Ward International cleans diesel particulate filters for customers on an as-needed basis. Ward International inspects, cleans, tests and returns the filters to the customer who sent it in. We do not exchange or substitute filters unless you want to purchase a replacement. All filters are recorded by serial number in our database with the associated results from cleaning.

**WARD INTERNATIONAL’S CLEANING PROCEDURE**

1. Record owner and serial number
2. Inspect and test filter on TrapTester; record defects, damage and test results in database
4. Test filter on TrapTester. Compare results with Baseline Matrix; determine status as Green Tag, Orange Tag, or Red Tag
5. If Green Tag achieved record results, repackage and return to customer.
6. If status is Orange Tag or Red Tag move filter forward into Stage 2 thermal cleaning using the Trap Burner
7. Perform second pneumatic cleaning on TrapBlaster to blow out ash freed in Stage 2 thermal cleaning.
8. Test filter for airflow on TrapTester; record results. Compare results with Baseline Matrix; determine status as Green Tag, Orange Tag or Red Tag and attach tag with cleaning results
9. Record results in database, repackage and return to customer.

**INSPECTIONS & TESTING**

Ward International inspects and tests the filter at every step of the cleaning process. When we are finished processing the DPF we know the exact condition of the filter and have absolute confidence and knowledge of the level of recovery. Cleaning results are shared with the customer and can be compared with historical recovery levels for the filter.

**QUALITY CONTROL**

Our equipment and the cleaning process has been subjected to rigorous testing by engineering teams from three major engine OEM’s. These tests determined that the equipment, process and thermal cleaning programs provide the best cleaning available without damaging the ceramic substrate, wash-coats or packing materials. The thermal programs adhere to all filter manufacturer specifications for cleaning.

**CLEANING RESULTS**

Ward International cannot and does not guarantee or warrant that we can achieve recovery of the filter. Filters can fail for a variety of reasons as a result of operating conditions. The primary source of failure is unusual thermal events that have caused sintering, failure of the cell walls or melting of the ceramic substrate. Filters may be damaged from drooping, thermal shocking, excessive oil soaking, chips and vibration. Due to design and materials some filters last longer than others or can withstand higher temperatures. Our equipment has an overall average cleaning success of about 95% of the filters. A recovered filter reaches Green Tag or Orange Tag status as set by statistical analysis. Approximately 5% of the incoming filters will not move out of the Red Tag range for a variety of reasons or have failed or been damaged prior to receipt. These filters are Red Tagged and deemed un-cleanable.

**OVERALL FILTER LIFE**

Overall filter life decreases when impacted ash is left in the filter cells. The deeper the impacted ash becomes the harder it is to remove in subsequent cleanings. The risk of sintering increases when ash is left in the filter. Ash stuck in the filter causes cold cells and leads to premature soot plugging. The cleaner the filter is kept the longer the overall life. Filters cleaned on pneumatic cleaning machines that do not clean each cell individually are more difficult to recover.
TIME BETWEEN CLEANINGS

Ward International cannot control the time between cleanings and makes no guarantees. Filters can be re-plugged within hours if the engine is malfunctioning, operating temperatures are out of specification or if the wrong fuels or lubricants are used. Some have seen filters run 240,000 miles after cleaning and filters that re-plugged in two hours. The ash that plugs a filter loads linearly in the filter based on engine hours and rpm. The loading rate of ash will vary due to the lubricants used, engine condition, and fuel quality. Usually it takes quite a period of time to plug a filter with ash. Soot plugging can occur very quickly and is usually due to a very unfavorable operating condition such as low filter temperature or engine problems. Retrofit filters without passive regeneration systems typically plug with soot much more often than engine systems equipped with active onboard regeneration systems. Active regeneration systems have the ability to burn off accumulated soot and thereby keep the filter clear.

TURN AROUND

Ward International will typically perform the Stage 1 Pneumatic Cleaning on an incoming filter within 8 business hours of arrival. If the filter needs a Stage 2 Thermal Cleaning the process time is about 12 hours.

Typical turn around times:
Stage 1 Pneumatic Cleaning – 24 hours
Stage 1 Pneumatic Cleaning plus Stage 2 Thermal Cleaning – 48 hours
Rush cleaning is available on request on a first come first serve basis. An up charge could apply for rush orders.

FREIGHT

Incoming: Ship all incoming freight prepaid. Ward International will not accept freight collect shipments.
Outgoing: Ward International will ship all outgoing freight collect unless otherwise agreed.
Pick-up and Delivery Service: Ward International offers free pick-up & delivery service in local areas of our dealership.

PACKAGING

DPF are very expensive filters and should be treated with care. Make sure your shipment is adequately packaged for rough motor freight conditions. The filter should be placed in a sealed bag or container. Make sure the packaging protects flanges or rims from denting. Do not leave the ceramic face exposed. Do not put hot filters into plastic bags or other packaging materials that will melt.

FILTER SIZE COMPATABILITY

Ward International has the ability to process any size filter.
Largest filter cleaned: 32” Diameter x 48” Long that came out of a large crane
Smallest filter processed: 5” Diameter x 6” Long

PRICES

Prices will be provided upon request. Prices may vary due to filter size and filter design and whether the filter needs to go forward to a Stage 2 thermal cleaning. Ward International only moves a filter forward to a Stage 2 thermal cleaning if the filter did not reach Green Tag range with the Stage 1 pneumatic cleaning.

Ward International has the following charges:
- Stage 1 Pneumatic Cleaning – Green Tag
- Combined Stage 1 Pneumatic Cleaning and Stage 2 Thermal Cleaning - Green Tag or Orange Tag
- Unsuccessful Cleaning Handling Charge: $25.00 flat charge in most cases unless filter is over 16” in diameter x 27” tall Note: The cleaning charges under item #1 and #2 above are waived by Ward International if we are unsuccessful in recovering the filter. Ward International believes if you did not get the enjoyment of being able to use your filter that we should not get the enjoyment of being paid. The nominal flat handling charge of $25.00 covers a small portion of the costs we incurred attempting to salvage your filter. This $25.00 fee will be rebated to you on your purchase of a replacement DPF from our Parts Department.

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