

**MANN
FILTER**

10 myths about filters

MANN-FILTER reveals the truth



MANN-FILTER – Perfect parts. Perfect service.

Time for facts

The 10 most widespread myths about filters and what is actually behind them.

We don't know whether yetis or sea monsters have ever really existed. But we do know about filters. And quite a lot, in fact. For more than seventy years now, everything we have done has been based on fact, so we often wonder why some myths about air, oil, and cabin filters have managed to remain so deeply entrenched. We now want to dispel these myths once and

for all. Because some of them may not only cost you hard cash, but may even place you in a precarious situation. For example, there have been numerous breakdowns, engine damage and vehicle fires which could have been avoided had the right filters been used. MANN-FILTER will now clarify matters by listing the ten most common mistakes below.



MYTH NO. 1

The same paper is often used both in cheap filters and expensive ones – at the end of the day, there are only a handful of filter paper manufacturers worldwide.

Wrong! Consider the facts:

The number of filter material manufacturers is indeed small. But the origin of the paper tells you nothing about its quality – and nothing at all about the efficiency of the filter. There are so many other factors that have a significant effect on the quality of the filter media:

- impregnation of the filter media
- improvement through the use of activated carbon or nano fibers, for example
- type and quantity of the synthetic fiber added to the paper pulp
- composition of the synthetic raw materials used in production
- drying time and temperature
- production processing (pleating, curing using heat)

Whatever the application, MANN-FILTER selects the right medium for the job from the wide range available. Comparable competitors often use only a few standard media.



MANN-FILTER – the end justifies the media

MANN-FILTER develops special high performance filter media which combine all the necessary properties. Manufacturers of cheap filters, however, only use the simplest filter media.

But even if they could use the same media, there would still be an enormous difference in terms of processing. Black rubber alone does not make a good tyre.



It depends on the application

Whether we are talking about a carton, handkerchief or sand paper – a factory supplies paper for the widest possible range of applications and types of totally different quality. So if a supplier of cheap filters sources his filter paper from the same manufacturer as MANN-FILTER, this does not mean that he also uses material of the same quality.

Brief and to the point: Sometimes, cheap products contain filter papers which would be about as suitable as sand paper for wiping your nose – you just end up with a bloody nose.



MYTH NO. 2

„Filters produced by low-cost manufacturers are less expensive and are almost as good as MANN-FILTER filters.“

Wrong! Consider the facts:

Low cost is not good, because expensive raw materials are the main driving force behind the price. And without good material, nobody in the world can make an efficient filter – however much he earns..

These are precisely the ways in which MANN-FILTER differs from less specialised manufacturers:

- standardised processes
- well-trained specialist staff
- high-quality raw materials and filter components
- optimum level of automation



MANN-FILTER – Quality in series

Standardised production processes and production technology lead to high product quality and help keep production costs competitive. Therefore, it is only possible to make a filter that costs less than a MANN-FILTER if lower

grade materials and obsolete technologies are used.

And these are precisely the methods used by many manufacturers that dump various filter brands onto the market in the low price band.

It's the technology that counts!



16 filters per second



Every year over half a billion filters are produced in our plants around the world - that makes more than 16 filters per second!

Brief and to the point: For MANN-FILTER, the same excellent production standard applies worldwide. In conjunction with the latest production technology, this standard provides the perfect basis for products in original equipment quality – something MANN-FILTER takes for granted.

MYTH NO. 3

MANN-FILTER filters are produced with the same technology as cheap filters. Cheap filters mainly cost less because they are not so widely advertised.

Wrong! Consider the facts:

Even if it were assumed that only the paper was pleated and that the other components were thrown together in some way or other, this statement would contain an ounce of truth at the most. But there are vast differences in filter production. The key features of an OE-quality MANN-FILTER filter are:

- highest development competence through many years of partnership with vehicle manufacturers
- production technologies certified according to the latest standards
- high quality materials optimally adapted to the application
- latest test methods according to OE specification and international test standards
- continuous quality control throughout the entire production process



MANN-FILTER – no compromises

The quality brand MANN-FILTER constantly invests in the continuous further development of test standards and production processes. This investment pays off and represents the essential difference compared with cheap products. MANN-FILTER offers the best quality and optimum protection for you and your customers. And this has nothing to do with the advertising budget.



