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AMSOIL Ea® Oil, Bypass and Air Filters



AMSOIL® Ea FILTERS

RACING AIR FILTERS BYPASS FILTERS OIL FILTERS

Advanced oil and air filtration technology from AMSOIL helps improve engine life and reduce maintenance costs.

Order by Phone 1-800-956-5695 - Give Operator Reference #5983322



AMSOIL Ea® Oil Filters

AMSOIL Ea Oil Filters feature advanced full-synthetic media, making them one of the highest-efficiency filters available for the auto/light-truck market.

- **Help** Reduce Engine Wear
- **Trap** Smaller Contaminants
- **Hold** More Contaminants
- **Full-Synthetic** Media
- **Extended** Service Intervals of 25,000 miles/One Year (EAO) or 15,000 miles/One Year (EA15K)

Advanced Media Technology

Cellulose and blended media found in most oil filters have larger fibers than the synthetic media found in Ea Oil Filters. They also have larger spaces between their fibers. This causes contaminants to load in the depth of the media and plug the flow of oil, resulting in higher restriction and reduced capacity. The smaller fibers in synthetic media have a controlled size and shape, resulting in better durability and greater efficiency and capacity than cellulose filters. AMSOIL Ea Oil Filters provide a higher level of engine protection and extended filter change intervals.

Absolute Efficiency

Efficiency is the filter's ability to capture contaminants. The more efficient a filter is, the more contaminants it will remove from the oil. To make a filter more efficient, the spaces between the fibers in the media are made smaller, creating more resistance and limiting the oil's ability to flow through the filter. Achieving maximum efficiency along with limited resistance is critical to good filtration.

The graph below shows that AMSOIL Ea Oil Filters achieve a near-perfect absolute efficiency rating. The exclusive technology used in AMSOIL Ea Oil Filters provides filtering efficiency of 98.7 percent at 20 microns. Ea Oil Filters are among the most efficient filters available for auto/light-truck applications.

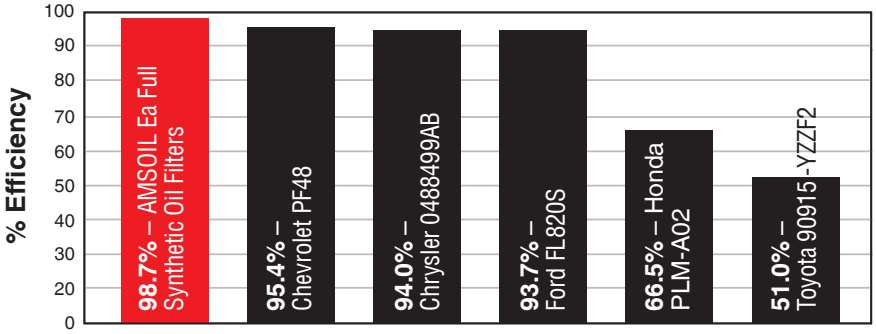
Maximum Capacity

Capacity is the amount of contaminants a filter can hold. When a filter reaches maximum capacity, it reaches the end of its usable life and must be changed. If the filter is not changed when it reaches maximum capacity, the oil continues to flow through unfiltered, leaving harmful contaminants circulating in the oil.

