



PORSCHE

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New tyre approval lists published following extensive tests with classic Porsche models

Best grip thanks to modern tyres – even for classic Porsche cars

Stuttgart. Drivers of classic Porsche sports cars can now find the new lists with all tyres approved by Porsche for download on the Porsche Classic website. These tyre approval lists represent the results of extensive tests over several weeks carried out by the Porsche tyre experts this summer. They used classic Porsche sports cars and modern classics such as a 356, a 911 Carrera G model, a 911 Turbo (930) and a first generation Porsche Boxster (986) for these tests. Such tests take place on a regular basis to test and approve newly developed tyres for classic Porsche cars. The approval is also documented by the so-called N marking on the tyre flank.

Porsche is the only manufacturer that performs such an extensive service for older models, ranging from those 356 models that are over 50 years old, through all the 911 generations and the transaxle models 924/944/968 and 928, right up to the first Boxster (986). This is justifiable as around two thirds of all Porsche sports cars ever built are still driving more or less regularly on our roads.

With these tyre tests for classic sports cars, Porsche ensures that these older models also profit from the progress made in tyre development and can take advantage of the modern tyres that are tailored to meet their requirements. This benefits driving behaviour and driving safety with regards to grip on wet roads and shorter braking distances.

The latest lists with the new tyres added this year can be downloaded from the Internet using this link:

<http://www.porsche.com/germany/accessoriesandservices/classic/galleryanddownloads/downloads/>

Continue reading the following pages to find out how these tyre tests take place and what else need to be considered with respect to tyres for classic Porsche sports cars.

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Please note: Photographs of the tyre tests for classic cars are available for download to accredited journalists from the Porsche press database at the Web site: <https://presse.porsche.de>.

Porsche tests new tyres for sports cars up to 65 years old

As around two thirds of all Porsche models ever built are still in driving condition, Porsche takes a lot of effort to look after these older models. You can see this from the format that is used for the tyre approval for older models: Currently, there are 183 recommendations, just for the right summer tyres, for those models built between 1949 and 2005. Another 126 recommendations apply to winter tyres.

All these approvals are usually updated every two years through ongoing tests. The reason for all this effort is obvious: As the manufacturer, Porsche cannot abandon owners with regards to the right tyre types, because many owners are still lovingly taking care of and driving their Porsche models that reach back into the fifties and sixties. Independent tyre businesses, if faced with a 1963 Porsche 356 and tyre format 185/70 R 15, would for instance probably use those tyre types that are generally available for the remaining VW Beetle population and the various Transporter models.

However, special tyre approvals for new Porsche models already applied in the past, and these were practically always based on special development steps by the tyre manufacturer and specifically designed for Porsche. Selecting a new set of tyres for a 356 model on the basis of "only size matters" would therefore essentially be a mistake. The beautiful vintage car would not be radically unfit to drive in most cases, but the original skill of such a car for a safe road stance and playful handling would be pretty much left at the road side. Maybe not when dry, but fairly probably when the road was wet. Such incorrect choices are why Porsche has carried out the latest tyre tests.

Oldsters can be dashing too

To avoid dramatic errors, new tyre models are tested and processed for approval for all the older car models. The Porsche Museum and Porsche Classic are always delighted to open up their fleets and send the cars out onto the test track. In this way, robust test drives take place on the test grounds of Contidrom near Hanover using

those Porsche models that already have a few decades tucked under their elegantly designed bonnets. Porsche Classic adopts the recommendations of the tyre test specialists who, particularly in the case of Dieter Röscheisen, can look back over a few dozen years of tyre testing experience. He therefore stands on a level playing field with his classic format test cars and is usually just as fast when on the go.

Because tyre testing also means driving at the limit in a controlled manner. The disciplines of dry and wet handling are of paramount interest, while brake testing and aquaplaning tests round off the test program. The entire test program is aimed at precisely measuring how the tyres behave up to the limits. Every facet of behaviour, from the initial steering movement to the exit of the bend, is precisely analysed and logged for each set of tyres in the test. The car turning cleanly into the bend is just the first step towards approval. Well-controlled behaviour under high transverse acceleration is obligatory, and exiting bends must be mastered without any discontinuous loss of road adherence.

A harmonious performance is paramount

The tests always comprise several rounds on the test track, which is rich in curves, and precisely determined lap times are used for comparative purposes. A tyre must deliver performance at its limits in a predictable and balanced manner to obtain a good evaluation. The same applies understandably to the front and rear axles as this is only way to get good marks and the prospect of approval for the historic vehicle series.

The marking that turns tyres in a historically valuable dimension into Porsche tyres is therefore a type of quality seal: Those tyre models recommended by Porsche bear the mark "N" on the tyre flank, always in combination with a number (N0, N1, N2, etc.). This "N" has for decades been the hallmark for the special tyre designs developed for Porsche. Naturally, it would have been nice at the time to be able to select "P" or "Po" for Porsche. But the international development of the tyre standards led to N being chosen as the unmistakable mark for the selected approval

by Porsche and that is how it stands today. The experts all know, the "N" belongs to Porsche when it comes to tyres.

The corresponding number after the "N" is solely used to differentiate the approval series. Example: The first version of a tyre with the dimension 195/65 R 15 was approved with the mark N0 for the applicable Carrera series in the seventies. When a new series of the same tyre, manufacture and type is designed and approved for production as replacement parts, the tyre is assigned the next higher auxiliary number - in this case 1 - to differentiate it from the previous series.

