Frequently Asked Filter Questions

E4OD, 4R100

PART NUMBER **36423-BPF**

PATENT PENDING

- **Why is a supplemental filter needed, isn't that the job of the OEM sump filter?**

  OEM sump filters have a tough job keeping fluid clean while flowing great volumes of oil that is very thick when cold. These contradictory requirements may work OK with new vehicles, but our tests have shown that especially after overhaul, alarming amounts of fluid contamination circulate through the transmission. Sump filters just aren't effective at cleaning the fluid as needed.

- **If contamination levels are greater after overhaul, how often must the filter be changed?**

  The greatest benefit of this filter is to remove left over contaminants from prior failures that settle in impossible to clean areas in hard parts, the converter and cooler as well as to collect break-in material. If the filter becomes restricted by contaminants, it has done its primary job. Periodic replacement is not mandatory. If replacement is desired, it can be done when the sump filter is serviced.

- **How is this filter different than currently available cooler line filters?**

  This filter installs inside the transmission and removes far more contaminants than common cooler line filters. This internal filter eliminates the problem of improper installation associated with external filters (or of not being installed if you ship units to other shops). The pleated type element in common cooler line filters is about .020" thick, whereas the Sonnax filter has hundreds of layers of "radially wound" media creating a .625" thick trap that is highly efficient at removing contamination from hydraulic fluid.

- **Does this filter have an internal bypass?**

  No, the Sonnax High Efficiency Internal filter uses a "bypass/kidney loop" configuration rather than an internal "bypass/relief valve". With filters, the word "bypass" can have two different meanings. One indicates a separate system that filters a portion of oil and returns it to the sump. This is common in hydraulic systems when clean fluid is required. "Bypass" also refers to an internal by-pass or pressure relief valve that allows fluid flow if a filter becomes restricted. This method is needed when a filter is in-series with a functional oil circuit and in some variations always allows some unfiltered fluid to flow straight through. Typical aftermarket, external cooler line filters are like this.

- **Where does the oil that feeds the filter come from? Is it taking oil away from somewhere else?**

  The oil that feeds this filter comes from the solenoid feed circuit, a un-orificed circuit that regulates at a preset pressure. "Un-orificed" means the amount of oil volume available is not limited as with other circuits fed through an orifice. The solenoid regulator valve maintains consistent circuit pressure regardless of whether the solenoids are on or off. Ultimately the pump is the oil source feeding this filter.

- **How much oil flows through the filter?**

  The filter is fed through a passage, tapped by the rebuilder, that allows only a slight amount of oil to flow through. It takes approximately 20 minutes to filter an amount equivalent to the E4OD/4R100 fluid capacity.

- **How is it possible to clean all the fluid through a small feed orifice?**

  Surprisingly, particles as large as .003" (75 micron) and larger circulate freely throughout the transmission and the sump filter as well! Even particles of this relatively large size are small compared to the feed orifice. For example, a .003" (75 micron) particle in the feed orifice is comparable to a person next to a 5-story building. The difference with the Sonnax filter is these particles flow in but NOT out.

- **Can I use this filter in other applications?**

  No. This kit is specially configured and calibrated for the E4OD/4R100. We will be developing other applications soon. Let us know which applications you are interested in.

For More Information

Attend the Presentation on Filtration Thursday, October 30th at Trans Expo!

Presented by Gregg Nader of Sonnax

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