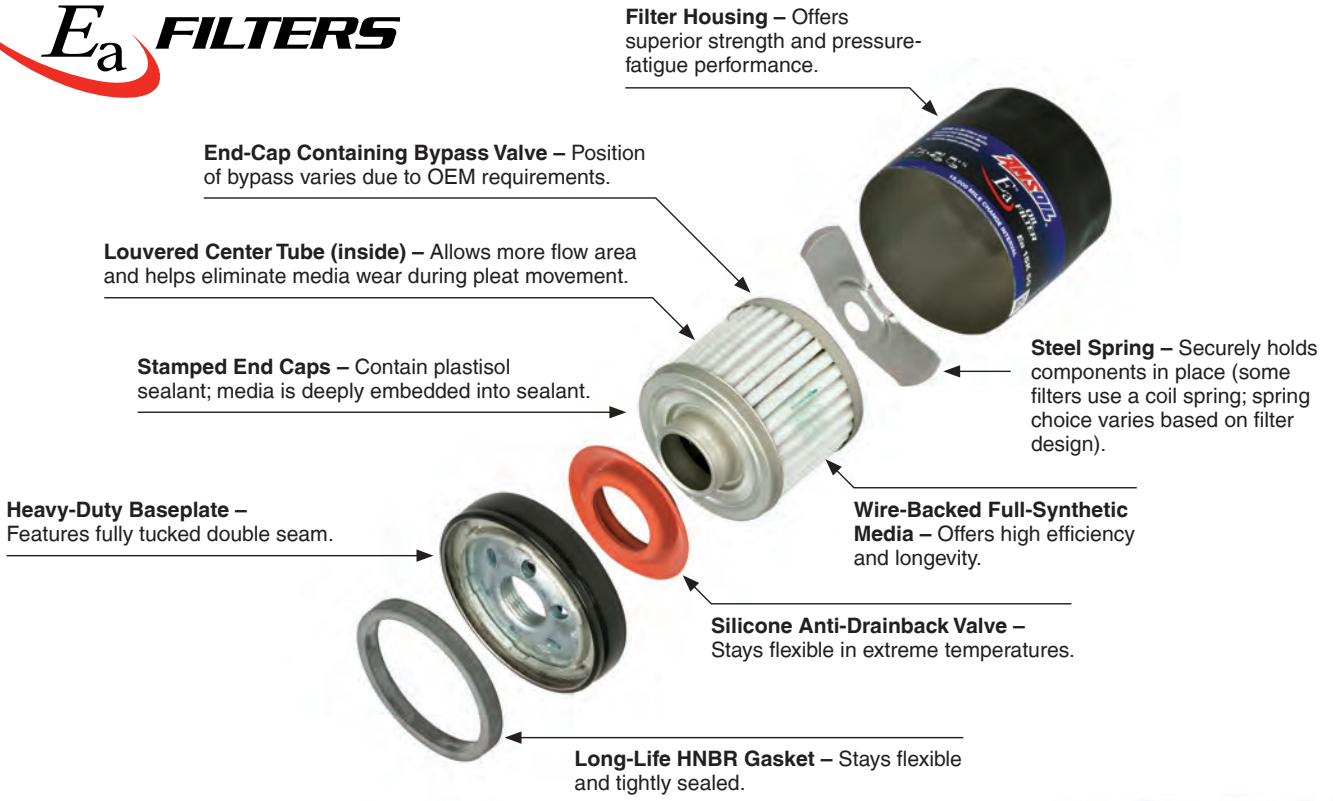
AMSOIL Ea Oil Filters have greater capacity than competing filter lines, providing convenience and cost savings through extended service intervals.

Average Filter Efficiency @ 20 Microns (ISO 4548-12)

February 2011 Test Results



Ea FILTERS



Durable Construction

AMSOIL Ea Oil Filters are made with premium-grade full-synthetic media. The strictly controlled processing of this media ensures accurate fiber construction and allows Ea Oil Filters to deliver increased durability. Ea Oil Filters' full-synthetic media technology is resin-free to resist degradation from hot oil. It uses a wire screen backing that is pleated with the media for superior strength. Ea Oil Filters are constructed with HNBR nitrile gaskets that are fully tested to extreme distances in numerous severe environments.



Improved Flow

Proper oil flow is essential to keep moving parts lubricated at all times. A filter without adequate flow properties can cause catastrophic engine failure. Flow is restricted as the spacing in the filter media is made smaller to provide greater efficiency. The synthetic media in AMSOIL Ea Oil Filters allows maximum efficiency without restricting flow. This provides exceptional cold-start performance and ensures proper levels of lubrication throughout the engine.

