

# Ceramex<sup>®</sup>

**NORTH AMERICA / LLC**

**GLOBAL PIONEER AND LEADER IN DPF & DOC RESTORATION AND EMISSION SYSTEMS**

**95%+ PERFORMANCE PROMISE**

**“THE OEM ANSWER TO DPF RESTORATION”**

## **THE CERAMEX SOLUTION:**

**A COMPLETE LINE OF RESTORED OEM  
APPROVED DPF'S AND DOC'S FOR HEAVY  
DUTY APPLICATIONS**

## **THE CERAMEX ADVANTAGE:**

**95% OEM PERFORMANCE AT A FRACTION  
OF THE COST OF NEW; GUARANTEED AND  
VERITEX VALIDATED**



## CERAMEX PRODUCTS

Trusted and Patented Technology; Premier Restoration Supplier to Major Global OEM's

Ceramex delivers the most effective restoration of Diesel Particulate Filters (DPF's) for all types of commercial vehicles and diesel-powered industrial equipment. Our patented, automated, cleaning and inspection technology meets the rapidly increasing market demand for commercial and industrial DPF cleaning and restoration that is both environmentally and cost conscious. Ceramex is trusted by many of the world's leading commercial and off-highway vehicle manufacturers to keep their fleets compliant with increasingly stringent emissions legislation. Our products are also validated and approved and used by many of the most prestigious OEM's across the globe. Primary Ceramex products are:

### Diesel Particulate Filters

If you've been exposed to the world of diesel, you have probably wondered, "What is DPF?" A diesel particulate filter, or DPF, is an exhaust after-treatment device that traps particulate matter such as soot and ash. A DPF typically uses a substrate made of a ceramic material that is formed into a honeycomb structure. In order to reduce emissions from diesel vehicles, diesel particulate filters capture and store exhaust soot, which must be periodically burned off to regenerate the filter. The regeneration process burns off excess soot deposited in the filter, which prevents harmful exhaust emission and the black smoke you commonly see emitted from diesel vehicles when accelerating. Engine manufacturers use DPF's to trap particulate matter in order to meet EPA 2007 emission standards.

### Diesel Oxidation Catalyst (DOC)

A diesel oxidation catalyst (DOC) is an after-treatment component that is designed to convert carbon monoxide (CO) and hydrocarbons into carbon dioxide (CO<sub>2</sub>) and water. It doesn't matter if you are running your diesel engine on the road or off, you must still adhere to strict emissions standards. A diesel oxidation catalyst (DOC) is an after-treatment device that can help you do that, as it effectively turns CO and hydrocarbons into CO<sub>2</sub> and water vapor. It breaks down pollutants in the exhaust stream from a diesel engine, helping to reduce particulate matter (PM) and is very similar to a catalytic converter on a car or light truck.

### Gaskets and Clamps

All the accessories you need to to support our restored DPF's





**CerameX is renowned for its world leading, patented diesel maintenance cleaning, restoration and validation technology.**

Though you may be unfamiliar with the CerameX name, we are the global pioneer and leader in diesel emissions, cleaning and restoration. Owing four unique patents, CerameX has revolutionized the diesel emissions world with an environmentally friendly technology, that quickly restores diesel particulation filters to a guaranteed **95%+ Performance** condition. Unlike our competitors, CerameX not only makes the 95%+ Performance Promise, but we back it up with state-of-the-art documentation on every restored filter. That's why CerameX is the leading supplier of restored DPF's to many renowned heavy-duty OEM's.

**CERAMEX IS THE FUTURE OF DIESEL EMISSIONS TODAY!**

**CERAMEX PATENTED RESTORATION TECHNOLOGY**



Utilizing our experience in the industry, as well as collaborations with the various OEM's we supply, we developed our patented Xpurge filter restoration technology. Developed specifically for the task, our patented XPurge process cleans filters more efficiently than conventional pneumatics.



