Donaldson
FILTRATION SOLUTIONS

Donaldson Delivers

Pilot Control Circuit Filtration

Pilot Control Circuit Filtration with Impact

Value That Exceeds Other Aftermarket Filters

Pilot control circuit filters are known for having a high operating pressure, burst, and fatigue requirement to withstand the duty cycles of the hydraulic pilot control circuit. The main purpose of a pilot control circuit filter is to protect your equipment's sensitive valves from contamination and excessive wear. Donaldson understands that the best filtration protection is achieved by using premium filtration media.

Optimized for System Performance

The Best Aftermarket Pilot Control Circuit Filters

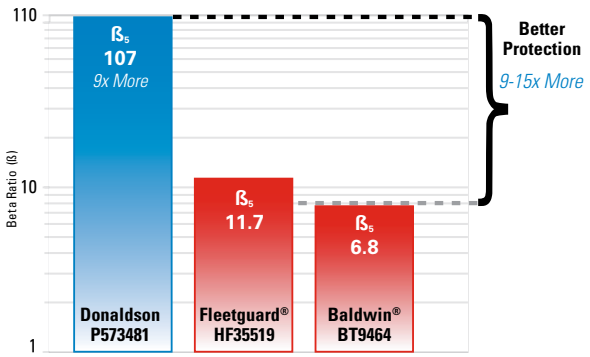
Lower pressure drop saves energy and reduces filter bypass in cold weather conditions. Minimized exposure of critical, expensive components to abrasive contamination keeps downtime and repair costs low. Maximized dirt holding capacity ensures filters last the specified service intervals in the dirtiest operating environments. Donaldson balances these filtration parameters to offer you the BEST overall filtration for your equipment.

START TO FINISH

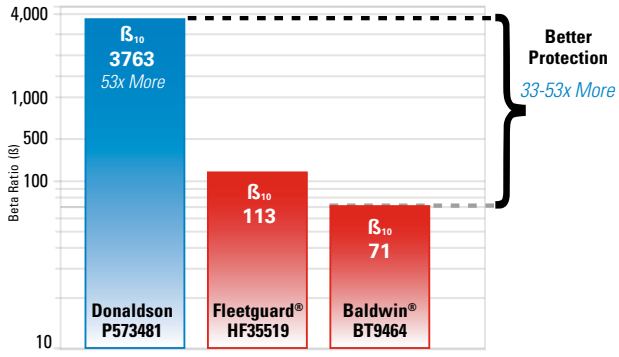
10-50x more efficient

THAN OTHER AFTERMARKET FILTERS

Beta Ratio (ß) @ 5µm particle size*



Beta Ratio (ß) @ 10µm particle size*

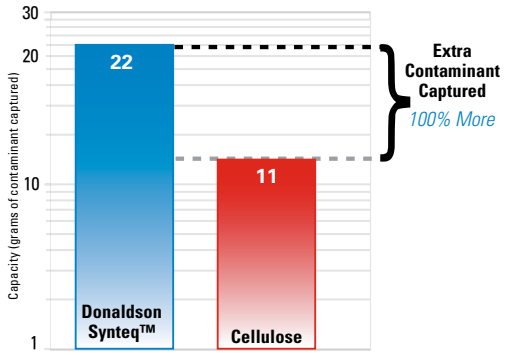


*Efficiencies are compared by forming beta ratios. Beta ratio is represented by contaminant–in divided by contaminant–out. Tested per ISO 16889 at 30 GPM / 114 LPM. Termination at 50 PSI / 345 kPa.
Fleetguard® is a registered trademark of Cummins Filtration Inc. Balwin® is a registered trademark of Baldwin Filters, Inc..

Maximize Contaminant Holding Capacity

Donaldson filters meet your equipment service interval requirements. By maximizing dirt holding capacity and reducing filter changes, using Donaldson filters keeps service time and maintenance costs down. Donaldson optimizes filtration to give you the best possible solution.

Contaminant Holding Capacity*



*Tested per ISO 16889 at 30 GPM / 114 LPM. Termination at 50 PSI / 345 kPa

Lower Restriction Makes a Difference

Minimize Bypass Contamination

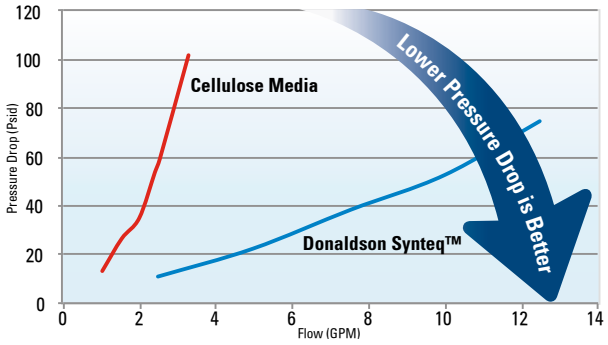
Lower flow restriction enhances filtration performance by reducing bypass events in cold start situations.