Nothing comes from nothing

Anyone who believes that two products are equally good just because they are based on similar technology is sure to have made many mistakes in life. Whatever the area of industry, there is usually a world of difference between low-cost and high class producers, even if they share the same basic operating principle. For example, no one would expect a simple disposable razor to challenge a top-quality brand blade. The latter will not only last longer, but will also provide a smoother, closer shave.

Brief and to the point: Advertising isn't everything. Even a large PR budget cannot turn a low-cost disposable razor into a super-sharp blade that offers the perfect shave. If you penny-pinch, you shouldn't be too surprised if the end results have a sting in the tail ...



MYTH NO. 4

Unlike with oil filters, the quality of air filters is not an issue – they are more or less all the same and are not as important for the running of the car. You can opt for the bottom price range without any problem.

Wrong! Consider the facts:

Oil filters are usually highlighted and attract attention. However, the importance of the air filter has increased enormously in modern vehicles. Reasons why you shouldn't skimp on this:

- modern engines are becoming increasingly efficient and are therefore making ever higher demands on air filters
- with the increase in the air volume passing through the filter, both the load on the air filter and its importance have risen proportionately
- an efficient air filter is the basis for optimum fuel combustion
- if water enters the air filter housing (as a result of heavy rain, for example), the correct function of simple air filters can no longer be guaranteed, which leads to a drop in engine power
- a flame-retardant impregnation protects both engine and occupants

Air filter medium after water ingress:



MANN-FILTER protects your components

The technologies and materials that are used in internal combustion engine blocks have become much more sensitive. If low efficiency air filters are used, the hard surface coating of the cylinder block will be attacked by particles that have not been removed and an active wear process begins. With modern engines,

there is then only one solution – replace the original block with a new one. High quality air filters from MANN-FILTER will protect your valuable engine permanently.



The risk is out of all proportion to the price

Sometimes, quality simply costs a bit more. However, the price of a new air filter from MANN-FILTER is nothing compared to the cost of a new engine block, which can soon run to several thousand euros. And even the replacement of a clogged air flow meter will cost several times the price of a high quality air filter.

Brief and to the point: Anybody making false economies ends up paying more in the end. Nobody can recover the cost of a new engine block by buying cheap filters.

MYTH NO. 5

**If I do not keep my car for very long,
I do not need to buy MANN-FILTER air filters,
which are much more expensive than
comparable cheap products.**

Wrong! Consider the facts:

Costs and risks arise at all times for both driver and vehicle, even if the latter is only kept for a short time. Reasons why you should avoid cheap filters – even if you want to sell your car in the near future:

- cheap air filters can damage the air mass flow meter sensor, which can soon lead to faulty injection behaviour, considerable loss of power and higher exhaust emissions
- cheaper materials can cause leaking due to brittleness and poor fit. Possible consequence: incorrect messages to the on-board electronics, which often cause considerable damage – and costs
- the absence of flame-retardant is dangerous: The ember of a cigarette in contact with the filter medium could cause a fire

Filter medium in the DIN test for flame-retardant materials:



MANN-FILTER – never short-sighted

However long you use your car: MANN-FILTER air filters will protect your engine, your car – and you. They provide the basis for a perfect fuel-air mixture and a sound, efficient engine. Through the flame-retardant impregnation, MANN-FILTER air filters reduce fire danger

in the engine compartment. Minor savings achieved by using cheap products, however, can lead to massive damage and high costs.



Never economise on safety

Imagine you had to change your airbag regularly. Would you then opt for a cheap model of lower quality and hope that nothing happens? Certainly not.

Brief and to the point: Even if you do not keep your car for long, you still have to play safe and not take unnecessary risks.



MYTH NO. 6

Air filters do not necessarily have to be changed at each vehicle inspection. It is enough to clean them or blow them through with compressed air to restore their function.