The Veritex inspections system is the industry ultimate in comprehensive DPF testing. Our patented process uses light and infrared light to examine and evaluate the conditions inside the filter once it has been cleaned. Using our industry exclusive Veritex system, we can identify any potential remaining blockages in the filters, as well as, expose and verify any damage such as holes and cracks.



The Veritrap is designed to check for non-visible cracks in the filter substrate. It measures the DPF's ability to trap particle matter less than 10 microns in width. If it passes too large of a particle or too many, the substrate is cracked.



The Vericat catalytic efficiency test allows us to validate the integrity of the catalytic properties of the unit. This test measures how efficient the unit is performing its catalytic function of converting pollution to clean air and benchmarks its performance to a new OEM unit.

## THE TRUTH ABOUT CERAMEX RESTORED

Don't confuse the words reman and restored when you look at Ceramex. Despite continuous efforts by our "cheap clean" competitors pushing their associated propaganda, Ceramex restored products are guaranteed to perform at 95%+.

So, let's be perfectly clear and honest on what a Ceramex 95%+ Xpurged restored and Veritex validated filter is and does as follows:

- 1. It is guaranteed to perform at 95%+ when compared to an aftermarket or OEM new filter**
- 2. It is priced considerably less than an OEM new or aftermarket DPF filter**
- 3. It saves and conserves valuable natural resources including eliminating tens of thousands of DPF's filled with diesel soot and ash winding up in landfills across our country**

The constant assault on Ceramex restored filters by our cheap clean competitors, simply points out the vulnerability of their inefficient process. Though priced less than a Ceramex restored unit, these cleanings often leave over 50% of ash and soot in the filter. You pay for a cheap clean and can end up putting a dirty filter back on your expensive vehicle with the expectation you received a thorough cleaning and performance will be improved, with absolutely no guarantees of either. Taking your truck downtime into consideration, this is a losing proposition for you, anyway you look at it.

Comparably, Ceramex 95%+ restored filters are in demand and used by major heavy-duty OEM's across the country including Cummins and PACCAR just to name a couple. So, when you think of a restored Ceramex DPF filter, think of it as the OEM's do:

## 95%+ PERFORMANCE PROMISE GUARANTEED!

### THE XPURGE CLEANING SYSTEM VS. AN AIR CLEANED FILTER

COMPARE	AIR CLEANING PROCESS	CERAMEX RESTORE PROCESS
SUCCESS RATE	UP TO 50% FIRST PASS YIELDS	95%+ FIRST PASS YIELDS
EFFICIENCY	AS LITTLE AS 30% OF ASH REMOVED	REMOVES 95%+ OF ACCUMULATED ASH
PASS/FAIL CRITERIA	PASS A BASIC AIR FLOW TEST	VERITEX INFRARED VALIDATED

### DIRTY FILTERS ARRIVE



### DIRTY FILTERS GO THROUGH XPURGE RESTORATION



### FILTERS LEAVE CERAMEX 95%+ CERAMEX RESTORED AND OEM VALIDATED



## CERAMEX IS THE DIESEL EMISSIONS PIONEER!

Since the EPA requirement of the diesel particulate filter in 2006 for all commercial diesel engines, due to the impact of pre-DPF engines on the environment, Ceramex has played an industry leading role in developing technology to keep diesel engines running cleaner, more efficiently, and more affordable. Today's Ceramex Xpurge and Veritex DPF and DOC cleaning and restoration processes ensure that DPF's are restored to a minimum of 95% of their original cleaning capacity. Comparably, many Ceramex competitors are still using outdated air pulse and air knife technology that only achieve a cleaning success of 40-60% and leaves substantial soot and ash remaining in the DPF.



### CERAMEX RESTORATION RESULTS

A dirty DPF contains up to 1.6 pounds of ash, robbing your truck of power, response and economy. In-field cleaning machines leave up to a pound of ash inside the DPF after cleaning.

