

DUAL-GARD® Oil Filtration System



AMSOIL[®]
The First in Synthetics[®]

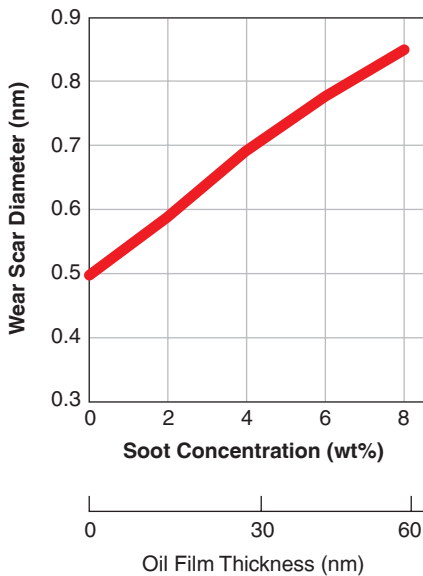
AMSOIL DUAL-GARD provides increased convenience and protection, saving you time and money.

AMSOIL Ea By-Pass Filters

By-pass oil filtration features a secondary filter with the purpose of eliminating nearly all contaminants in motor oil. By-pass filters have high capacities and eliminate much smaller particles than full-flow filters, including soot. While by-pass filters effectively reduce engine wear and increase oil volume, their high efficiencies mean they also have higher restriction and must be used in conjunction with a full-flow filter.

By-pass filters operate by filtering oil on a “partial flow” basis. They draw approximately 10 percent of the oil pump’s capacity at any one time and trap the extremely small, wear-causing contaminants that full-flow filters can’t remove. By-pass filters have a high pressure differential, causing the oil to flow through them very slowly and allowing for the removal of smaller contaminants. It is called by-pass filtration because the oil flows from the by-pass filter back to the sump and by-passes the engine. This continuous process reduces long-term wear and allows extended oil drain intervals.

Soot to Wear Correlation



As soot levels increase, the wear scar diameter increases, showing the direct relationship between soot and wear.

“Study on Wear Mechanism by Soot Contamination in Engine Oil”

– Sato, H. Yamamoto, H. and Sasaki, M.

Higher Efficiency

AMSOIL Ea By-Pass Filters (EaBP) provide higher filtering efficiency, soot removal and increased oil capacity due to their advanced media configuration. AMSOIL Ea By-Pass Filters have an efficiency of 98.7 percent at two microns.

Longer Lasting

When used in conjunction with AMSOIL synthetic motor oil and an AMSOIL Ea or Donaldson Endurance™ full-flow oil filter, Ea By-Pass Filters should be changed with every-other full-flow filter change, not to exceed 60,000 miles. When used with other brands of motor oil or full-flow filters, Ea By-Pass Filters should be changed with every-other full-flow filter change. AMSOIL recommends using oil analysis when extending oil drain intervals.

Increased Oil Capacity

The increased fluid system capacity and filtration life provided by Ea By-Pass Filters allows improved oil cooling and ensures equipment constantly runs on highly filtered oil. Engine efficiency is increased and engine life is extended significantly.

Soot Removal

Soot is created as a by-product of the diesel combustion process, leading to higher wear rates as it becomes suspended in the oil. AMSOIL Ea By-Pass Filters use a highly efficient synthetic/cellulose sandwiched media that removes 39 percent of soot contaminants less than one micron. Soot removal efficiency can increase approximately 10 to 14 percent when the Ea By-Pass Filter is used in conjunction with a standard full-flow filter, even higher in conjunction with an AMSOIL Ea or Donaldson Endurance full-flow filter.

AMSOIL DUAL-GARD®

Versatility

The AMSOIL DUAL-GARD Mounting Kit (BMK22) accommodates any two AMSOIL Ea By-Pass Filter elements (EaBP90, EaBP100, EaBP110). Accommodating multiple element sizes allows the unit to be mounted in various engine compartments and accounts for different sump capacities.

Convenience

Ea By-Pass Filter elements spin on and off for fast, neat filter changes.

Protection

The layered synthetic/cellulose composite media of AMSOIL Ea By-Pass Filters has been shown to reduce piston ring and rod/main bearing wear.

By-Pass Safety

A metering orifice inside the mount controls oil flow so that it never draws more than 10 percent of the oil pump's capacity. The AMSOIL DUAL-GARD By-Pass Filtration System filters all the oil in the system every five to 10 minutes, depending on sump size.