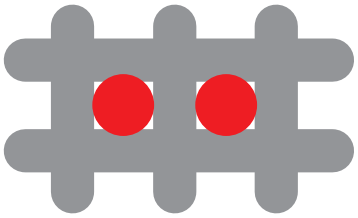
Extended Service Intervals

When used in conjunction with AMSOIL synthetic motor oils, AMSOIL Ea Oil Filters are guaranteed for extended service life:

- Ea Filters designated with product code Ea15K are recommended for 15,000 miles/one year, whichever comes first, in normal or severe service.
- Ea Filters designated with product code EaO are recommended for 25,000 miles/one year, whichever comes first, in normal service or 15,000 miles/one year, whichever comes first, in severe service.

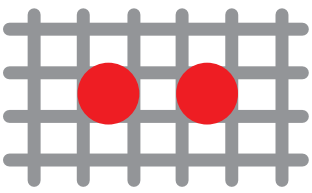
Cellulose Media Fiber Spacing

High Restriction



Synthetic Media Fiber Spacing

Low Restriction



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AMSOIL Ea® Bypass Oil Filters

AMSOIL Ea Bypass Filters provide the ultimate in protection against wear, oil degradation and corrosion in auto/light-truck, heavy-duty and other applications.

- **Help** Extend Engine Life
- **Help** Extend Drain Intervals
- **Reduce** Maintenance Costs
- **Remove** Soot & Small Particles
- **Improve** Oil Cooling

Bypass Basics

Bypass oil filtration systems feature a secondary filter with the purpose of eliminating nearly all contaminants in engine oil. Bypass filters have high capacities and eliminate much smaller particles than full-flow filters, including soot. They help reduce engine wear and increase oil volume, but their high efficiencies mean they also have higher restriction and must be used in conjunction with a full-flow filter.

Bypass 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. Bypass 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 bypass filtration because the oil flows from the bypass filter back to the sump and bypasses the engine. This continual process reduces long-term wear and helps extend drain intervals.

Higher Efficiency

AMSOIL Ea Bypass Filters provide higher filtering efficiency, soot removal and increased oil capacity due to superior media composition and configuration. They feature an efficiency of 98.7 percent at two microns.

Superior Construction

The superior construction of Ea Bypass Filters provides better sealing and increased longevity along with superior corrosion resistance. They feature a marine powder-coated exterior. Their zinc-dichromate baseplates increase rust protection, and are compatible with existing AMSOIL bypass filter mounts. Ea Bypass Filters have a nitrile HNBR gasket.

Longer Lasting

Ea Bypass Filters offer long service life. Do not exceed the limits listed in the chart below.

	EaBP90	EaBP100	EaBP110	EaBP120
Mileage	60,000	70,000	80,000	120,000
Hours	600	800	1,200	1,800
Time	2 years	2 years	2 years	1 year

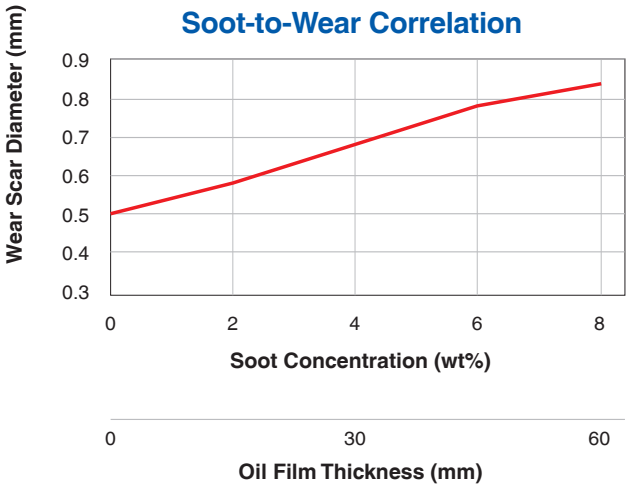
AMSOIL Bypass Oil Filtration Systems



The Dangers of Soot

Carbonaceous combustion particulates, known as soot, are created as a result of the normal diesel combustion process. Soot particles that aren't expelled via the exhaust system become trapped on the exposed oil film. The rings wipe the particulates into the oil where they aggregate, increasing soot levels in the oil. Dispersant additives will generally keep soot from 0.002 to 0.5 microns in suspension. However, as the amount of soot suspended in the oil increases, the performance of these additives decreases.

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.