Ceramex's patented multi-step OEM restoration process restores DPF's to like new condition removing the ash other processes leave behind. **Ceramex removes up to 4x the amount of ash when compared to air cleans.**

## CERAMEX GETS THE ASH OUT!

<b>DIRTY DPF</b> 25.6 oz	<b>AIR KNIFE</b> 14.4 OZ	<b>AQUEOUS</b> 6.4 OZ	<b>CERAMEX</b> 1.2 OZ
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Residual Ash After Cleaning Results Pictured Above

# 95%+ PERFORMANCE PROMISE GUARANTEED!

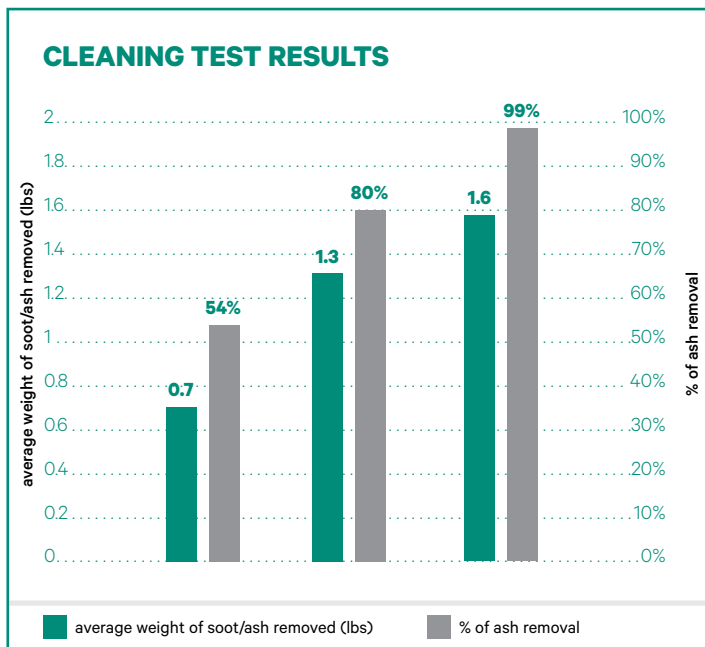
## CERAMEX RESTORED VERSUS COMPETITOR AIR CLEANED

Most machine cleans are a cheap and temporary fix to your emission system. Despite all the propaganda regarding their unique equipment and cleaning effectiveness, the majority of these quick, down and dirty cleans are performed with “air only” via a tool called an Air Knife. In addition, companies performing these cleans have little or no reliable and provable means to validate the effectiveness of their clean. Their use of a simple and basic air flow test only verifies some air is penetrating the cleaned filter and provides absolutely no data regarding the total thoroughness of their clean. The Ceramex process and our associated VERITEX validation is approved by OEM’s across the world, who we supply with thousands of restored filters each year. Our 95% Performance+ Promise includes documented images and test results for every Ceramex restored unit, so you have both data and visual proof that we have met our 95%+ Performance Promise.

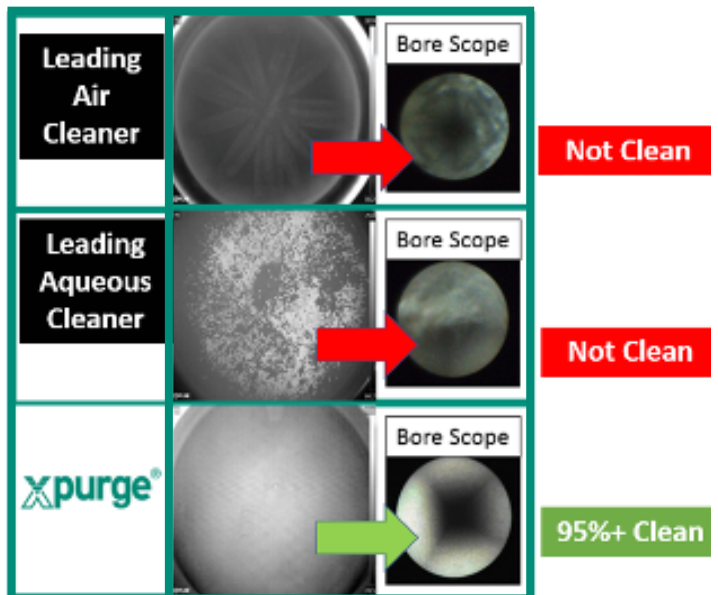


# 95%+ PERFORMANCE PROMISE GUARANTEED!

CHECK OUT THE XPURGE RESTORATION RESULTS AND OUR VERITEX IMAGING AND SEE HOW CERAMEX DOMINATES THE COMPETITION.



