire with optimized rolling resistance may be tempting, but in an emergency situation, when you are suddenly approached by a wall or an abyss, every millimeter of braking distance saved counts 1,000 times more than a sip of fuel in the tank of your Porsche!

Dear friends:

"Only tires with the N mark can you be sure that you have a qualitatively

purchase high-quality tires specially developed for your Porsche model".

Therefore, I draw the following summary on the subject.

As nice as it may be to be able to save money when buying tires, in my opinion it is all the more short-sighted to simply throw the aforementioned safety aspects overboard ...

Yes, I admit it, I sometimes drive my Porsche fast, especially when cornering.

And NO, I don't want to leave it to chance whether I'll get home healthy with "cheap" tires.

Therefore: Stay healthy in the long run and only use tires with the N marking for your Porsche.

Warm greetings

Jürgen Albert

master mechanic

Images: Porsche, Ducati, Balzer, Wikipedia

Text: Juergen Albert