

All Oil Filters Are Not Created Equal: It's What's Inside That Counts

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BROADVIEW, IL, February 12, 2010 – When it comes to selecting a filter for your car, it's hard to tell just by looking at it whether the filter you choose is up to the job. Filters are small-dollar products that can cause high-dollar consequences, so it's important that you choose wisely, whether it's an oil, engine air, cabin air, fuel or transmission filter you're dealing with.

Technology Drives Quality

"The quality of a filter really depends on the technology behind it," explained Todd Vick, Engineering Manager, Aftermarket Products for Purolator – the company that invented the very first oil filter in 1923 and the first spin-on oil filter, in 1955. "Filtration is all about capturing and holding debris and contaminants that could otherwise cause gradual wear or even catastrophic failure of your engine or transmission," Vick said.

According to Vick, "When choosing a replacement filter, most people think first about the filtering medium, and that's a good idea. There's a great deal of science that goes into the development and manufacturing of filtering media, and the media used in oil filters is not at all suitable for engine air filters or fuel filters. Each type of filter requires a unique media in order to function properly."

Filter Efficiency And Capacity

Take oil filters as an example. “The filtering media must be fine enough to capture and hold even the tiny particles that can cause engine damage without restricting the free flow of oil to critical internal engine components,” said Vick. “Our decades of experience allow us to strike the perfect balance of maximum filtration with minimum restriction. So, for instance, the media in our Purolator PureOne premium oil filter is able to capture 99.9% of particles that are smaller than a thousandths of an inch. And our Purolator Classic oil filter can capture 97.5% of those same tiny particles. This ability to capture particles is known in the industry as ‘efficiency.’”

The capacity of the filtering media (the ability to hold particles) is equally important, continued Vick, “so motorists should insist on a filter with the greatest capacity to hold particulates without compromising filtration.”

Other design features that help elevate quality filters above lesser designs, include the thickness of an oil filter’s housing and end caps. For example, starting an engine in very cold weather when using thick engine oil can cause a brief but dramatic spike in oil pressure that, in some circumstances, may be enough to actually burst the housing.

Likewise, the use of thicker end plates and more reliable crimping procedures during the manufacturing process will yield an oil filter that is much more reliable, said Vick.

Role of Internal Valves

Quality oil filters incorporate two types of internal valving when specified by the original equipment (OE) design engineers. The anti-drainback valve keeps oil from draining back into the oil pan after engine shut-down, which can cause a potentially damaging dry start-up the next time the engine is fired up. The other internal valve found in better oil filters is a bypass valve, which allows

unfiltered oil to flow to critical internal engine parts if the filter itself becomes blocked, either by debris or, in the case of poorly made filters, disintegration of the filtering media. Either way, a bypass valve will assure that the engine receives an adequate supply of unfiltered oil. And, while unfiltered oil is not good for an engine, it is certainly better than no oil at all. So the incorporation of a reliable bypass valve is essential, especially in vehicles that experience longer-than-specified oil change intervals.

Effect of Extended-Life Oil Blends

Speaking of longer-than-specified oil change intervals, what about so-called “extended-life” oil blends, including synthetic oils, that claim you can go as long as 25,000 miles between oil changes? Purolator’s Vick has strong feelings on this subject. Surely the chemistry of engine oils is far better in most ways than it used to be. And synthetics certainly offer benefits in terms of lubricity and protection.

“However,” said Vick, “No matter how good the oil, chemistry cannot remove particulates and even liquid contaminants like raw fuel and condensed moisture that can collect in engine oil over time. Only draining the oil can remove such materials. Further,” continues Vick, “the high cost of fuel coupled with tough economic times have combined to motivate motorists to take fewer and shorter trips. The result is that engines don’t run hot enough long enough to burn off these potentially-damaging dilutants. So,” concluded Vick, “give your engine the best possible protection and life expectancy by changing your oil at the car maker’s recommended intervals, with high-quality oil and filter that meet and even exceed the manufacturer’s specifications. And don’t forget that oil change intervals are specified by time as well as mileage.”

Similar considerations relate to your selection of engine air filters and even cabin air filters, which many car owners aren’t even aware of. Clean air for your engine is almost as important as clean air for you, your family and your friends

who share the air in your car. And, as with oil filters, design and construction features can greatly affect the effectiveness of these important filters. Vick explains that the design of the filtering media, along with sophisticated assembly processes, assure optimal efficiency and capacity, for a happier and healthier you and your engine.

About Purolator

Purolator manufactures and supplies high quality automotive filters to the North American aftermarket and original equipment manufacturers. Inventor of the automotive oil filter in 1923, Purolator has, since then, pioneered more than 40 'firsts' in the filtration industry. In fact, the first automotive oil filter was called a 'Purolator,' short for 'pure oil later.' Currently, the Purolator brand has more than 2,000 part numbers for automotive, light truck and heavy-duty applications. With its new expanded line of filters for heavy duty vehicles, Purolator now offers a comprehensive line of such filters to the aftermarket. Part of the Bosch umbrella of automotive aftermarket products within NAFTA, Purolator's advanced aftermarket filters include:

- PureONE and Purolator Classic oil filters
- PureONE and Purolator Classic air filters
- BreatheEasy cabin air filters
- The 'forgotten filters,' including transmission filters, fuel filters, breathers and PCV valves.
- Heavy duty filters including oil, air, fuel, transmission, coolant, hydraulic fluid filters, fuel/water separators, cabin air filters and air dryers.

To learn more about Purolator filters and the filtration category, please visit www.purolatorautofilters.net.