# EXTEND THE LIFE OF YOUR OIL AND ENGINE WITH A FRANTZ BYPASS FILTER KIT



The stock (OEM) oil filter on any car or truck will catch damaging particles anywhere from 15-20 microns, which are actually pretty small. For a size reference, the average human hair is about 72 microns in diameter, so 20 microns equals roughly .0008 inches. Pretty small right? But we can do better.

Engine bearings and cylinder walls will still be adversely affected by particles as small as 2-5 microns. This isn't large enough debris that will spin a bearing or anything like that, but over the course of a couple hundred thousand miles, it makes a difference.

Why don't engine manufacturers make stock filters that catch these nearly microscopic particles? The reason an OEM filter cannot get down to this fine of filtration is because it wouldn't have enough flow to feed the engine. This is why a Frantz Filter redirects about 4%-6% of the oil at a time into the filter itself. It will take some time to filter all of the oil, but within 500 miles of driving, we can have the oil cleaner than it came out of the jug.

#### WHAT IS A BYPASS FILTER?

A bypass filter is a secondary oil filter that works alongside the engine's primary filter. The filters eliminate smaller organic and inorganic particles and reduce contamination. As a result, bypass filters can increase oil volume and protect the engine. At Hot Shot's Secret,

we offer a Frantz bypass oil filter kit with all the necessary components to trap and remove the finest contaminants from your engine oil.

#### HOW A BYPASS OIL FILTER SYSTEM WORKS

A bypass oil filter system works by drawing a small portion of the flow that would have otherwise fed the engine. The filters remove the finer contaminants from the oil that the primary filter may miss. Bypass filters have a high pressure differential, which is the change in pressure from the inlet to the outlet side of the filter. Since the pressure differential is high, the oil flows through the filters slowly, resulting in thorough filtration of smaller particles.

Once oil circles through bypass filters, it flows back directly to the sump and bypasses the engine. The continuous bypass filtration process produces analytically clean oil while maintaining an efficient flow through the engine. The Frantz bypass filter system filters the oil through specially designed, highly effective filter media and recirculates it back to the engine for unparalleled filtration.

#### FACTORS TO CONSIDER WHEN CHOOSING AN OIL BYPASS FILTER

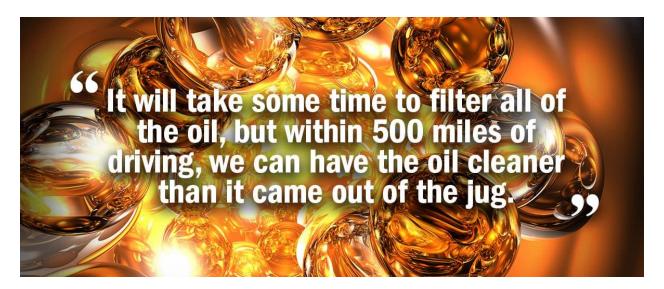
Bypass filters play a crucial role in improving your oil's cleanliness, which ultimately reduces long-term wear on your engine — extending its life span. For this reason, it is important to choose an oil bypass filter that offers the ultimate performance and engine protection. Here are a few considerations you should make when selecting a bypass filter for your engine:

Efficiency: A bypass oil filter system must be able to capture particles within the appropriate micron range to ensure efficiency. Our Frantz filter system has undergone rigorous testing and filters oil down to 2 microns, which is 10 times finer than the OEM filter.

Flow rate: The rate at which the oil flows through the filter is another essential factor to consider because it directly impacts efficiency. Our bypass filters allow oil to flow through at a deliberate rate to catch and remove much smaller particles effectively.

Installation: You also need to consider your bypass filters' installation requirements and how long installation may take. Fortunately, our Frantz bypass filter kits come with all the necessary fittings and parts for a quick and easy installation.

Dirt-holding capacity: Dirt-holding capacity can help you determine the amount of contaminants bypass filters can retain before changeout is needed. A filter with a higher dirt-holding capacity can reduce the frequency of changeouts, ultimately decreasing operation and maintenance costs.



