



**NEW! Lube, Fuel & Coolant
Spin-on Engine Filter Line**



The Best Choice for Popular
Heavy-Duty Engines

Brochure No.
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F I L T E R S

Donaldson®

New Design Eliminates Any Potential Engine Failure!*



Today's heavy-duty engines are built to last longer and to withstand more severe service than in years past. These improvements demand filters with heavy-duty design characteristics and optimum filtration performance.

Donaldson's new line of engine liquid filters outperforms all competitive filter brands in design and filtration performance.

You can be certain that a Donaldson manufactured engine liquid filter will perform in even the most demanding environments.

Beefed-Up Thread Plate & Seam

The Donaldson produced spin-on has three heavy-duty features: ① thread plate profile (strength), ② rolled threads (cleaner), and ③ the full tuck seam (durability). The tapered thread profile simplifies installation and prevents cross threading. The full tuck seam ensures maximum strength and durability compared to competitive brands.



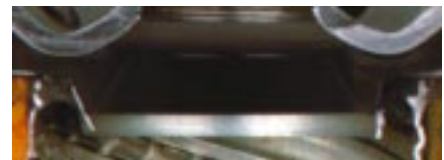
Donaldson Thread Plate Cross Section



Competitive Thread Plate Cross Section

Resilient Inner Seal

Not all filters have a seal between the thread plate and end plate. Donaldson's seal is constructed of molded elastomer which is designed for extreme cold and heat. Competitive brands use paper, cork and plastic spacer materials that do not last the service life of the filter.



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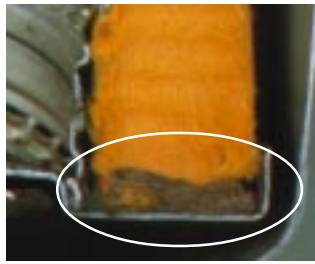


Brand A

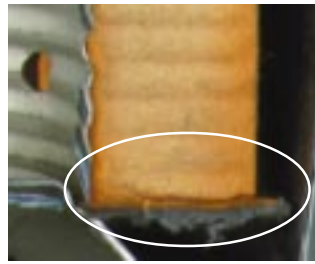


Brand B

* Due to filter failure.



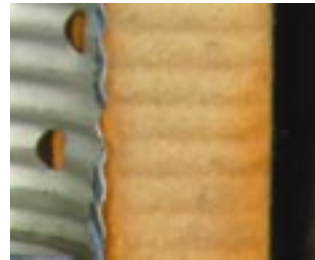
Donaldson



Brand A

Heavy-Duty Element End Plates & Seal

A leak will occur in a filter when the end plate and filter do not seal completely. There is no chance of Donaldson filters leaking at this critical point because Donaldson spin-on filter media is embedded deeper in the plastisol (sealing compound) compared to competitive brands.



Donaldson cures its filter media (on left) before the element is assembled, as shown by the consistent color of the entire surface of the filter media. The uneven color variation of the filter media of Brand A (on right) is an indication that the filter media was cured after element assembly.

More Durable Filter Media

During manufacturing, the filter media is cured in special ovens. Curing is the process that adds strength to the filter media and ensures that filter bypass does not occur. Donaldson cures its filter media while the media is in a flat, pleated state to ensure consistent and even curing. Competitive brands cure the media after the element is assembled – leaving the media poorly cured and in a weakened state. Uncured media has very low strength and can rupture easily when saturated with oil.



Donaldson



Brand A



Brand B

Increased Flow Center Tube

Donaldson's center tube is unique. Tubes with holes have to balance the flow area (reduced flow) with the collapse strength (more holes equals weaker tube). The Donaldson center tube allows more flow area without compromising the collapse strength. Sharp edges on holes in competitive tubes can cause media tears during pleat movement. Donaldson's louver design has hundreds more flow openings and since the louvers are pushed in towards the inner tube, the surface is smooth and pleat tip wear is eliminated.



