

Bypass Oil Filtration Systems & Mounts

AMSOIL HEAVY-DUTY BYPASS SYSTEM

Product Code: BMK30-EA

Maximize engine life and reduce maintenance costs with advanced filtration that removes 98.7% of contaminants down to 2 microns.



Product Description

The AMSOIL Heavy-Duty Bypass System (BMK30) delivers maximum filtration performance for heavy-duty diesel and gasoline engines, removing contaminants that standard full-flow oil filters leave behind. It is built for operators who run Class 6, 7, and 8 trucks, off-road equipment, buses, generators, marine engines, and agricultural machinery where engine longevity and reduced maintenance costs matter most.

Heavy-duty engines operate in punishing environments. Diesel soot accumulates rapidly, fine wear particles circulate continuously, and standard full-flow filters are limited by design. A full-flow filter must balance flow restriction against filtration efficiency, which means particles smaller than about 20 microns routinely pass through and continue to cause abrasive wear inside the engine. Over hundreds of thousands of miles or thousands of operating hours, that constant abrasion shortens engine life and drives up rebuild costs.

REMOVES PARTICLES DOWN TO 2 MICRONS

The AMSOIL Heavy-Duty Bypass Filter (EABP120) features a proprietary media that removes 98.7% of all contaminants 2 microns and larger, tested per ISO 4548-12. That level of filtration captures soot, fine metallic wear particles, and other contaminants that full-flow filters simply cannot trap. For context, a typical full-flow filter is rated at 20 to 25 microns. The bypass filter works alongside the full-flow filter on a partial-flow basis, drawing less than 5% of the oil pump's capacity at any one time, filtering it thoroughly, and returning it to the sump. Over time, this process cleans all the oil in the system repeatedly, keeping contamination levels far lower than a full-flow filter can achieve alone.

IMPROVED OIL COOLING AND INCREASED SYSTEM CAPACITY

Installing the Heavy-Duty Bypass System adds approximately 1 gallon of oil capacity to the engine's fluid system, depending on hose length and mounting distance from the engine. More oil in the system means more thermal mass to absorb and dissipate heat. The additional oil and extended filtration life work together to keep the engine running on highly filtered oil at lower temperatures. For trucks running Cummins ISX, Detroit DD15, or Cat C15 engines in long-haul applications, or for Powerstroke and Duramax pickups pulling heavy loads, that added capacity translates directly to cooler oil and longer component life.

EXTENDS OIL DRAIN INTERVALS WITH OIL ANALYSIS

When paired with an oil analysis program, the AMSOIL Heavy-Duty Bypass System supports extended drain intervals up to 120,000 miles, 1,800 hours, or 1 year, whichever comes first. The bypass filter element (EABP120) should be replaced at those same intervals. Extended drain intervals should always be verified through oil analysis to confirm oil condition. For fleet operators running Class 8 trucks on the highway, or contractors logging hours on off-road equipment, fewer oil changes mean less downtime, lower disposal costs, and reduced maintenance labor.

DURABLE CONSTRUCTION FOR SEVERE SERVICE

The bypass filter mount is constructed from high-quality cast aluminum with a steel filter stud, tested in both on-road and severe off-road service. The mount is finished with a thick layer of powder-coated paint to resist road salt, debris, and engine compartment chemicals. The system comes complete with the mount, mounting hardware, 15 feet of hose, hose fittings, installation instructions, and one AMSOIL Bypass Filter (EABP120). The fitting required to pull pressurized oil from the engine and the return fitting to the sump are application-specific. Fitting suggestions and fitting locations for specific engines are available through the BMK30 Fittings List on the AMSOIL website. Additional fittings can be sourced from any hydraulics or heavy-duty equipment outlet.

HOW BYPASS FILTRATION WORKS

Bypass filtration is a secondary filtration circuit that operates in parallel with the engine's full-flow filter. Oil is drawn from a pressurized port on the engine, routed through the bypass filter housing at low flow rates, and returned to the oil pan. Because oil flows through the bypass filter very slowly, the media can trap extremely small particles without creating the flow restriction that would starve the engine of oil. This is not a replacement for the full-flow filter. It is a complement to it. The full-flow filter handles high-volume filtration of larger particles at full engine flow, while the bypass filter continuously polishes the oil by removing the fine contaminants that cause long-term wear. Soot particles smaller than 2 microns can still darken the oil, but the oil's dispersant additives keep those sub-micron contaminants in suspension to prevent agglomeration and wear.