#### MORE BENEFITS THAN LONGER ENGINE LIFE

Extended engine life isn't the only benefit of a bypass filter — you will also extend the time between oil changes. This is really where a Frantz filter system puts money back into your wallet. Modern synthetic oils really don't break down like their outdated, conventional counterparts. We are able to blend in detergent packages that can withstand thousands and thousands of miles of use. With lab analysis, you can get 50,000 miles out of oil with no problems — remember, we are keeping the oil cleaner than when it was new. Using our Blue Diamond POA oil, a 100,000 mile plus life can easily be achieved.

## FRANTZ FILTER BENEFITS

- Filtration down to 2 microns
- Extended oil change interval
- Saves time and maintenance expense
- Removes water & coolant
- Extended engine life



Our media not only takes out particulate contamination but also things like water and coolant. Even if your head gaskets and oil coolers are in presumably good shape, you can still get trace amounts in the oil from an oil cooler with a slight leak — maybe not enough for you to notice, but enough to be abrasive inside the engine. Beyond the removal of contamination, a bypass filter has cooling properties that help further prevent the breakdown of your oil. If you want to protect your engine and extend your oil drain intervals all while saving money, then you should seriously consider getting a Frantz Filter System.

**INSTALLING A FRANTZ SYSTEM** 

Installing a Frantz system has never been as easy. Hot Shot's Secret has brought innovation to this classic design with a quick-install kit for the Ford 6.0L & 6.4L Powerstroke and other popular diesel engine models. The custom kit includes a Frantz filter, an oil filter cap, an oil-fill cap, a gasket and two quick-release pre-made stainless-steel braided hose lines. The only tools needed for installation are a 9/16 wrench and a crescent wrench. The base mounts to the truck with powerful magnets, resulting in a no-drilling installation, in about five minutes.

Prior to mounting the base, connect both the supply line and the return line to the Frantz canister. Tighten fittings with a 9/16 wrench. Then guide the base to the mounting location. Remove the factory fill cap, replace it with the new cap, tighten down, and snap the line in place with the quick-connect fitting. Then remove the oil filter cap with the crescent wrench, remove the old filter and replace with the new filter which snaps into the base of the new cap. Install the new O-ring gasket to the cap, then insert in place, push down, tighten with the crescent wrench, and connect the line with the quick-connect fitting. Lastly, make sure both lines are out of the way of things and tighten the clamp on the filter base.

Other kits are available for popular truck engines as well as a universal kit, that can be used on any vehicle with proper accessories. Look for more quick-install kits to be available soon to make the process simpler on other engines.

### BYPASS OIL FILTER SYSTEM MAINTENANCE

While proper installation is needed for the correct functionality of your bypass oil filter system, maintenance is just as essential. Regular maintenance and replacements of filter media can help ensure the system continues working effectively, reducing the chances of costly repairs, and extending your engine's life span.

Your bypass filter will filter out particles down to 2 microns, more than 10 times finer than the OEM filter. To ensure optimal performance and longevity of your engine, it is recommended to change the bypass filter at regular intervals. Change bypass filters every 7,500 to 15,000 miles, the cellulose media should be changed before 10,000 miles. You still need to change your full flow OEM filter as well at the recommended intervals.

Over time, the TBN (Total Base Number) in all oils will fade and get below the recommended levels. Using Hot Shot's Secret TBN Booster maintains the Total Base Number (TBN) of the oil, neutralizing harmful acids and while adding CK4 detergency back into the oil. TBN Booster is composed of 100% active ingredients to recharge any diesel engine oil.

The base oil used makes a difference when extending drain intervals. Our Blue Diamond is a 100% full PAO synthetic. What does that mean to you? The film strength of a full group IV Polyalphaolefin PAO oil WILL NOT shear under load, providing extreme wear resistance and will resist oxidation at high temperatures, while evaporating much slower than typical group III synthetic oils. Sending your oil out for an analysis is the best way to learn the condition of your engine oil, detect issues before they become headaches and determine a safe oil change interval. An oil analysis can also help you determine how much TBN is needed or how many miles your oil can run before it needs to be serviced again. We recommend analysis every 10,000 miles with our Blue Diamond® oil, until a history is formed, then every 20,000 miles.

By integrating a bypass filter system with Hot Shot's Secret TBN Booster and Blue Diamond® Oil into your engine maintenance regimen, you'll unlock the full potential of your engine while enjoying enhanced performance, prolonged lifespan, and significant cost savings over time.

