AMSOIL®

The First in Synthetics®

Donaldson® and WIX®

Supplemental Filtration Products

- Oil Filters
- Air Filters
- Gasoline Filters
- Fuel Filters
- Hydraulic Filters
- Coolant Filters
- Heavy-Duty Filters
- Transmission Filters
- Cabin Air Filters
- Racing Filters

AMSOIL carries Donaldson filtration products to meet every heavy-duty filtration need. Donaldson Filters are widely regarded as the best there is in the filtration world. AMSOIL offers products from Donaldson's Endurance line, Donaldson P-Series and Donaldson PowerCore filters.

Donaldson Endurance

Donaldson® Endurance™ air and oil filters provide the highest level of filtration efficiency in the industry. Specifically designed for on-road, heavy-duty class 6, 7 and 8 vehicles, Donaldson Endurance air and oil filters feature exclusive nanofiber technology. Class 6 vehicles, 19,501 to 26,000 pounds gross vehicle weight (GVW), include single-axle vans, beverage trucks and school buses; class 7, 26,001 to 33,000 pounds GVW, include refuse trucks, tow trucks and city transit buses; class 8 trucks, 33,000 pounds GVW and greater, include fuel haulers, inter-city/tour buses and cement trucks.

Air Filters

Endurance air filters offer longer engine life, longer filter life, initial efficiency up to 99.99 percent and five times more capacity than conventional cellulose filters.

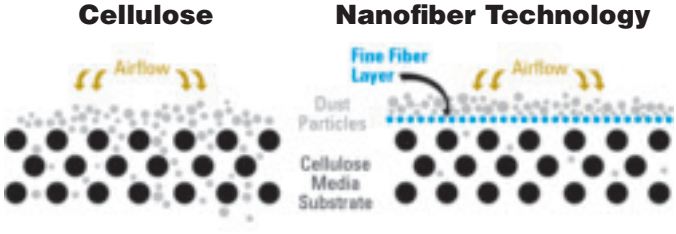
Endurance air filters come with a "twice the miles" guarantee to deliver twice the miles between change intervals over cellulose air filters for on-highway applications, or customers receive a new filter at no charge.

The nanofiber technology traps submicron contaminants on the surface rather than dispersing them throughout the depth of the filter where there is less area for the air to flow. Therefore, in on-highway applications, where the contaminant is primarily submicron in size, Endurance air filters cause less restriction than conventional filters with cellulose media. The smaller, interfiber spaces have higher efficiency and capture more contaminants.

Here's how it works: Imagine two filtration media, a chain link fence and a mosquito net. Each is required to stop contaminants, in this case tennis balls.

A tennis ball will fit quite nicely into an opening of a chain link fence, but will obstruct the hole almost 100 percent. Now, imagine a tennis ball covering a mosquito net. The tennis ball, at the point of contact with the netting, will obstruct much less filter area than the chain link fence example. In fact, air will flow around the tennis ball all the way to the point of contact. It will take many more particles to obstruct the netting surface area than the chain link fence.

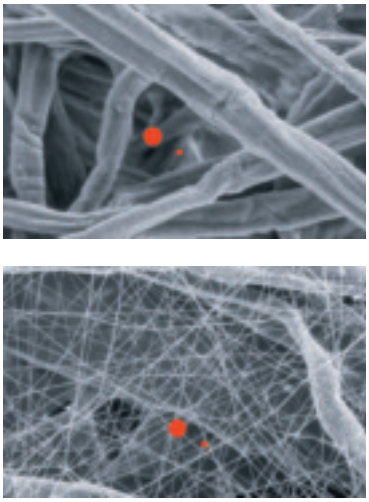
Media Comparative Cross Section



Donaldson Endurance Air Filters with Nanofiber vs. Conventional Cellulose

Cellulose fibers are larger than nanofibers, and have larger spaces between the fibers, causing contaminants to load in the depth of the media and plug the airflow path, which results in higher restriction and less capacity.

