

# True Component Protection

**Injector Testing Shows Cat® High Efficiency Fuel Filters Provide Superior Protection.**

Cat® High Efficiency Fuel Filters offer the most reliable and effective protection of today's high performance, low emission engines. Protecting critical fuel system components is getting more difficult all the time. Improved machine performance brings tighter component tolerances, increasing engine temperatures, and higher injector pressures. All these changes demand significantly cleaner fuel be used in your equipment.

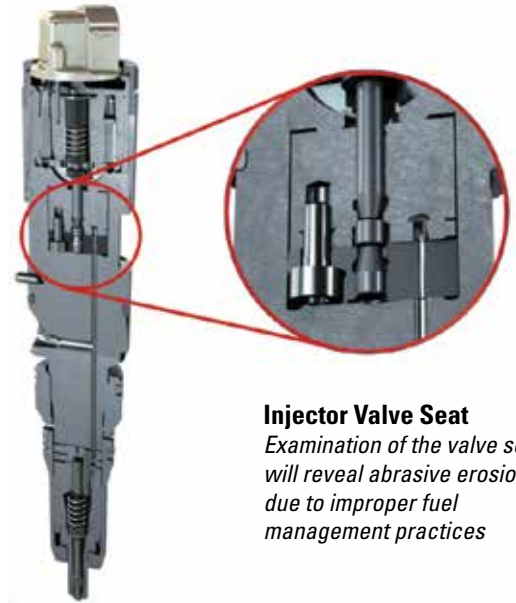
**How good are your fuel filters?**



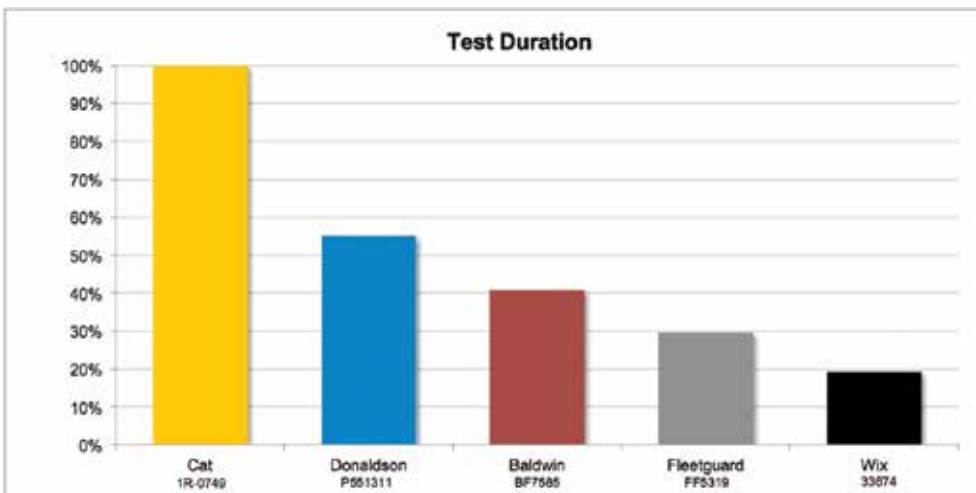
# Which filter performs best?

As injector pressures increase, maximizing injector life demands filtration capable of limiting the size and number of particles that get through the fuel filter. All fuel filters remove some abrasive particles but many competitive filters are simply not effective at capturing and retaining the particles that are most damaging to fuel system components.

This was demonstrated through an injector life test that utilized a Cat C9 engine fuel system. The test rig consisted of a factory cylinder head, fuel injectors, fuel pump, lines, and electronics. 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 3X that of new or achieved 50 hours in duration.