Above test results show recent comparisons of Ceramex restored DPF’s benchmarked to both a leading air and aqueous cleaner. Ceramex repeatedly and consistently substantially outperforms all competitors.



## CERAMEX SAVES YOU TODAY AND TOMORROW!

Why risk your truck's well-being and your future earnings by using a cheap air or inferior solution clean? You love and trust your rig, protects its worth and value by investing in the best value in the market; a Ceramex restored DPF filter. Ceramex can save you 50% or more on DPF maintenance over the life of your truck. And, with Ceramex, there is no wondering or guessing if your filter was cleaned properly. Instead, you get the **Ceramex 95%+ Performance Promise** with every Ceramex restored DPF filter you purchase. And our promise isn't just a bunch of hot air! With our patented Vertitex validation, we have documented visual proof that your filter has been restored to 95%+ Performance when compared to a new OEM filter. Ask about our Ceramex Challenge and see how much money we can save you and your fleet!

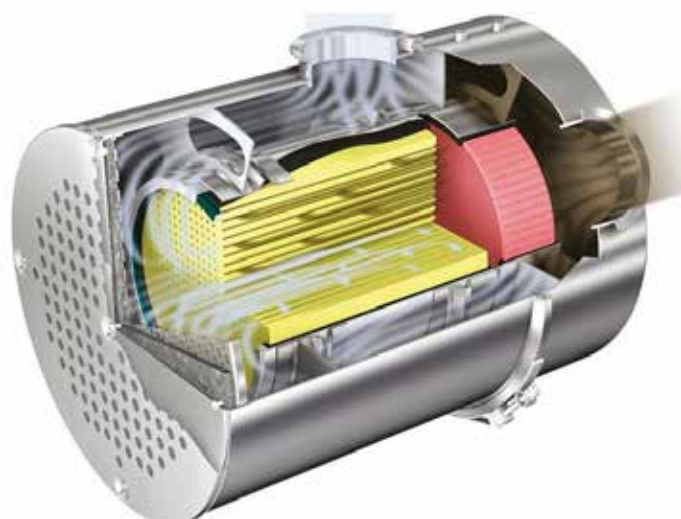
<i>Pricing comparisons are national estimates. contact your local supplier for exact pricing</i>	<b>LEADING NATIONAL AIR CLEANER</b>	vs	<b>CERAMEX RESTORED EXCHANGE</b>	<b>OEM REMAN EXCHANGES</b>	<b>AFTERMARKET NEW</b>	<b>OEM NEW</b>
<b>AVERAGE RETAIL</b>	<b>\$450</b>	vs	<b>\$750</b>	<b>\$950</b>	<b>\$1,723</b>	<b>\$2,100</b>
<b>COST VS. CERAMEX</b>	<b>60%</b>	vs	<b>100%</b>	<b>+127%</b>	<b>+203%</b>	<b>+280%</b>
<b>DOWNTIME FOR SERVICE</b>	<b>2-3 DAYS</b>	vs	<b>3-4 HOURS</b>	<b>3-4 HOURS</b>	<b>3-4 HOURS</b>	<b>3-4 HOURS</b>
<b>SERVICE INTERVAL (MILES)</b>	<b>75K</b>	vs	<b>200K</b>	<b>200K</b>	<b>200K</b>	<b>200K</b>

The pricing estimates above show the initial cost savings of various DPF filter options. The air cleaning option can end up costing much more as a result of future extended downtime and shorter cleaning intervals

### PREVENTATIVE MAINTENANCE IS THE KEY— SAVE UP TO 50% OVER YOUR VEHICLE'S LIFETIME

If regular preventative measures are put in place at the prescribed time or mileage, much grief, downtime, and the associated cost can be prevented. Many fleets seem to think that because the after-treatment warranty extends to 500,000 miles or more, they'll hope nothing goes wrong in the interim. That's like saying I bought a 500,000-mile warranty on my engine, so, I won't bother changing the oil during that time. It doesn't work and it's a terrible mindset to adopt. Incorporating a proper DPF preventative maintenance program will lead to huge savings over the lifetime of your fleet. With Ceramex, you receive the following benefits.