Keyword tyre ageing

This particularly critical aspect was also tested during the latest test series in summer 2014. This effect mainly plays a role when a vehicle with a long history is only rarely driven and spends more time standing than driving. The tyres visibly become more brittle, the traction and level of grip decrease. The word "undriveable" may not apply directly if such a tyre is just over five years old. But the capability for a smooth driving style, which may have characterised it at one point, decreases steadily with increasing age in all cases. If you take a look at the so-called DOT number on the tyre flank, you can quickly determine how old the tyre actually is. The number accompanying the letters DOT is always a four digit number, specifying the production week and year of the tyre, i.e. 1302 for week 13 in year 2002.

During the 2014 test program, tyre-testing expert Dieter Röscheisen evaluated a twelve year old tyre as very critical, particularly regarding wet handling: "The tyre was tested on a 1988 930 Turbo. This twelve year old tyre offers very little traction, particularly when wet, with correspondingly weak braking performance and is therefore extremely tricky to drive, especially in vehicles without ABS, due to the high blocking tendency of the front wheels. It initially steers very sluggishly into curves. This leads to an uncomfortable understeer, which is atypical for the basic setup of the Porsche. At some point during the curve, it usually suddenly develops some traction which in turn makes the rear act uneasily. The driving behaviour of the standard

Porsche 930 is really affected by this and requires an expert hand, particularly in the wet, to prevent abrupt breakaways. It is difficult to impossible to drive quickly in a clean line."

A completely different tone is struck in the test evaluation results regarding a new 185/70 R 15 tyre for the 1963 Porsche 356. The original words on the evaluation sheet: "This set leaves a very good overall impression, even on the 356 with the smallest 5.0 J x 15 rims. A lot of grip is present and the balance is good. Over and understeering tendency is low and the grip breakaway is not too abrupt. This makes the rear a bit more agile overall. One can drive fast and precisely, with a very safe feeling at all times. The tyre offers a high safety reserve and has no particular weak points."

Just as an aside, this vintage Porsche, a 356 Super 90 model from the museum collection, is probably equipped with slightly better tyres today and drives with more balanced driving characteristics than when it was built 51 years ago in 1963.

Approximately 300 tyres to choose from

The afore-mentioned and other new tyre qualities of tested and approved designs and matches are listed in detail on the Porsche Classic homepage. There are approximately 300 approved summer and winter tyres available for Porsche sports cars built between 1949 and 2005. There maybe five to seven recommendations available for certain models, depending on the rim sizes.

This is because not every new tyre developed and matched with a current model was continued to be manufactured for decades after the period during which it was produced as original equipment. Some types were simply discontinued, others are modified due to new regulations regarding the rubber compound recipes. This is, for instance, the case if specific chemical compounds used in tyre production are changed when more modern components come onto the market offering better grip and, simultaneously, less rolling resistance. The tyre manufacturers cannot let such developments pass them by.

Simply mounting the tyres of subsequent evolutionary stages without testing onto rims of older vehicles has not been successful in practice. There have been cases within the broad field of historic vehicles where the car has become almost uncontrollable when driving at the limits after it had been equipped with unspecified tyres. Really disastrous driving behaviour is not necessarily the immediate result. However, in the majority of cases, significantly unbalanced behaviour during steering and handling resulted. A particularly negative problem is when a tyre performs poorly under wet conditions. Just like all other drivers, the driver of an older Porsche cannot choose the weather on the roads being travelled upon.

This is just one of the reasons why the new developments for older vehicles by the tyre industry are subjected to the Porsche test program. In numerous cases this leads to a cooperation in the further development of specific tyre types, often leading to highly commendable test evaluations for the various tyre types. The "N" mark on the flank unifies them all as tested and approved.

One of the manufacturer's tasks here is also to maintain a suitable stock: Tyres for models from the sixties and seventies are - due to the lack of demand - no longer manufactured in continuous mass production. Instead, a new series is produced from time to time when required. If suitably stored (cool and dark), the tyres only age slowly and slightly. This ensures that the quality is maintained, even after a few years. Porsche Classic only recommends those tyre types that performed well in the test procedures.

Preventing ageing: Store tyres like good wine

A tyre starts to lose suppleness and grip after about five years. It does not, of course, become abruptly undriveable, but starts to appreciably lose balance over subsequent years. However, the effects of ageing can be slowed down if storage is implemented with care – in a similar manner to good wine: Tyres age less rapidly if stored in the dark at lower temperatures. If you can afford it and have the necessary space to do

so, store a fresh set of tyres for your forthcoming pleasure tours in your cool cellar and park your vintage Porsche in the garage on a set of – maybe well worn – "standing tyres".

If you don't want to or cannot change the tyres so frequently, you should pay attention to the following tips. Because, if the vehicle stands for too long in one place without greatly increased tyre pressure, so-called "flat spots" occur. It is therefore common practice to raise the air pressure up to the maximum permissible pressure for the rims, which is usually 4.5 bar, when storing cars. So-called tyre shoes or tyre pillows, obtainable from accessory dealers, are also useful in this case. These are concave supports made of rubber, plastic or wood placed under the wheels so that the car is parked with all four wheels in the hollows. The concave form distributes the tyre contact area over a significantly larger area and prevents the tyre from becoming square during the standing time due to flat spots.

Porsche therefore ensures, through their regular tyre tests for Porsche classic cars and modern classics, that driving pleasure and driving safety are not diminished, even in older models.