

# WHY AM I EXPERIENCING SLOW FLOW?



We design our filters to prevent contamination from moving downstream and harming your equipment, vehicles, etc. As a filter moves through its useful life, it is normal to experience reduced flow over time. However, when slow flow occurs more frequently than you expect or desire, it is important to determine what the issue is so that you can correct it. We've provided the information below to help you assess what may be going on with your system when slow flow occurs.

- ▶ If you're using our Cellulose or Microglass filters (or any other particulate-only filter), refer to the left column below.
- ▶ If you're using our Hydrosorb, Hydroglass, or Multi-Fuel filters (or any other water detecting filter), you could have particulate contaminant **or** water-based contaminant. Please review both columns below.

## **PARTICULATE CONTAMINATION**

Rust, dirt, microbial growth, etc.; usually introduced slowly, causing a gradual reduction in flow rate

### **DETERMINING IF YOU HAVE IT**

Use a Tank Sampler Kit to obtain a sample from the tank (keep in mind that this method only tests a section of the tank)

If you still don't know what is causing slow flow after using a Tank Sampler Kit, safely remove the outer shell and end plate of the filter in order to evaluate the filter element itself

Note: Be very cautious while dissecting the filter to avoid causing a fire or other dangerous situation

### **WHAT IT LOOKS LIKE INSIDE THE FILTER**

Marked discoloration of the filter media

It may be obvious that there is a lot of "stuff" on the outside of the filter media

You may also note an hourglass shape to the filter pleats—this deformation of the pleats is an indicator of high differential pressure which results in slow flow

## **WATER CONTAMINATION**

Usually appears suddenly, causing an abrupt reduction in flow rate

### **DETERMINING IF YOU HAVE IT**

Use a water finding paste and "stick the tank" and/or use a Tank Sampler Kit to obtain a sample from the tank (keep in mind that these methods only test a section of the tank)

If you still don't know what is causing slow flow after using water finding paste and/or a Tank Sampler Kit, safely remove the outer shell and end plate of the filter in order to evaluate the filter element itself

Note: Be very cautious while dissecting the filter to avoid causing a fire or other dangerous situation

### **WHAT IT LOOKS LIKE INSIDE THE FILTER**

Filter media will likely be severely swollen if water is present

If you aren't sure whether the media is swollen, locate the water detecting section of the filter element

- » In Hydrosorb and Hydroglass filters, the water detecting section is within the pleated filter media itself
- » In Multi-Fuel filters, the water and phase separation detecting section is behind the pleated filter media

Smear an appropriate water finding paste on the media's water detecting section to determine if water is present

Knowing whether you have excessive particulate or water-based contamination, if not both, is always the first step in addressing the issues that are causing slow flow and excessive filter changes. We hope this information helps you effectively assess your system so that you can take the necessary steps to ensure clean fuel.