Donaldson



Brand A



Brand B

Strong Housing Material & Shape

Donaldson domes and corner radius have superior pressure fatigue performance. Filters with wrench flats or sharp radius edges will crack sooner than the Donaldson filter.

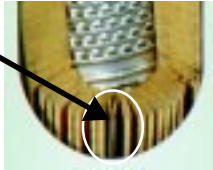
Not Convinced?

If you are still not convinced that Donaldson's filters are the most reliable and durable spin-on design in the industry, here are a few more points to consider...

Another no-leak feature is the tabs on the top end plate of the filter cartridge. These tabs prevent the inner element from getting off-center in the housing – preventing leaks and unfiltered fluid to bypass the element.



The filter media in the element is fastened mechanically with a metal clip. Competitive spin-on brands use a glue seam which is more susceptible to deterioration during operation.



The spring in a spin-on filter keeps the internal filter element compressed against the thread plate and seal. Donaldson spin-on filters use coil springs which compress and rebound under extreme pressure. Competitive brands use a leaf spring which, when compressed, will bend and deform allowing unfiltered fluid to bypass the element.



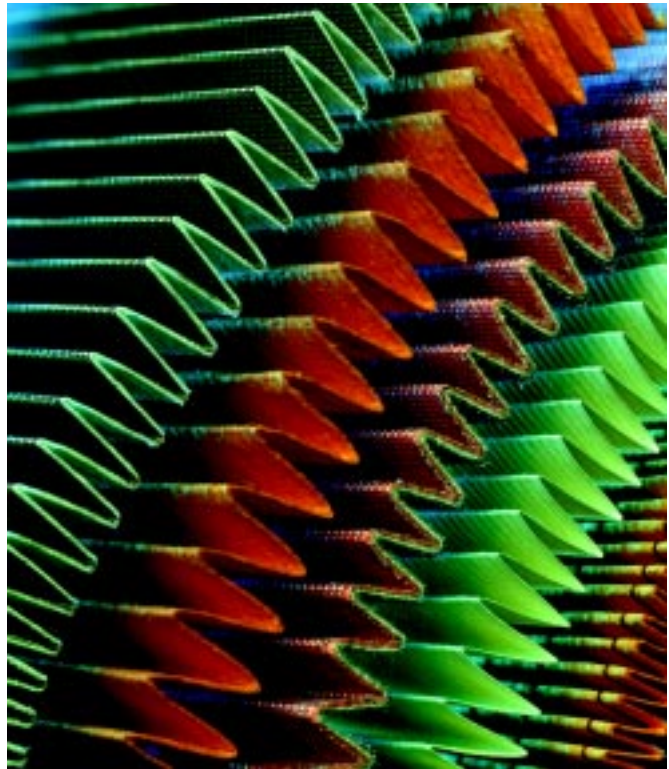
Donaldson's spiral lock seam has nearly twice the collapse strength of filters with a straight seam.



Filtration Performance Meets or Exceeds the Needs of Today's Engines

Engine manufacturers have different filtration performance specifications based on the operating environment of the engine.

During the design process, Donaldson engineers match this performance with over 26 grades of liquid filter medias. Most filter manufacturers typically use less than five media grades.



Expanded Liquid Filter Manufacturing Facilities

To accommodate an expanding liquid filter demand, Donaldson recently doubled its filter production facility.

During the assembly process, filters are tested for leaks, hydrostatic burst, pressure fatigue, and seam construction.

Products are individually shrink-wrapped to protect contamination from entering the filter during shipment and/or storage.

Highly automated manufacturing ensures consistent quality and quick responsiveness to customer orders.

The Donaldson identity on the spin-on filter is sharp and smudge-free. It is applied with a unique, fully automated printer designed specifically for Donaldson Company.



Filter production line.



All Donaldson manufacturing facilities are ISO9002 and QS9002 certified.



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