APPLICATIONS AND COMPATIBILITY

The BMK30 system fits virtually all heavy-duty diesel and gasoline applications, including Class 6, 7, and 8 heavy-duty trucks, off-road construction and mining equipment, transit and school buses, stationary generators, marine engines, logging equipment, and agricultural machinery. Multiple systems can be plumbed in series for larger applications with large sumps. The system is designed specifically for use with the AMSOIL Heavy-Duty Bypass Filter (EABP120) and is compatible with the AMSOIL oil sample valve (BK30) for convenient oil sample collection.

SERVICE LIFE

The AMSOIL Heavy-Duty Bypass Filter (EABP120) service limits are 120,000 miles, 1,800 hours, or 1 year, whichever comes first. Extended oil drain intervals should always be accompanied by oil analysis to confirm the oil remains within serviceable limits.

Frequently Asked Questions

Q1: What vehicles and equipment is the AMSOIL Heavy-Duty Bypass System BMK30 designed for?

The AMSOIL Heavy-Duty Bypass System (BMK30) is designed for maximum filtration performance in virtually all heavy-duty diesel and gasoline applications. This includes Class 6, 7, and 8 heavy-duty trucks, off-road equipment, buses, generators, marine engines, logging equipment, and agricultural equipment. It is also used by some owners on light-duty diesel trucks like the Ford 6.7L Powerstroke and even smaller gasoline engines.

Q2: How does the AMSOIL Heavy-Duty Bypass System BMK30 protect my engine better than a full-flow filter alone?

The AMSOIL Heavy-Duty Bypass System efficiently removes small particles and soot that full-flow oil filters can't capture on their own, filtering particles as small as 2 microns and larger. It also provides improved oil cooling by increasing the fluid system capacity. Verified customers have reported remarkably clean engine internals even at 120,000 miles, and one owner noted that at 5,000 miles his oil still looked new with the bypass system installed.

Q3: What particle size does the AMSOIL Heavy-Duty Bypass System BMK30 filter down to?

The AMSOIL Heavy-Duty Bypass System (BMK30) is capable of removing particles 2 microns and larger from engine oil. This level of filtration far exceeds what standard full-flow oil filters can achieve alone, targeting the fine contaminants and soot particles that cause accelerated engine wear over time.

Q4: How does the AMSOIL Heavy-Duty Bypass System compare to running just a standard full-flow oil filter?

Unlike a standard full-flow oil filter that must balance filtration efficiency with oil flow to avoid starving the engine, the AMSOIL Heavy-Duty Bypass System works alongside the full-flow filter to capture particles as small as 2 microns that the full-flow filter misses. It also increases total fluid system capacity, which improves oil cooling and extends both oil and filter life. The system adds approximately 2 quarts of additional oil capacity, as reported by a verified Powerstroke owner, further aiding in engine oil cooling.

Q5: Does the AMSOIL Heavy-Duty Bypass System BMK30 help extend oil drain intervals on diesel trucks?

Yes, the AMSOIL Heavy-Duty Bypass System is designed to help extend oil drain intervals by providing increased filtration capacity and life, increased fluid system capacity, and efficient removal of contaminants and soot that degrade oil over time. When used in conjunction with AMSOIL full-flow filters and synthetic oil, verified customers have reported confidently running extended oil change intervals. Installation and servicing instructions along with a fittings list are available from AMSOIL for proper setup.

Q6: Is the AMSOIL Heavy-Duty Bypass System BMK30 compatible with my existing full-flow oil filter setup?

Yes, the AMSOIL Heavy-Duty Bypass System (BMK30) is designed to work in conjunction with your existing full-flow oil filter, not replace it. It operates as a supplementary filtration system that processes a portion of oil flow to remove fine particles the full-flow filter cannot capture. AMSOIL provides a BMK30 Fittings List with fitting suggestions and fitting locations specific to various applications to ensure proper compatibility and installation.

Available Product Codes

Product Code	Package Size	Unit of Measure
BMK30-EA	1 System	Each

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