Soot Causes Wear

As dispersants in the oil are consumed, soot particles grow to a size that causes problems, indicating a direct correlation between wear and soot concentration; the higher the concentration of soot, the higher the level of wear (see graph).

Today's oil manufacturers are extending oil life by holding higher concentrations of contaminants, including soot, in suspension in the oil. They are also increasing fuel economy by reducing oil viscosity and oil film thickness, therefore reducing the critical contaminant size. This further necessitates the use of bypass filtration, especially in diesel engines.

EaBP Vital Statistics

AMSOIL offers several bypass filtration systems and Ea Bypass Oil Filters that can be installed on a variety of popular applications, including Ford* Power Stroke*, Chevrolet* Duramax*, Dodge* Cummins*, heavy-duty trucking, marine and other applications. Contact your local AMSOIL Dealer for information. Bypass filtration is a valuable system for anyone who wants to prolong engine life. It is also beneficial to vehicles that are exposed to high levels of contaminants on a regular basis.

*All trademarked names and images are the property of their respective owners and may be registered marks in some countries. No affiliation or endorsement claim, express or implied, is made by their use. All products advertised here are developed by AMSOIL for use in the applications shown.



AMSOIL Ea® Heavy-Duty Extended-Life Oil Filters

AMSOIL Ea Heavy-Duty Extended-Life Oil Filters provide excellent filtering efficiency and high contaminant-holding capacity for heavy-duty applications, including, but not limited to, over-the-road trucks; dump trucks; refuse haulers; school buses; farm tractors; mining, construction and industrial equipment; and more. They provide extended service intervals that coincide with the maximum drain interval recommendations of AMSOIL synthetic motor oils (not to exceed one year), increasing convenience and reducing maintenance costs.

- **Excellent** Efficiency for Maximum Wear Protection
- **High** Capacity
- **Full-Synthetic** Media
- **Provide** Extended Service Intervals for Reduced Costs

Absolute Efficiency

Ea Heavy-Duty Extended-Life Oil Filters are engineered using full-synthetic media that provides an average filtering efficiency of 98.7 percent at 20 microns in accordance with industry standard ISO 4548-12, ranking them among the most efficient available for heavy-duty applications. Increased efficiency helps reduce wear for long engine life.

Less Restriction

Ea Heavy-Duty Oil Filters have lower restriction than conventional cellulose media filters. Their small synthetic fibers trap smaller particles and hold more contaminants, resulting in lower restriction. During cold-temperature warm-up periods, an Ea Heavy-Duty Oil Filter allows the oil to flow through the filter more easily than a typical cellulose filter. Lower restriction helps circulate oil more quickly, promoting long engine life.

Contaminant Capacity

A filter's capacity refers to the amount of contaminants it can hold and still remain operational. AMSOIL Ea Heavy-Duty Oil Filters have a high holding capacity for small, wear-causing contaminants.

Superior Construction

Ea Heavy-Duty Oil Filters are made with premium-grade full-synthetic media. Over the service life of a conventional cellulose filter, hot oil can degrade the resins that bind the media. Ea Heavy-Duty Oil Filters' full-synthetic media technology is resin-free. It uses a wire screen backing that is pleated with the media for superior strength. Ea Heavy-Duty Oil Filters are constructed with HNBR gaskets that are fully tested over long durations in numerous severe environments.



AMSOIL Ea Racing Air Filters

AMSOIL Ea Racing Air Filters are specially designed for racing and street rod enthusiasts who desire AMSOIL quality and protection in carbureted applications. AMSOIL Ea Racing Air Filters are constructed with nanofiber technology. This synthetic media ranks among the most efficient available and provides better airflow and more capacity than cellulose filters.