Red circles represent the diameter of a 2-micron and a 5-micron particle.



Nanofibers have submicron diameters and small interfiber spaces, which result in more contaminants being captured on the surface of the media and lower restriction.

Donaldson Endurance air filters deliver cost saving benefits:

- **Longer Engine Life**
- **Longer Filter Life**
- **Extended Maintenance Intervals**
- **Double Mileage Guarantee**

Oil Filters

Donaldson Endurance oil filters are made with advanced synthetic technology that results in fibers that have a controlled size, down to submicron diameters.

This controlled process allows Endurance oil filters to deliver both higher dirt holding capacity at the same pressure differential and higher efficiency compared to conventional cellulose filters. The synthetic media also has better durability and increased resistance to water.

Throughout the service life of a cellulose filter, hot oil degrades the resins in the media. The synthetic media uses a wire screen backing pleated with the media for superior strength and long term durability.

Endurance oil filters provide a filtering efficiency of 98.7 percent at 15 microns and 50 percent at 7 microns in accordance with industry standard ISO 4548-12. This is the best rating in the industry.

So whether extending maintenance intervals to the limit and running the engine for a million miles without an overhaul, maintaining a national fleet or running a coal mine, Endurance filters can lower total operating costs.

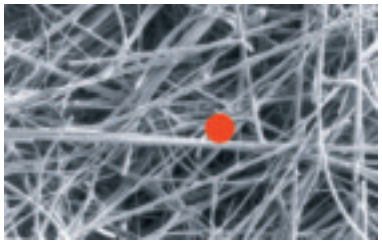
Using AMSOIL synthetic oils and the Endurance filters, with advanced synthetic technology, makes a superior extended drain combination.

AMSOIL will guarantee Endurance oil filters up to twice the manufacturer's recommended service interval, to a maximum of 60,000 miles for heavy-duty diesel applications. Endurance filters are guaranteed to extend the customer's drain interval when used under normal on-highway conditions while following these maintenance practices:

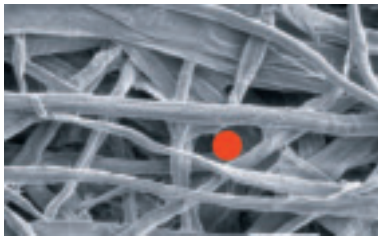
- Use of Endurance oil filter(s)
- Use of AMSOIL Synthetic Motor Oil
- General preventative maintenance practices performed in accordance with manufacturer's recommendations.
- Engine in good operating condition prior to attempting extended drain intervals

Small synthetic fibers trap smaller particles and hold more contaminants, resulting in lower restriction.

Red circles represent the diameter of a 20-micron particle.



Cellulose fibers are inconsistent in size and shape, allowing more contaminants to pass through, resulting in higher restriction and lower capacity.

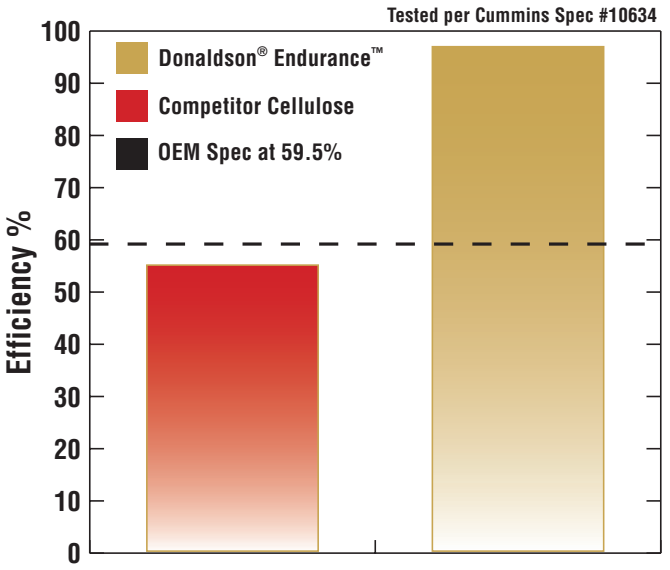


Engine Protection Filters Drive Costs Down

Donaldson Endurance oil filters are made using exclusive advanced synthetic media technologies. Synthetic media technology delivers cost saving benefits with:

- **Extended service life**
- **Greater engine protection**
- **Prolonged engine and equipment life**
- **Improved lubricant flow**
- **Improved cold start performance**
- **Reduced operating costs**

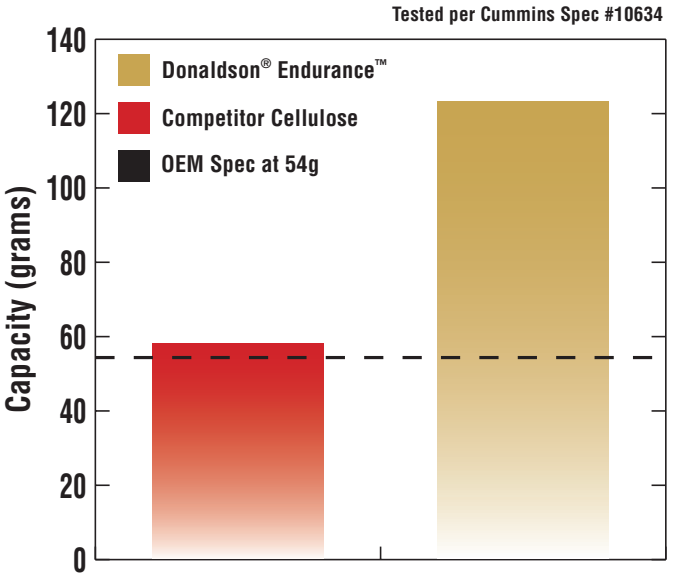
Efficiency



Higher Efficiency

Dirt and other small contaminants cause wear that reduces engine and equipment life. Endurance oil filters are more effective than cellulose media in removing these small contaminants.

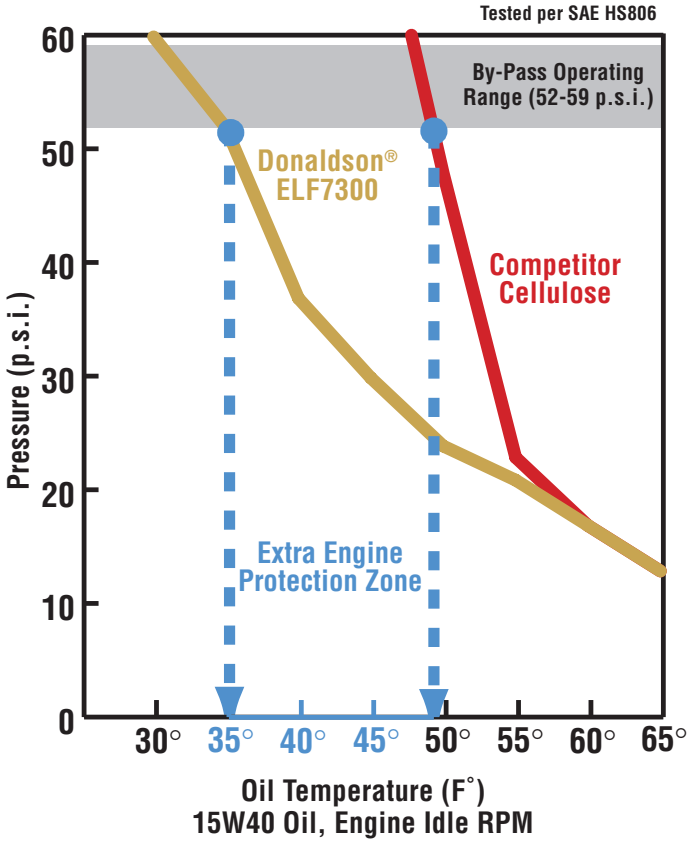
Capacity



Higher Capacity

Contaminant holding capacity is a major factor in determining when a filter needs to be changed. Endurance oil filters have greater contaminant holding capacity than conventional cellulose filters.

