

## Oil Filter ‘Capacity’: It’s Not Just About How Much Oil It Will Hold

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**BROADVIEW, IL, March 15, 2010** – It would be easy to think of oil filter 'capacity' as the amount of extra oil you need to add when changing both your oil and your oil filter. But, in industry terminology, that's not the true meaning.

“The real intention,” says Ramon Nuñez, Director of Filtration for Robert Bosch LLC, joint venture owner of Purolator Filters, “is to describe the amount of debris an oil filter can hold before it becomes obstructed and causes the filter’s bypass valve to open. When this happens, the filter allows unfiltered oil to reach critical internal engine components, which is better than no oil at all, but not much.”

When choosing a replacement oil filter one should be certain that the filter has sufficient capacity to capture and hold all the debris it’s likely to encounter during its service life, explains Nuñez.

The longer an engine oil filter is in service, the more debris it will hold. And, eventually, the filter can become completely obstructed, causing the bypass valve to open and, as described above, direct unfiltered oil to the crankshaft, engine bearings, and other precision components. The result can be catastrophic.

So how much debris *should* an oil filter be able to hold, and where does it come from, anyway? “To answer the second question first,” says Nuñez, there are a number of potential sources of particulates inside an engine. Casting flash can break off of the inside of the engine block, or even the crankshaft, connecting rods, and even off of the pistons and valve train components.”

“Sources of non-metallic debris include dust and dirt, pieces of gasket material that may become dislodged over time, pieces of disintegrating valve stems seals, and even bits of hardened carbon that can build up on, and then break off of, valve train parts and other oil-wetted internal parts that are subjected to high temperatures that can bake oil into hard carbon deposits,” added Nuñez.

All of this can add up to substantial amounts of debris that can build up over the thousands of miles that elapse between oil changes, making it essential that one choose and install an oil filter with substantial capacity.

How substantial? Consider this: a Purolator PureONE PL30001 premium oil filter will capture and safely hold up to 13 grams of debris before directing the bypass valve to open. And how much is 13 grams? That’s the equivalent of 31 standard size paper clips – a huge volume of debris by anyone’s standards.

Sure, there are other features to consider when choosing an oil filter. 'Efficiency' is one such. Efficiency is a measure of the percentage of particles of a given size a filter is able to capture. For example, a Purolator Classic oil filter, on average, can capture 97.5 percent of particles larger than a thousandths of an inch in diameter. And a Purolator Premium PureONE oil filter captures, on average, 99.9 percent of these same filters. So, both types of Purolator oil filters are able to remove most particles very efficiently.

“And so,” says Nuñez, “select an oil filter that you can be confident will safely remove all the debris it might meet inside the engine, while maintaining its ability to continue providing properly filtered oil where it’s most needed – between highly-stressed moving parts in the heart of the engine.”

*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](http://www.purolatorautofilters.net).*

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