Lower Pressure Drop – Better Filtration Performance

Lower pressure drop (lower flow resistance) means your pilot control circuit is less likely to experience restricted oil flow that could result in hard particles bypassing the filter and damaging critical components.

As the graph shows, Donaldson Synteq™ media filters with their superior wire-backed media support, have an order of magnitude lower pressure drop than those using cellulose media.

Filter Pressure Drop at 450 cSt Viscosity



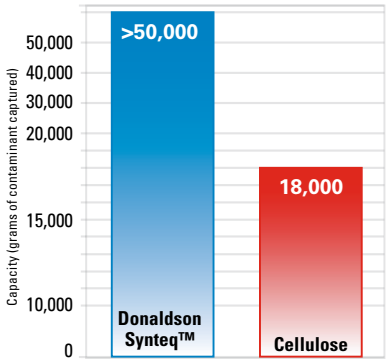
Tested per ISO 3968 at 450 cSt.

Under Constant Pressure

Building Durable, High Quality Pilot Control Circuit Filters

Starting your equipment in the cold will provide some of the most extreme viscous flow surges your pilot control circuit will experience. It is very important that all components in your circuit are designed to withstand this pressure time and time again. At Donaldson, our Synteq™ filter media is designed and validated to withstand the harshest conditions and operating environments, ensuring your equipment stays up, running and efficient.

Flow Fatigue Summary



- **More resilient in handling real world, repeated stress than other aftermarket filters**
- **Resistance to Flow Fatigue**

(Tested per Industry Standard ISO 3724)

Donaldson Filters Protect Under Pressure

Donaldson knows that pilot control systems are continually exposed to cold start conditions and must therefore be resilient to repeated high pressure impulses. That is why we recommend synthetic media over cellulose wherever high pressure impulses are expected.

Cellulose filters are known to be much more susceptible to flow fatigue failures and can expose systems to filter failure in extreme cases.

	Donaldson	Fleetguard	Baldwin
Part Number	P573481	HF35519	BT9464
Dirt Loading (g/ft² media)	18.1	17.8	3.8
Particle Efficiency @ ß=75 (µm)	4.3	9.2	10.4
Particle Efficiency @ ß=100 (µm)	5	11.5	12.7
Beta Ratio @ 5µm	107	11.7	6.8
Beta Ratio @ 10µm	3763	113	71
Pressure Drop @ 10 GPM and 450 cSt (in kPa)	3629.4	2456.4	Too high to measure

*Efficiencies are compared by forming beta ratios. Beta ratio is represented by contaminant–in divided by contaminant–out. Tested per ISO 16889 at 30 GPM / 114 LPM. Termination at 50 PSI / 345 kPa. Fleetguard® is a registered trademark of Cummins Filtration Inc. Balwin® is a registered trademark of Baldwin Filters, Inc..

Optimize Value

Donaldson knows that your purchasing decisions depend on many variables. A value equation that optimizes material content and performance to give you the best protection for your money.

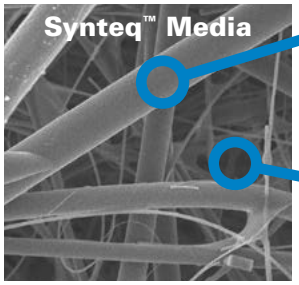
Optimize Performance

The Synteq™ media used in our P573481 optimizes performance of the following filtration parameters:

- Superior particulate efficiency without added restriction
- Extra dirt holding capacity
- Superior flow fatigue resistance under high viscosity conditions

Donaldson pilot control circuit filters offer a solution to support system protection without sacrificing quality.

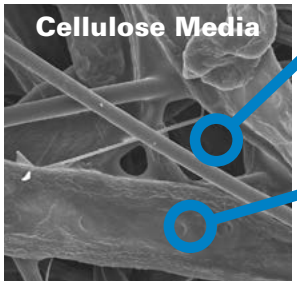
Filtration Media Comparison



Synthetic media has thinner and stronger fiber structures that minimize pressure drop

More consistent pore structures and densities increase contamination holding capacity

Donaldson Synteq media offers the best protection for pilot control circuit available today



Cellulose media has thicker fiber diameters, which close off pores and passageways for fluid flow, increasing pressure drop

Obstruction by large cellulose fibers decreases contamination holding space, reducing dirt holding capacity

Other pilot control circuit filters use lower performance filtration media, reducing performance dramatically

Donaldson FILTRATION SOLUTIONS

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