Flow Restriction During Cold Starts



Better Engine Protection During Cold Starts

Endurance oil filters have significantly lower restriction than conventional cellulose media filters. During the engine warm-up period, an Endurance oil filter allows the oil to flow through the filter at a colder temperature than a typical cellulose filter. The additional filtering time decreases engine wear.

Improved Gasket and Grommet

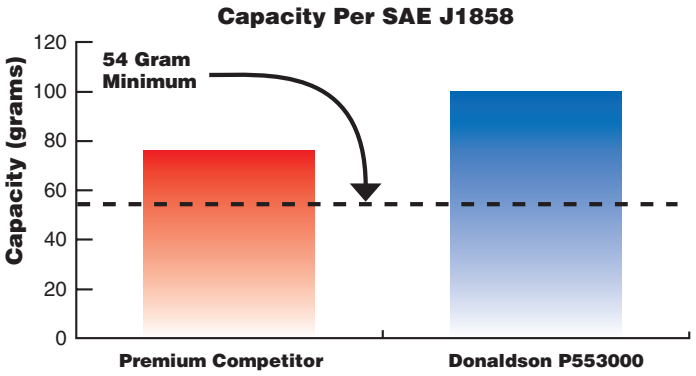
The Endurance filter's high-grade material stays flexible and sealed during extended exposure to hot oils with advanced additive packages.

P-Series

With many applications that differ from, and several that coincide with the Endurance line, Donaldson P-Series filters offer premium filtration at a competitive price. Donaldson P-Series filters feature housing constructed with heavy gauge steel and domed construction, providing superior pressure fatigue performance. Donaldson P-Series oil filters are constructed with either full synthetic media or synthetic blends for high efficiency. The center tube allows more flow without compromising strength, and the louvered design eliminates tearing during pleat movement. The media is embedded deeper into the sealing plastisol than conventional filters, allowing better sealing longevity. Additional features include a nitrile sealing gasket, a fully tucked seam, roll formed threads and a compression spring holding all the components in place within the filter. AMSOIL carries Donaldson P-Series oil, air, fuel, hydraulic and coolant filters.

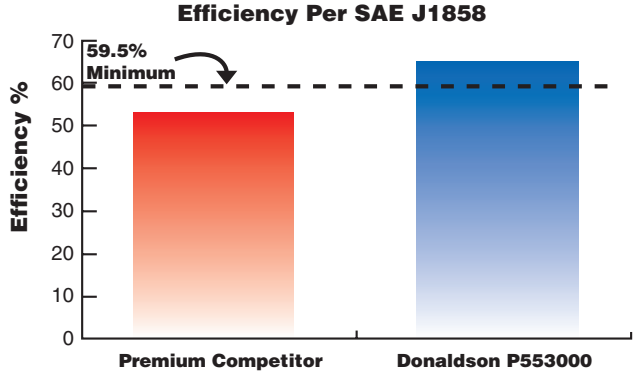
Greater Capacity

Donaldson P-Series filters hold more contaminant than the original equipment oil filter. The more capacity a filter has for holding contaminants, the longer the filter will perform. The longer the filter lasts, the more miles an engine can run without a filter change.



Higher Efficiency

Advanced filter media delivers higher efficiency engine protection than the original filter. Synteq filter media is the key to Donaldson's P-Series heavy-duty filter line's high efficiency performance. Higher filter efficiency results in cleaner oil because the filter media stops more contaminants from passing through.