Wrong! Consider the facts:

Permanent temperature loading of 80 degrees and temperature peaks of more than 100 degrees can occur at the filter element during vehicle use. Even materials of the highest quality will therefore age and suffer fatigue. Also, any attempt to clean an air filter can have very detrimental effects:

- mechanical stress during the cleaning process can lead to rupture of the pleats – which means the end of the filtration effect
- the high cleaning air pressure may destroy the structure of the filter paper, so that the dust holding capacity is reduced
- dirt particles can enter the engine through broken pleats and damaged structures
- the reduced holding capacity in turn reduces the service life

Pleating and structure of an air filter with a non-woven fabric:



MANN-FILTER – simply the best in the long run

MANN-FILTER air filters use the very latest filter media, which achieve much higher separation efficiencies than many comparable products on the market. So

you can be certain that even the most modern engines have the best protection at all times. Through special processing, a long service life can be achieved and service intervals greatly extended, even under harsh environmental conditions.



Little better than cold coffee

Cleaning processes of this kind will clog any filter and make it unusable, because they can destroy the filter medium. It would be the same if you were to remove a used coffee filter from the machine, tip out the contents and, after rinsing vigorously with water, expect to make good quality coffee using the old filter. Because of the inevitable stress on the filter, you would probably be in for a nasty surprise – should the paper tear.

Brief and to the point: Cleaning an air filter or blowing it through with compressed air may make it look cleaner, but the quality is by no means high.



MYTH NO. 7

Instead of buying a new cabin filter, all you need to do is brush the old one until it is clean.

Wrong! Consider the facts:

If you take water and brush to a cabin filter, it will look cleaner, but the tiny particles, such as pollen, fungus or mould spores cannot simply be brushed away. The cleaning process may in fact loosen them so that they enter the passenger compartment next time the ventilation system is operated. Other problems also often occur:

- misting of the windows (icing in winter), because residual moisture from washing the filter can enter the passenger compartment
- recurring misting of the windows in damp weather, because particles retained in the filter material do not allow the fresh air to pass through freely
- reduced cooling effect, because residual dirt particles can block the air flow from the air conditioning system into the passenger compartment
- pollen, dust and dirt particles can no longer be retained, because the electrostatic charge of the filter has been lost due to washing

Focus on cabin filters:



Bacterial culture from the non-woven fabric of a new cabin filter



Bacterial culture from the non-woven fabric of a cleaned cabin filter

MANN-FILTER – doorman for the vehicle cabin

High-quality cabin filters from MANN-FILTER separate almost 100% of particles less than 0.5 micrometers in diameter as they are electrostatically charged and contain special

multi-layered filter media. They must consist of purely synthetic materials, so that moisture can be absorbed.



Not even a stain remover will help here

Would anyone think that after a quick clean with sponge and brush, an old mattress will give as good a service for the next ten years as a new one? Hardly! It might freshen it up a little, but not make much progress with regard to hygiene and function.

Brief and to the point: You should not experiment with your health. And your active driving safety also makes it worthwhile to replace the cabin filter regularly once a year or every 15,000 km.



MYTH NO. 8

**Provided that size and thread match,
oil filters are interchangeable.
Therefore, you do not have to go
to the effort of buying a filter with
corresponding part number.**

Wrong! Consider the facts:

Even if the dimensions of a filter are right, it does not mean it is a good choice. From the outside, the black can may make you feel confident about what you are buying, but only a high quality oil filter offers optimum protection. MANN-FILTER offers the best filter for practically every car or van model. It's what's inside that counts:

- the filter material must be suitable for the engine and application
- only the right filter that matches the application perfectly is able to retain separated dirt particles until the next change is due
- depending on the type of engine, a filter needs a certain number of valves for optimum protection against engine wear. And not only is the number of valves important, but also the correct design values, such as the opening and closing pressure of a valve, for example
- thanks to the robust construction of the threaded cap, reliable seals and a pressure-resistant, corrosion-protected housing, MANN-FILTER filters offer optimum stability and leak-tightness

It's what's inside: the inner life of a quality oil filter and a cheap product



MANN-FILTER – always just right

We take it for granted that MANN-FILTER products meet the demanding specifications of automotive manufacturers – but this is by no means generally the case on the aftermarket. At MANN-FILTER, you will not only find the right size, but also the right solution for every engine

and machine type and also for practically every application. MANN-FILTER does not offer run-of-the-mill products.