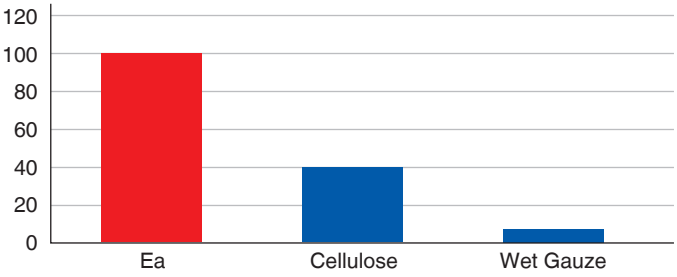
- **Help** Reduce Engine Wear
- **Trap** Smaller Contaminants
- **Hold** More Contaminants
- **Reduce** Restriction to Help Improve Power

Capture More Dirt

Efficiency is the ability of a filter to stop dirt and other airborne contaminants from entering the engine. The more efficient a filter is, the more dirt and contaminants it stops.

Studies on the intake of particulates show that increased dust passing the air filter results in additional engine wear. Filters such as Ea Racing Air Filters that stop a greater amount of particulates help reduce engine wear.

Filter Capacity

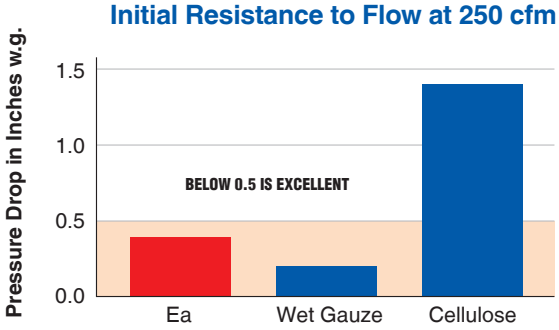


Holds More Dirt

A filter's ability to contain trapped contaminants determines how well an engine will run and how long the filter will remain effective. If the capacity is too low, the filter will require frequent replacement. When the filter is full, air cannot pass through at the rate necessary for proper engine performance.

AMSOIL Ea Racing Air Filters hold up to 2.5 times more contaminants than cellulose air filters. The nanofibers in the media contain more pores per square inch, allowing for higher dirt-holding capacity and lower pressure drop when compared to cellulose filter media alone. Thinner media fibers produce more uniform pore-size distribution, improving the filter's overall quality and ability to capture and retain particles. Testing shows that Ea Racing Air Filters hold 15 times more contaminants than a wet-gauze-type filter.

Initial Resistance to Flow at 250 cfm



Allows More Airflow

Proper airflow is vital to maximizing performance and engine life. Air is required to release the energy from the fuel being used. Inadequate airflow can cause serious loss of power, poor performance and excessive fuel consumption. Tests show that AMSOIL Ea Racing Air Filters have more than three times the airflow of filters that use cellulose media alone.

Quick Cleaning

AMSOIL Ea Racing Air Filters are cleanable and long-lasting. AMSOIL recommends cleaning Ea Racing Air Filters when designated by the restriction gauge if the vehicle is so equipped, or according to operating conditions. In dusty conditions or in high-performance vehicles, more frequent cleaning may be required. Filters can be cleaned by carefully vacuuming the filter media on the dirty side, or by holding the filter with one hand and carefully blowing the filter media at a 45-degree angle on the clean side using low-pressure shop air (15-20 lbs. psi).

Aftermarket Filters

AMSOIL also offers premium filtration products from its aftermarket partners, including Donaldson®, WIX® and MANN-FILTER®.







Donaldson Filtration Solutions

Donaldson Filtration Products

Oil · Air · Fuel · Hydraulic · Coolant

AMSOIL carries Donaldson Blue and P-Series filtration products, regarded as among the best available, to complement the AMSOIL Ea® Heavy-Duty Extended-Life Oil Filter line.

WIX FILTERS

WIX Filtration Products

Oil · Air · Cabin Air · Fuel
Racing · Transmission

AMSOIL offers WIX filters for automotive and light truck applications as a complement to the AMSOIL Ea line of filters, allowing AMSOIL to offer the convenience of one-stop shopping.

MANN FILTER

MANN-FILTER Filtration Products

Oil · Air · Cabin Air · Fuel

AMSOIL offers MANN-FILTER filtration products as a complement to the AMSOIL Ea line of filters. MANN-FILTER specializes in filtration products for European applications.

AMSOIL The First in Synthetics®

Contact your local full-service 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 #_____

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