Fuel Filtration

Today's engines are built to more stringent specifications and finer tolerances. Fuel systems, pumps and injectors require cleaner fuel to achieve better combustion and lower emissions. Donaldson fuel filters provide clean, filtered fuel that prevents pump wear, injector clogging, premature engine wear and can boost fuel efficiency. AMSOIL carries a complete line of spin-on and cartridge-style filters.

Coolant Filtration

Engine cooling systems keep engine temperatures at the right level to dissipate heat and maintain the right operating conditions for optimal fuel economy. Donaldson coolant filters remove contaminants, minimize the risk of filter plugging and keep your engine running efficiently.

Hydraulic Filters

Donaldson industrial hydraulic filters provide excellent protection for machinery and components in hundreds of applications in factories and on heavy-duty equipment. Donaldson provides filter housings, filter heads, replacement cartridges, spin-ons and hydraulic accessories.

Donaldson P-Series Filter Features

- Unique wide-mouth cartridge outflow that allows unobstructed oil flow from the filter media, consistently delivering the maximum flow available.
- Multi-density Synteq filter media holds more contaminants, meeting and even exceeding performance specifications for Cummins diesel engines.
- Superior filter cartridge design that permits 38 percent more full-flow surface area and therefore, the engine oil continually receives high-efficiency filtration.

PowerCore Filters

AMSOIL offers premium air filters that utilize PowerCore filtration technology. The rugged structure of PowerCore filters features an innovative, layered, fluted filter media, which allows air to enter an open flute while forcing it out an adjacent flute, allowing only clean air into the engine. Dirty air is effectively filtered and cleaned in only one pass through the media.

AMSOIL carries the entire line of Donaldson PowerCore filters that provide less restriction and greater power. Applications include the Ford 6.0L PowerStroke™ Diesel, GM H2 Hummer 6.0L Vortec, certain models of John Deere tractors and Freightliner M-2 engines, as well as an air induction box for Ford 7.3L PowerStroke Diesels.

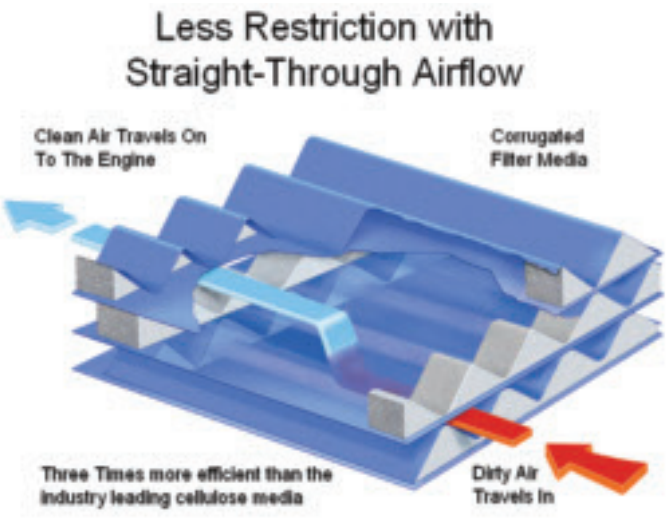
Expanded Market

Truck sales represent the fastest growing segment of the U.S. automotive market. Fifty percent of new vehicles sold today are trucks. Now, AMSOIL has expanded that market even further with the addition of premium filters for the Ford 6.0L Diesel PowerStroke engine and the GM H2 Hummer 6.0L Vortec.

Innovative Design

The design of the U.S. and internationally patented housings, filters and filter media are key to Donaldson PowerCore filtration technology.

Donaldson PowerCore filter media is formed into flutes. These flutes are layered to give tight, rugged structure to the filter. The fluted channels are alternately sealed allowing air to enter through an open flute and forcing it to exit out an adjacent flute. The dirty air travels in and is filtered in one pass through the media.