**Top
inside as
well!**



It's what's inside that counts

It's the same with filters as with tablets: their size tells you nothing at all about their effect – it's what's inside that counts. With a filter, it is a question of the correct functioning of the components, such as the filter medium, for example, and this is not visible from outside. What the filter does is only revealed when it is in use.

Brief and to the point: It's what's inside that counts

**"Would you buy any tablets just because
the box looks the same?"**



...or

**does it depend
on the contents?**



MYTH NO. 9

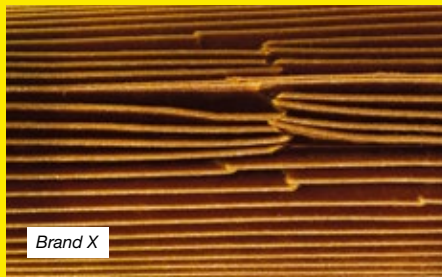
If you take a cheaper filter and replace it twice as frequently, the effect is the same as using an expensive filter.

Wrong! Consider the facts:

If you believe that in the short-term, a cheap filter works just as well as an expensive one, then unfortunately we have to disappoint you. Because it never gives the same result – not for an instant. And to cap it all, a cheap filter conceals a whole series of risks:

- possible leaks: e.g. at the filter medium or by-pass valve
- lower separation efficiency
- uncertainty regarding durability
- use of incompatible materials in the vehicle – e.g. embrittlement of cellulose media through aggressive oil constituents

Comparison of used oil filter elements:



MANN-FILTER saves money, time – and nerves

'It's what's inside that counts' – that should already be clear from Myth no. 8. Only a high quality filter really protects the engine right from the start. By using a MANN-FILTER quality filter, you can even save money – let alone time

and your nerves. Why should you compromise on reliability, protection and performance and even pay more at the end of the day?



Just do the maths to find out

Have you ever estimated the total cost of a filter change? The emphasis here is on "total", because this is not done when the filter is purchased. As well as the material itself, you can also expect additional costs, such as the oil costs when the oil filter is changed – not to mention the expense of any replacement vehicle and the loss of your time

Brief and to the point: In spite of all the facts, you could of course also bridge the service interval with two cheap products. However, when costing the exercise, you should not only consider the price of the filter, but also twice the cost of changing it. It's safe to assume that a MANN-FILTER quality filter works out better in the end?



MYTH NO. 10

The quicker the oil pressure light goes out again after changing the filter, the better the filter.

Wrong! Consider the facts:

Usually, there is only one reason why the oil pressure light comes on briefly and then goes out again: when, after changing, the filter is empty for a moment. But you can confidently leave the stopwatch where it is, because the time taken says nothing at all about filter quality. The delay can be dangerous if the warning light no longer goes out – because then the oil pressure is too low. Apart from a low oil level or a defective oil pump, the problem may also be caused by the filter:

- the flow resistance is too high because an incorrect or low quality filter has been used
- the filter is full because the change interval has been exceeded



MANN-FILTER – always on the safe side

With quality products from MANN-FILTER, you can be sure that your filter is not at fault if the oil pressure light comes on. Because they conform to OE specifications and therefore guarantee optimum function at all times. Also, quality filters from MANN-FILTER have an accurately functioning bypass valve, which is adapted to the engine and always opens

and closes at the right time. Bypass valves used in cheap filters, however, are often badly made, or are even permanently open and therefore do not offer any comparable filtration performance. And unfortunately, no warning light will tell you that.



Not a question of time

If you install an oil filter without a filter element, the oil pressure light goes out immediately – because the oil flow then has the least resistance; however, it is of course not filtered either. That says it all. If after being switched on, a smartphone is powered up extremely quickly, you cannot conclude from this that you can make calls particularly well with it.

Brief and to the point: Therefore, the time before the warning light goes out does not lead to any conclusions about the quality of the filter used.





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