

Filtering For Power

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It's a known fact that certain components inside an engine will wear and shed material. This can be especially true when it comes to a new engine in those first couple of minutes of start-up. For reasons such as that, an oil filter is a necessity to catch those particles before they recirculate throughout the engine. Your choice of a filter can then mean life or death for one of your prized possessions.

Mark Mittel of System 1 Filters said, "With typical throw away paper filters, you never see what is going on inside the filter or motor, short of cutting the filter apart which can sometimes be troublesome as well as a filthy affair. Our System 1 filter allows you to disassemble the filter easily and see just what is being trapped inside. This allows you to fix any concerns before it becomes a major problem."

Likewise, the same holds true in fuel systems. Today's electronic fuel injection systems utilize injectors which can have extremely small orifices for the fuel to pass through. Fuel pumps and the like also have tighter clearances than ever before. The least little particle of dirt can cause all sorts of havoc.

Mittel said, "In a filter, oil or fuel will always take the path of least resistance. Paper filters have highs and low spots throughout the pleats of the filter. This means that should there be a low spot in the paper, that's where the majority of the oil or fuel will flow. Our filters are uniform throughout which offers excellent filtration and flow capabilities."

When compared to a typical paper filter element, System 1's stainless woven wire cloth elements offer 360-degrees of filtration.

"Paper filters can also offer a certain amount of pressure loss," Mittel added, "sometimes as much as six to eight psi. Because of the design of our stainless wire element, you'll see only about one psi of pressure loss," Mittel added.

When it comes to filtration, it's all about micron size. Microns are a measurement of opening size. The smaller the number, the more filtration capabilities. This is not to mean that you should merely request the smallest micron filter you can, as the smaller number can also indicate some sort of flow restriction. However, having the correct filter for your application is essential. System 1 offers filters from 30- to 75-microns.

Mittel said, "As an example of this, we offer a 75-micron element for use with heavyweight oil. Lighter, multi-viscosity oils can use a smaller micron opening."

Can a better filter help to increase horsepower? Mittel says the possibilities exist. "It does make sense because we are about six times less restrictive than the paper style filters, so the pump doesn't have to work as hard pushing oil thru the filter, so yes it could make more power but it is something that we don't advertise as such."

What makes the System 1 filters different is the fact they are a cleanable, re-useable type filter. Designed to be taken apart endlessly, their units can be cleaned and reused over and over again. Each one has excellent particle retention and the best flow capabilities in the industry.

As far as maintenance is concerned, taking apart and inspecting your oil filter at each oil change interval is a smart move.

Mittel says, "One of the best kept secrets is using the filter as a tool. It's the best tool to get a look at what is going on inside an engine. If you're having a bearing, gear or other problem, it will show up in the filter first. Having a filter you can take apart and inspect is your best bet to eliminate future problems."

Fuel filter maintenance is another thing altogether, Most fuel filters will only see maintenance when a problem exists. But it's best to get ahead of the curve and inspect the filter on a regular basis, especially where methanol fuel is used. Methanol filters require more service than gasoline due to the corrosive nature of the product. In the case of a stainless element, the corrosion can start to become restrictive.

"In the case of a methanol application," Mittel says, "we recommend never to let your fuel system set for a very long period of time. Blowing out the fuel lines and/or running a small amount of gasoline throughout will flush the system and keep it in tip-top shape."

Filters; probably the best kept secret in regards to a tool. It might be the best tool you'll ever own.

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