Improved Efficiency and Protection

Donaldson PowerCore filters are 10 times more efficient than average conventional filters. PowerCore filters provide improved contaminant encapsulation, over 100 percent more dust holding capacity in a given volume. That means dust and dirt won't dislodge during servicing.

The straight-through fluted filter design improves engine protection because there is no media movement, expansion, contraction or bunching. There is also less dust and dirt passed on to the engine. The fluted design keeps contaminants inside the filter, preventing contamination of the unprotected air filter housing.

Improved Handling and Maintenance

PowerCore filters are lighter and smaller, making filter changes much easier. Their non-metal, incinerable construction makes them easier to dispose of.

- **Three times more efficient than standard filter designs**
- **Increases contaminant holding capacity**
- **Eliminates media movement, expansion, contracting and bunching**
- **Contaminants remain trapped and won't dislodge during service**
- **Utilizes RadialSeal™ sealing for easy service**
- **Metal-free construction allows for incineration**
- **99.95% efficiency**

Donaldson 7.3L Power Stroke Diesel Air Induction System

AMSOIL offers a new air induction system from Donaldson. The new system brings better performance to Ford owners. Diesel engines need clean, unrestricted air for optimal performance. The new Donaldson 7.3L Power Stroke Diesel air induction system with PowerCore technology provides better air filtration through better engineering.

The PowerCore Air Induction System (PCIS-73) replaces the present air intake system and utilizes a Donaldson PowerCore filter to provide unmatched performance and filtering efficiency on 1999 through 2003 model year F-250 to F-550 Super Duty trucks and SUVs with 7.3L PowerStroke Diesel engines.

Greater Filtering Efficiency

The Donaldson air induction system is three times more efficient than the industry leading cellulose media. The layered structure from PowerCore technology is totally non-metallic and allows for 99.95 percent efficiency. The highly efficient Donaldson PowerCore air filter is the only aftermarket induction system that is approved by Ford Motor Company.

Easy Installation

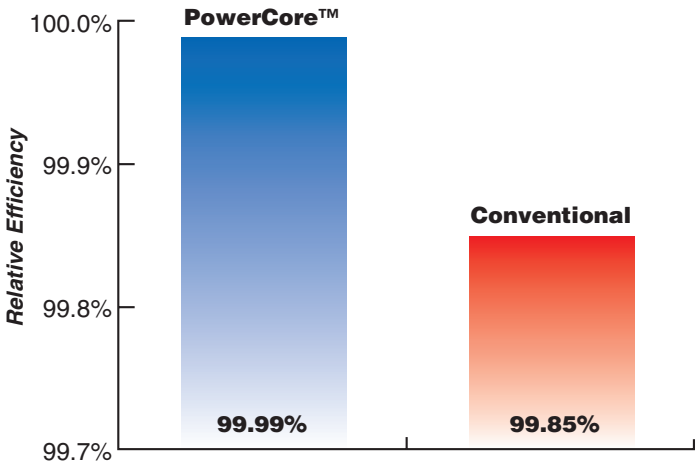
The new air induction system kit comes with the air filter box fitted with a PowerCore filter, air restriction gauge, temperature sensor, air inlet duct, battery blanket, battery box plate, necessary fasteners and complete installation instructions. The kit installs in 35 to 40 minutes and there are no extra parts to buy. (Early 1999 models require an additional clean air hose available from Ford.)

Greater Filter Capacity

More capacity means more engine protection. The PowerCore air filter has over 16 times more media surface area than washable filters, and 3 times the media surface of conventional filters. The PowerCore air filter has five times more dust holding capacity than washable/reusable air filters and twice the capacity over premium quality traditional filters. Greater capacity also means changing filters less often, even in more severe service situations. When the restriction gauge on the PCIS-73 reads in the red zone, change the filter as soon as possible.

