



*Specializing in bypass oil filtration kits for Ford, Dodge, Chevy, light and medium duty diesels.  
All Made in the USA*

*Our by-pass kits are manufactured from solid 6061 Billet Aluminum and anodized to prevent corrosion and oxidation. Each kit ships with pre-assembled, hydraulically crimped, stainless steel braided PTFE lines. We have mounting brackets available for all of our applications making installation on your vehicle a simple "bolt-on" with no holes to drill, no mounts to fabricate, and using simple hand tools.*

### **What is a By-Pass Oil Filter?**

A by-pass oil filter is an added system designed to be used with a full flow oil filter to remove more and finer contaminant particles, such as dirt and metals, than the full flow filter alone. The heart of the system is a spin-on style bypass filter that has an efficiency of 98.7 percent at two microns containing a synthetic/cellulose sandwiched media. The inner layer of the element is composed of a highly efficient cellulose media covered with a full synthetic media outer layer. Oil flow rate is maintained by the integrated flow orifice designed into the spin-on filter adapter.

### **What Does A By-Pass Oil Filter Do?**

It filters solid contaminants from the engine oil including fine abrasive particles and soot as small as one micron. Most full flow filters alone can only remove particles larger than twenty or thirty microns without overloading, and plugging up. By filter the engine oil to such finite levels, most all engine damaging particles are removed from the oil; far more than the full flow filter can remove alone.

### **How Does a By-Pass Oil Filter Work?**

A small amount of oil from the main oil galley is directed through the by-pass filter where the contaminants are trapped in the filter medium. The cleaned oil is returned to the oil sump. The oil flow rate through the filter is low, three to eight gallons per hour, and is controlled by a metering orifice.

### **Why Sample Oil?**

To maximize the benefits of a by-pass oil filter you need to begin an oil sampling and testing program to ensure oil quality. Some oil distributors and filter vendors provide this service. We highly recommend Blackstone Laboratories. Besides allowing longer oil change intervals, performing oil testing can provide early warning signs of engine problems. Your oil testing program can serve as a "window" into your vehicles' components to warn you before it is too late. You can find problems early and perform the preventative maintenance that your vehicles need to keep them running their best, which will help to save long term operational costs.



Ford 6.0 Standard Bypass Kit

### **Why Use a By-Pass Oil Filter?**

Lubricating oil is made from a limited natural resource and used oil is by far one of the largest hazardous waste streams generated in the US. A fleet maintenance facility can generate thousands of gallons of used oil each year from routine engine maintenance. You can reduce the amount of used oil you generate by using by-pass oil filtration systems to extend oil life in your vehicles. The by-pass filtration system allows you to reduce purchase and disposal costs of oil while still maintaining optimal operating conditions by utilizing extended drain intervals. Internal combustion engines require that their lubricating oil maintain proper viscosity and total base number (TBN) in order to perform at peak efficiencies or to perform at all. Through normal use, the viscosity and TBN of the oil changes as the oil gets contaminated with metal, soot, and water and the additive package breaks down. Lubricating oil itself does not wear out, so if the contaminants are removed the oil can keep doing its job.

*With our by-pass filtration systems, you'll enjoy lower operational and maintenance costs, longer engine life and the peace of mind that your engines internal components are protected.*





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**Why spend the extra money on by-pass filtration?**

Our kits will pay for themselves. The average price for an oil change on a Ford 6.0 liter is approximately \$100.00, (including oil, oil filter and labor). If you follow the manufactures recommended service intervals and change the oil every 5000 miles, you'll easily pay \$400.00 in oil changes every 20,000 miles.

With our bypass kits, you can safely extend your oil change service interval to 15,000 miles with high quality conventional oil. At that rate, the system will pay for itself after the first 25,000 miles.

Utilizing a full synthetic oil and oil sampling, it is completely feasible to see 100,000 mile oil change intervals. This is due to the fact that synthetic oils do not wear-out or break down like conventional oils. The only reason to change synthetic oil is to get rid of the contaminants contained in the oil after an extended service use. Our bypass filtration kits allow synthetic oils to do their job by filtering 98.7% of all particles in the oil 2 micron in size and larger. For now, we send out every kit with Amsoil's EABP100 by-pass filter. The EABP100 filter is a very good product and Amsoil has done extensive research to develop their product. We will be providing our own filters in the near future mirroring Amsoil's efficiency ratings but offering ours at a significant savings over the competition. Our bypass filtration kits do NOT affect the manufactures warranty in any way. **So why buy our kit and not the competitions? Simple. We provide a more inclusive and far superior product at a significant savings. It's a no brainer!**

---"We receive many oil samples from clients who don't understand what is required to run unusually long oil use intervals in their engines. The accumulation of wear metals, blow-by materials, and oil oxidation products in their oils is alarming. It has been our experience that one cannot simply add oil of a particular brand or base stock and expect it will be useful for an extended period of time, lubricating, cleaning, and cooling as required. Oil that becomes contaminated needs to be changed promptly. In our opinion, there are no magic oils or additives.

There are, however, auxiliary systems you can add to your engine's lubricating system that will keep the oil clean enough to use over an extended period of time. By-pass filtration units are the most common system used for this purpose.

In-line oil filtration, which comes installed on your engine from the factory, filters oil entering the engine down to roughly 30-40 microns (millionths of a meter). This is about as finely as in-line filtration can filter,



because when the oil is cold or the filter is partially plugged, a finer filter would cause too great a pressure drop, forcing open the filter by-pass valve and allowing unfiltered oil to circulate through the engine. By-pass filtration works differently. When this type of auxiliary system is installed, some of the sump oil by-passes the in-line filter system, passing continually through a by-pass filter and then returning to the oil sump. Using this method, sump oil is constantly being cleaned any time the engine is running, and it can be filtered down to a very fine size. All you have to do to maintain the system is occasionally change the by-pass filter. Not only do the by-pass filtration units cleanse the sump oil of blow-by and oxidation products, they also reduce wear metals and silicon accumulations, both of which are abrasive. Oil does not wear out. Its usefulness is limited by contamination. By-pass filtration removes most of the contaminants.

How long can an oil fill be run using by-pass filtration? We've heard claims of large (Class 8) diesels going 1,000,000 miles on the same fill of oil with no harm done to the engines. We have analyzed oils which have been in service 240,000 miles and found nothing unusual in the analysis, other than higher than average iron and lead (from steel parts and bearings), and these wear accumulations were not intolerably high.

After having run many tens of thousands of diesel engine oil samples, it is our opinion that a by-pass oil filtration system is one of the most important factors in extending oil drains. **If you are interested in extended oil drains, we suggest you investigate adding this type of system to your engine.**" ----Blackstone Laboratories

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