Perkins fuel filters

The difference is in the detail

Protect your fuel system with advanced fuel filters

Tighter tolerances, plus higher temperatures and pressures in diesel fuel systems make clean fuel more important than ever.

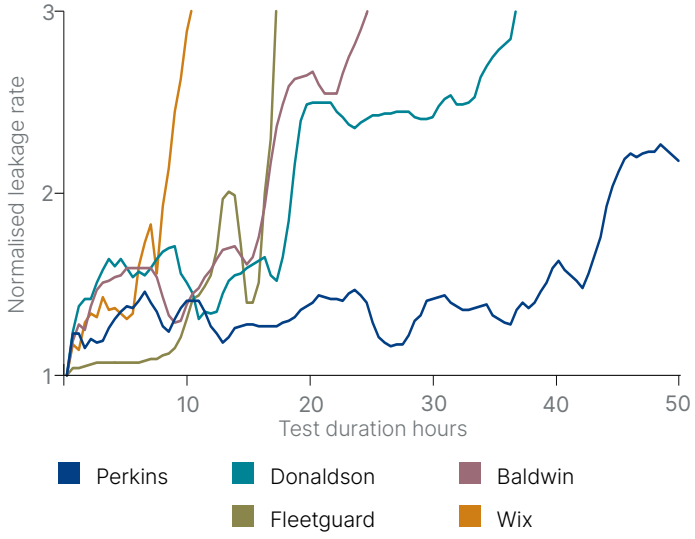
Even dirt and metal particles as small as five microns can damage fuel injectors and other key components and water can cause corrosion damage. Damage caused by the particles can include scoring and damaged injector valve seats, pump components and control valves leading to increased fuel consumption, poor engine starting and improper idling. The effectiveness of the fuel filtration is key in preventing this damage.

Injector testing shows Perkins fuel filters provide superior protection.

Perkins fuel filter 4650996 was compared against high quality competitive filter brands to compare injector life. Testing was conducted using a 9 litre engine fuel system to test injector life. Highly contaminated fuel was circulated through the system at rated and high idle to simulate an extremely harsh operating environment. The test was terminated if the injector exhibited a leakage rate three times that of new or achieved 50 hours in duration.

The injector leakage rate for the competitive filters was seen to exceed three times before the 50 hours test termination. The Perkins filters lasted longer, with a lower leakage of just over two times at the test termination period.

Injector performance comparison



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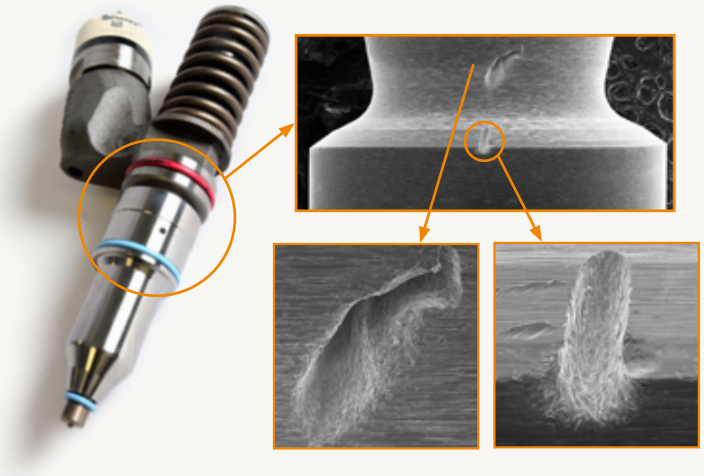
Injector valve seat damage

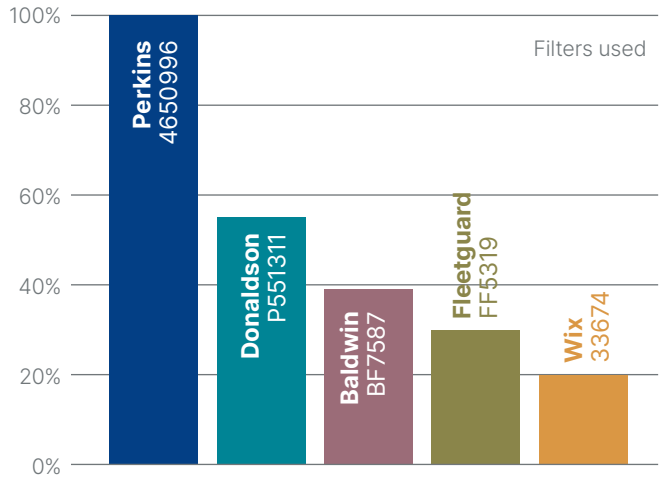
Particles in the fuel cause wear or erosion on the valve seat, which leads to fuel leakage through the injector. All the competitors had significant leak paths form as a result of erosion due to a high level of contaminates getting through the filter. The image on the right represents typical wear of injector valve seat at test termination.



Perkins filtration increases injector life by 45%

These test results can be summarised in the average expected injector life.

Average expected injector life



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

Injector life was significantly longer for those protected with the Perkins filters.

How Perkins fuel filters improved injector protection

The Perkins® Ecoplus technology in these fuel filters uses an engineered filter element inside the metal canister. This element uses fibreglass spiral roving to hold the media in place to prevent the pleats from flexing. Reducing flexing and movement of the filter pleats improves particle retention and holding capacity. And the addition of spiral roving has also been shown to increase resistance to filter media collapse.

Perkins Ecoplus technology is widely used on fuel filters for our Perkins engines, and used on latest generation oil filters for 904 Series engines.

Perkins fuel filters offer:

- Reliable and effective protection of today's high performance, low emission engines
- Clean fuel delivered to sensitive fuel system components
- Low fuel system costs over the life of your equipment

Testing process

These accelerated wear tests were conducted by the Caterpillar testing laboratories using a Perkins injector on a cylinder head and factory fuel system of a 13 litre engine. The fuel was dosed with ISO 22 fuel (40k particles/mL) and used a Perkins secondary filter and competitive filters sourced from the US market. With no primary or tertiary filters and run at rated pressure (180 kPa) and high idle (1800 rpm). The test was terminated when either the injector reached three times the leakage rate of new or after 50 hours in duration.

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Together, we power ahead.