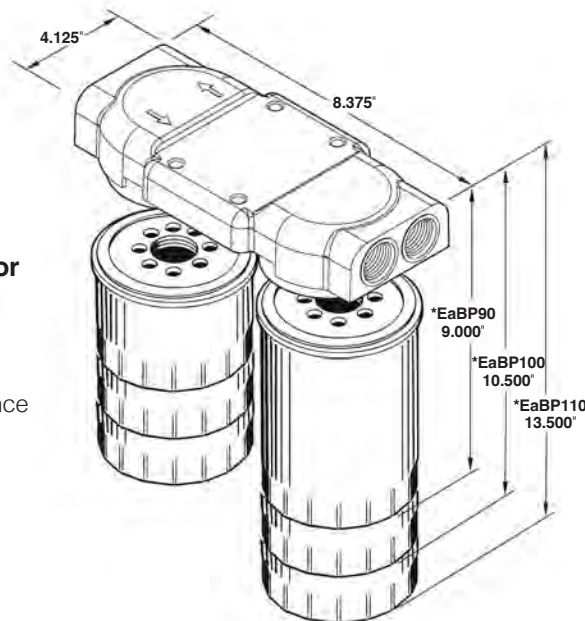


The DUAL-GARD Mounting Kit

The DUAL-GARD Mounting Kit includes a mount, mounting hardware, a restrictor orifice and two 7/8"-14 to 1/4" J.I.C. fittings. Complete installation instructions are included along with an additional parts list of plumbing hose and fittings available separately. Spin-on filter elements (available in three sizes) should be purchased separately in pairs based on sump size or available room in the engine compartment. Use the following as a guide:

For a crankcase sump of 15 to 18 quarts use two EaBP90 filter elements.
For a crankcase sump of 15 to 30 quarts use two EaBP100 filter elements.
For a crankcase sump of 15 to 42 quarts use two EaBP110 filter elements.

AMSOIL By-Pass Filters last twice as long as full-flow oil filters, so change them only half as often. For additional information contact AMSOIL Technical Services at (715) 399-TECH, or go to the Contact Us section at www.amsoil.com.



Minimum Area Needed for Dual Mount and Spin-On Filter Elements

* Mount and element heights plus 1-inch removal clearance

Other Applications

- Stationary Engines
- Large Compressors
- Electric Generators
- Construction
- Filter-Pump Carts
- Marine, Forestry, Mining
- Agriculture & Irrigation

AMSOIL Spin-On By-Pass Filters

1. Reduce Wear

AMSOIL Ea By-Pass Oil Filters with exclusive two-stage pleated and layered cellulose/full-synthetic media have an efficiency rating of 98.7 percent at two microns. Using this type of filter can reduce maintenance costs and increase engine life.

2. Improve Performance

Clean oil lubricates and cools better by reducing friction more efficiently. Piston rings also seal better, which reduces fuel dilution of the oil and oil consumption and increases compression. These benefits save time and money by improving fuel economy and equipment reliability.

3. Superior Construction

The superior construction of AMSOIL Ea By-Pass Filters provides better sealing, increased longevity and superior corrosion resistance. Ea By-Pass Filters have a marine powder-coated exterior, and their zinc-dichromate base plates increase rust protection. Ea By-Pass Filters also feature a nitrile HNBR gasket and an orange silicone anti-drain valve.

4. Extend Oil Drain Intervals

By cleaning oil continuously, AMSOIL Ea By-Pass Filters not only help increase engine life, but the life of the lubricant itself. Additives in highly filtered oil last substantially longer because they are not wasted breaking up dirt and sludge or controlling combustion by-products, while the additional filter and hoses increase the system's oil volume. Ultra-fine filtration means lubricants do their job better and longer, while requiring fewer changes.*

5. Reduce Waste

AMSOIL Ea By-Pass Filters save users time and money, while saving the environment from exposure to higher levels of pollution from waste oil. Fewer oil changes mean less waste oil and fewer waste materials to be disposed of by a fleet/plant manager.

** Change oil on the basis of lab analysis, not by mileage.*



Contact your AMSOIL Dealer for more information on AMSOIL products or to place an order. You may also order direct by calling AMSOIL INC. at 1-800-956-5695 and providing the referral number listed here. ▼

Referral # _____