



Perkins® Ecoplus fuel filters

The **difference** is in the **detail**

Protect your Perkins small and medium engines engine fuel system with advanced fuel filters

Perkins® Ecoplus filters were originally developed for our 1100 Series engines and improved over 20 years of continuous development on our 854, 904 and 1200 Series engines. They offer proprietary technology that safeguards your engine and extends the lifetime of your investment.

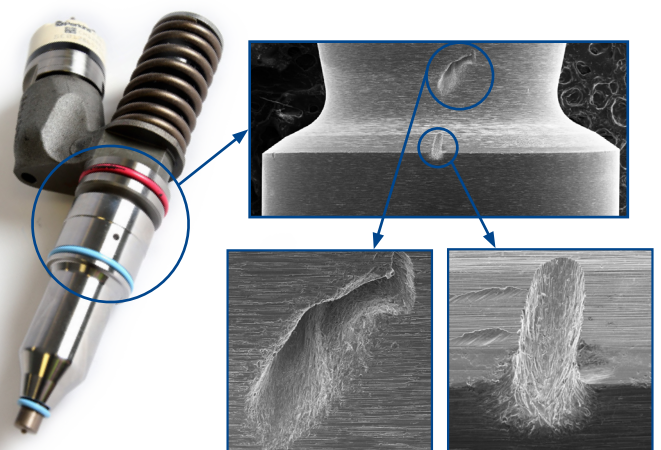
Their 'element based' design means Ecoplus filters are less harmful to the environment than traditional filters. They

- have no metal can to dispose of
- require less materials to manufacture
- minimise waste after use
- can be easily and cheaply incinerated or recycled

Today's diesel engines use components built with tighter tolerances and operate at higher temperatures and pressures than their predecessors, all of which make clean fuel more important than ever. Even dirt and metal particles as small as five microns can damage fuel injectors and other key components, and water can cause corrosion damage.

If the fuel filter does not perform effectively the consequences can include scoring and damaged injector valve seats, pump components and control valves. This damage can lead to increased fuel consumption, over-fuelling, poor engine starting and improper idling as well as emission levels in excess of regulations. At this point the only solution is to replace the injectors.

The effectiveness of a fuel filter can be affected by surges or changes in pressure in the fuel system, causing distortion to the fuel filter media. This distortion causes the media pleats to close up, reducing the surface area for filtration leading to poor particle retention and the closing and opening causes stress to the media itself with the potential for early life failure.



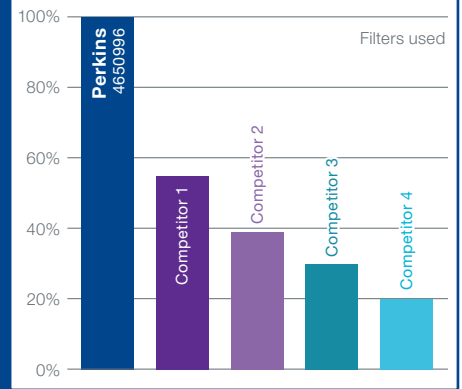
Injector testing shows Perkins fuel filters provide superior protection.

We tested Perkins fuel filters using EcoPlus technology against high quality competitive filter brands to compare injector life.

The tests simulated real life, using an engine fuel system including a fuel pump and injectors, with contaminated fuel to replicate a harsh operating environment.

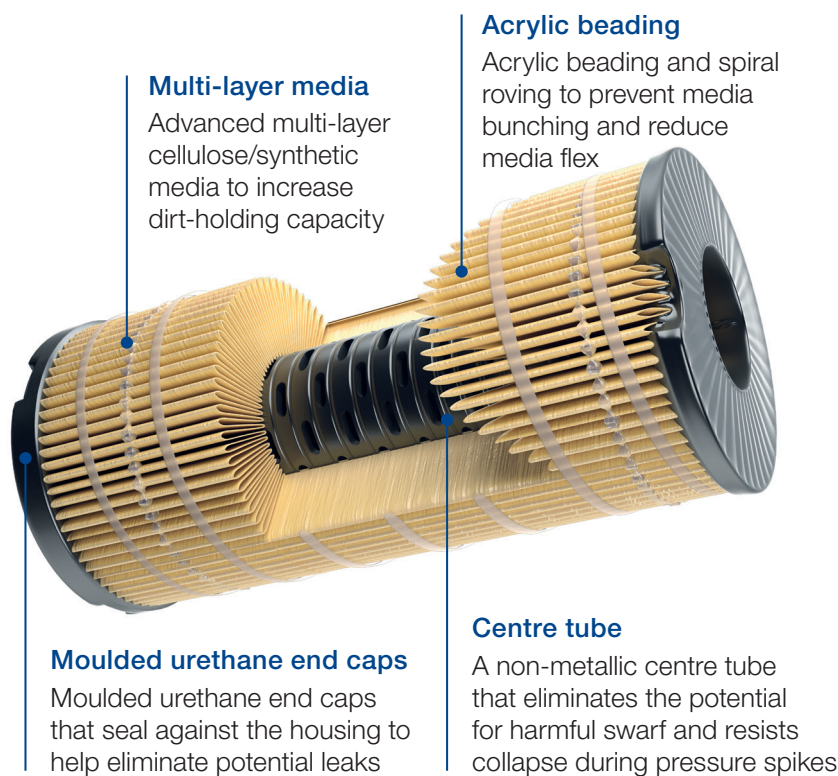
The tests showed injectors protected with Perkins filters exhibited noticeably less wear and fuel leakage when compared to the injectors tested with the competitive filters.

Perkins filters increased injector life by up to 45%



Find out more information visit: www.perkins.com/reallifefilters

The key features of EcoPlus technology



Spiral roving provides support

Within a fuel system surges or changes in pressure can cause distortion to the fuel filter media. The EcoPlus technology uses a fibreglass spiral roving to prevent the pleats from flexing, holding the media in place. This reduction in the flexing and movement of the filter pleats improves particle retention and holding capacity. The addition of spiral roving has also shown to have increased resistance to collapse.

Make a sound investment

The real cost of using a non-genuine filter may not show up immediately. But over time genuine filters provide increased protection for injectors and fuel pumps, reducing wear and making failures less likely.

Also, as little as a three percent higher fuel consumption through injector wear could soon outweigh any savings from using a non-genuine filter.

Protecting fuel systems makes economic sense: Wear on injectors can increase fuel consumption

All Perkins® EcoPlus filters come with a full 12-month warranty.

Made for real-world conditions

Whilst Perkins specifies that fuel should be good quality, we design our fuel filters to cope with a wide range of applications and fuel standards around the world. And our rigorous engine testing regimes mean we know they will deliver high levels of performance wherever they are used. Using laboratory testing alone may not be a good indicator of filter performance in the field.

Perkins filters offer an effective defence against contaminants to safeguard your engine and extend the lifetime of your investment.

Don't risk downtime with anything else.

Find out more about the full EcoPlus range at: www.perkins.com/ecoplus