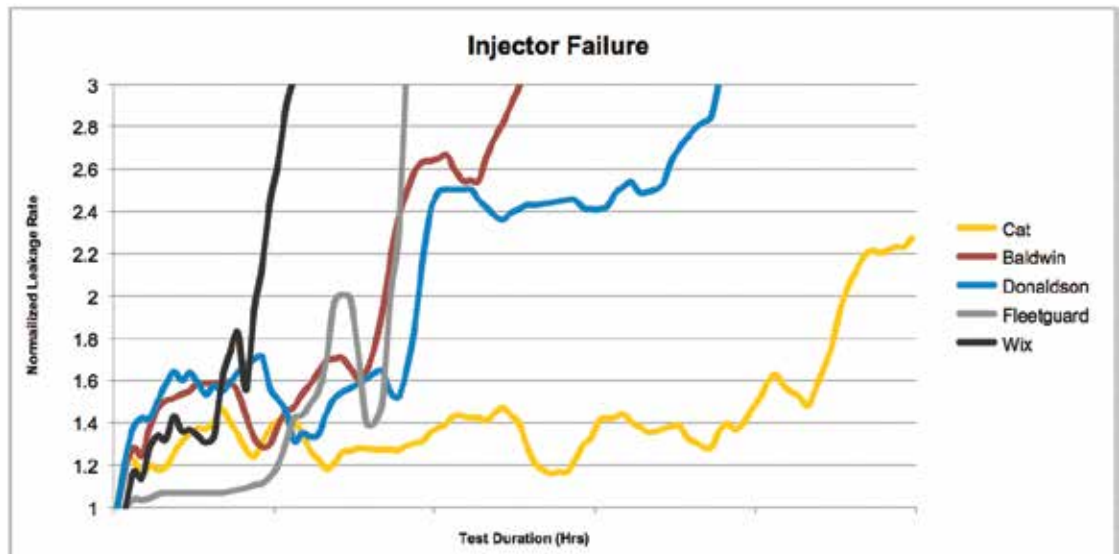


**Injector Valve Seat**  
*Examination of the valve seat will reveal abrasive erosion due to improper fuel management practices*



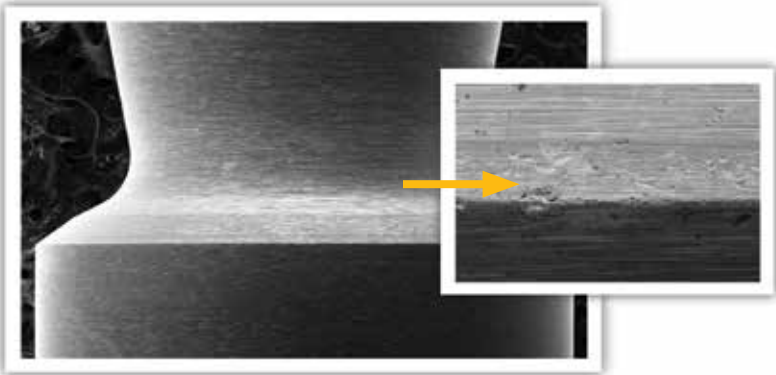
The Cat 1R-0749 Advanced High Efficiency Fuel Filter was pitted against (4) equivalent competitive filter brands to compare injector life. Two filters for each brand were tested and the results averaged together to show the performance for each brand. The injectors with Cat filtration lasted 45% longer than the nearest competitor.

From a duration perspective, the injectors tested with the Cat filters significantly outlasted those tested with the competitive filters. The injectors tested with the Cat filters also exhibited significantly less wear and fuel leakage when compared to the injectors tested with the competitive filters.



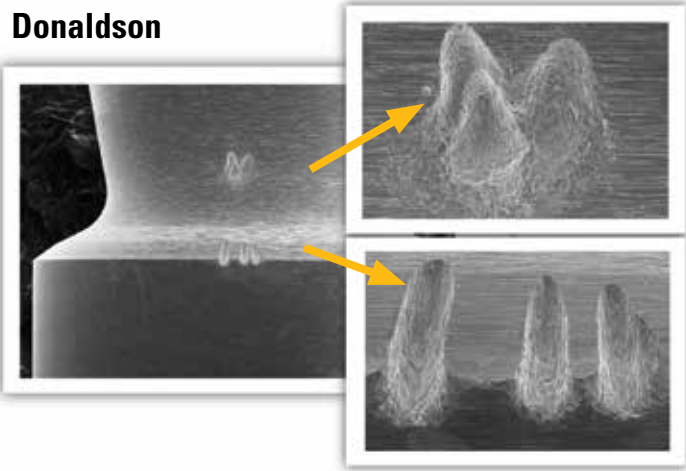
## Post-test Pictures of Injector Valve Seat

### Cat Filter

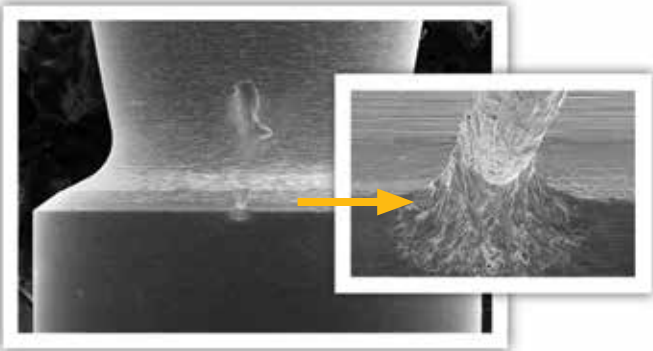


Using Cat Fuel Filters resulted in the least amount of wear on the injectors\*  
All the competitors had significant leak paths form as a result of erosion due to a high level of contaminates getting through the filter.  
As a result, engine performance and component life are greatly affected.