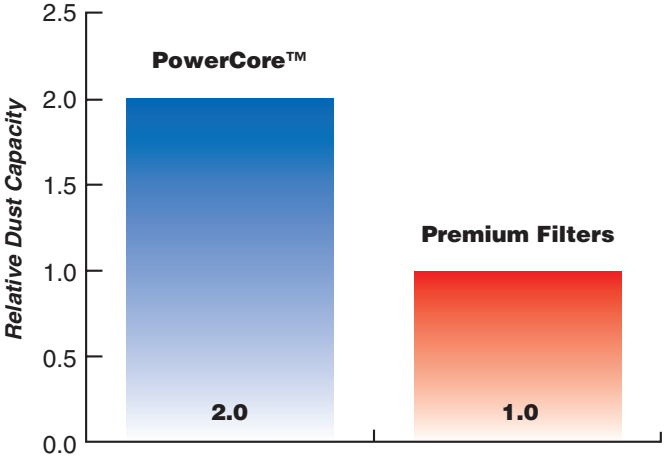
- **5 times the amount of dust capacity of typical washable filters**
- **16 times the media area of typical washable filters**
- **400 times more efficient at capturing harmful dust and contaminants than typical washable filters**
- **Improved fuel economy**
- **Improved horsepower**

Overall Efficiency



Improved filtration efficiency.

Dust Holding Capacity



Gain Over 100% More Dust Holding Capacity in a Given Volume

WIX® Filtration Products

To complement the Ea line of filters, AMSOIL now offers WIX filters, allowing AMSOIL Dealers to offer one-stop shopping for automotive customers. AMSOIL carries over 700 WIX air, oil, fuel, racing and transmission filters for automotive and light truck applications.

Oil Filters

WIX oil filters have a full metal base plate for superior strength at the double seal. They also feature a silicone anti-drainback valve that stays flexible in extreme temperatures. This improves oil flow and keeps oil in the filter to prevent dry starts. The up-front by-pass valve in WIX oil filters keeps oil from washing past dirty media and entering the engine. Their glass-enhanced media offers greater efficiency, capturing more 10- to 12-micron sized particles than other cellulose/synthetic blend medias. WIX oil filters also have a coil steel spring to ensure internal filter parts are sealed properly.

Air Filters

WIX panel element air filters have a linear path through the filter for low airflow restriction, a specially formulated adhesive to form WIX's exclusive pocket pleat for the filter media and a soft sealing urethane gasket molded in place on the filter element.

Radial air filters are constructed of mesh screen on the inside wall diameter for element strength and media protection from backfire. Each round filter is manufactured with heat-resistant plastisol with specially designed crush seals on the top and bottom walls and adhesive seal joining the media ends.

Gasoline Filters

WIX gasoline filters provide unmatched gasoline cleansing performance. They prevent pump wear, injector clogging, premature engine wear and help boost fuel efficiency. WIX gasoline filters offer quick, easy filter replacement, long life and the possibility of extended service intervals. WIX spin-on filters reduce the possibility of improperly installed cover gaskets, and they provide effective, easy draining of excess water on filters equipped with the drain plug. The superior materials, design and construction of WIX gasoline filters provide excellent performance under all types of operating conditions.

Transmission Filters

AMSOIL also offers the full line of industry-leading WIX transmission filters for passenger cars and light trucks. WIX transmission filters provide superior protection for many transmission applications in the auto/light truck market.

Cabin Air Filters

AMSOIL carries the entire WIX line of high-efficiency cabin interior air filters for passenger cars and light trucks.

Racing Filters

AMSOIL is carrying WIX racing filters in addition to filters for more common automotive and light truck applications. WIX racing filters are specially designed for racing applications and are not intended for normal driving applications. AMSOIL carries all WIX racing filters, which

AMSOIL products and Dealership information are available from your local AMSOIL Dealer.

AMSOIL INC., AMSOIL Bldg., Superior, WI 54880 • (715) 392-7101 • Fax: (715) 392-5225, (715) 392-5267 • Printed in U.S.A. © Copyright 2005 G-2111 6/07