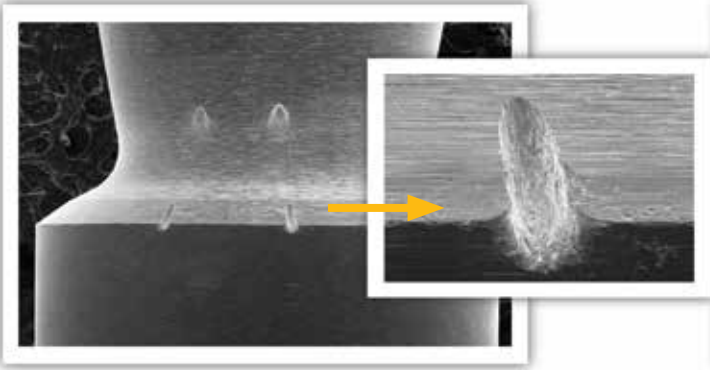
### Donaldson



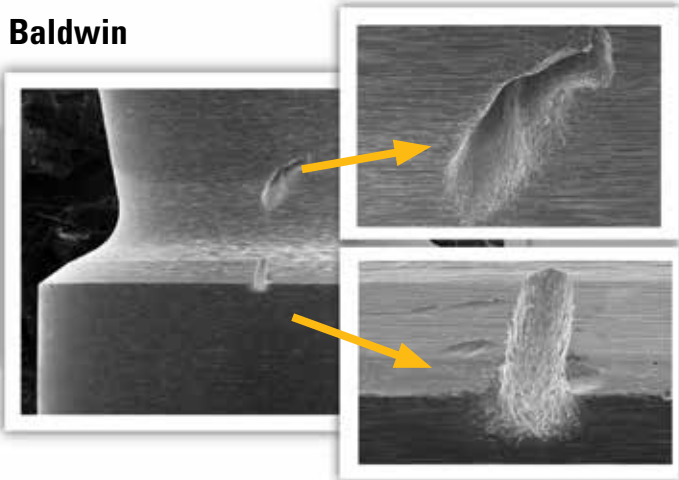
### Wix



### Fleetguard



### Baldwin

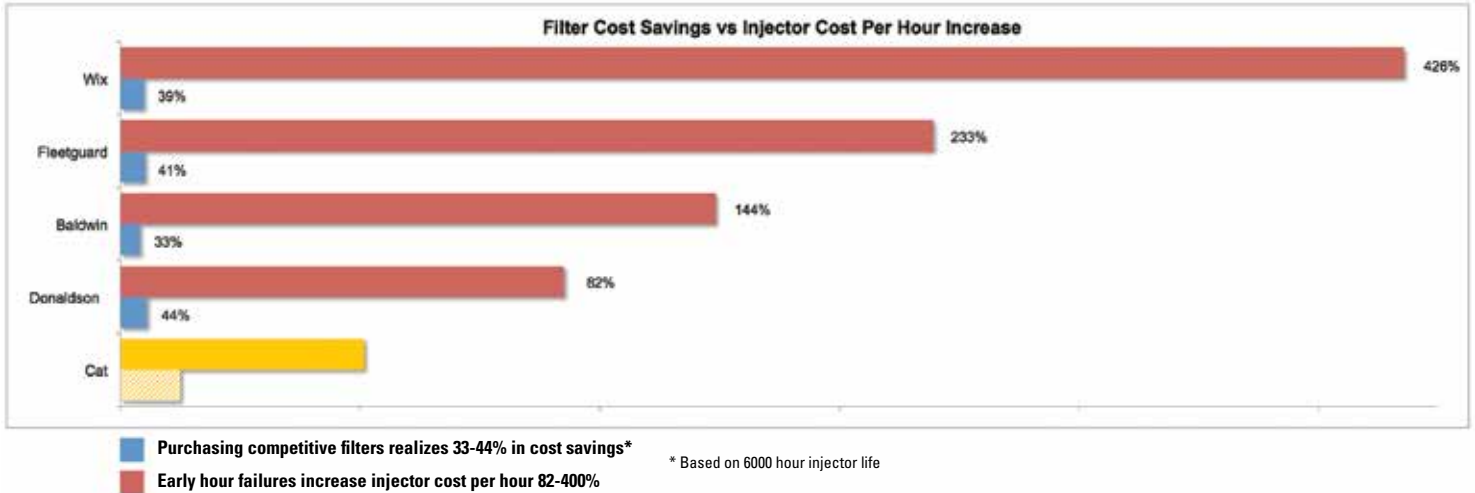


\*Pictures represent typical wear of injector valve seat at test termination point.

# What can Cat fuel filters do for you?

Most customers do not realize the “true cost” of purchasing non Cat filters for their equipment. Rarely will a catastrophic failure be the result of your choice of filtration products. It is only over time, when early hour component failures occur, that the “true cost” is realized.

## How much is your choice in filters costing you?



- Better component protection
- Better fuel system performance
- Lower overall cost



**Make the right choice!**

### CAT DEALERS DEFINE WORLD-CLASS PRODUCT SUPPORT.

We offer you the right parts and service solutions, when and where you need them.

The Cat Dealer network of highly trained experts keeps your entire fleet up and running to maximize your equipment investment.

**BUILT FOR IT.™**