- Superior performance over conventional cleaning processes
- High capacity, fast turnaround for reduced downtime
- Extended interval between cleans
- Up to 7% improvement in fuel consumption
- Less filter failures and expensive replacements
- Filter imaging for audits and monitoring
- Full cleaning traceability throughout the restoring process



# Ceramex Challenge

## Receive up to \$1,000+ FREE in DPF Restoration & Validation For an Opportunity to Earn Your Business!

### Challenge Qualifications:

- At least 100 trucks in the fleet
- Currently have a required DPF preventative maintenance schedule
- Must possess a “swing” DPF unit or have an ability to be without test units for shipping time in and out, plus 2 working days
- Upon arrival at Ceramex, unit(s) must pass visual inspection criteria
- Due to fragility of the DPF proper packaging is required to insure in-bound unit arrives undamaged. Note: Approved Ceramex packaging can be sent if required/necessary)
- Shipping of qualifying challenge units is paid by Ceramex

### Ceramex Process:

- Unit will be shipped to Ceramex at 2401 E Sunshine Springfield, MO 65804

- Ceramex Pre-Restoration Process:

Visually inspect

Weighed

Veritex validated

Back pressured tested

Bore Scoped tested

- Ceramex Restoration and Validation Process
- Cycle through the full Ceramex Restoration process including:

Serialized

Xpurged

Dried

Tested

- Weighed
- Veritex Validated
- Back pressured tested
- Bore Scoped tested
  - Cosmetically cleaned
  - Clean and/or repair bungs and flanges
- All validation results will be prepared and presented to primary fleet contact
- Unit (s) will be returned to the primary fleet contact based upon agreed timeline

### IMPORTANT:

**Unit must remain at our Ceramex facility for a maximum of 48 hours to complete testing and restoration process**



**VISIT OUR WEBSITE AT  
WWW.CERAMEXNA.COM  
TO REGISTER FOR  
YOUR CHALLENGE.**



## WORLD RENOWNED OEM PROVIDER

Trusted by the world's leading heavy-duty OEM vehicle and equipment manufacturers, Xpurge is the next generation of DPF cleaning technology. It provides outstanding cleaning performance that restores DPF filters to a condition that is as good as new. Xpurge cleaning is highly effective and can remove 30% more contaminants than conventional methods, in a fraction of the time. Our unique Veritex inspection technology is our most comprehensive test method. Veritex inspection technology uses light transmission to verify a DPF's internal condition after cleaning. This patented method, which is a non-destructive test, provides a picture of the internal filter condition, identifying any damage or blockages.

In addition, Veritex provides evidence that the filter has been cleaned properly and will continue to perform effectively. The system generates a record of a filter's condition every time it is cleaned, allowing individual filters to be monitored throughout their service life.



## CERAMEX KNOWS DIESEL EMISSION TECHNOLOGY AND RESTORATION!

As a global manufacturing leader in emissions restoration products, our technology and restoration processes have been approved and are being used by many HD OEM's throughout the world including:

- Paccar
- Navistar
- Isuzu
- Cat
- Bobcat
- Scania
- Case/New Holland
- Hitachi
- Komatsu
- and many others!



# We Live in a Dirty World So You Don't Have To!

In 2007, diesel particulate filters (DPF's) were introduced for on-road heavy duty diesel engines to trap diesel particulate matter for engine manufacturers. These DPF's were required to meet the new U.S. Environmental Protection Agency's (EPA) emissions standards.

These standards were put in place not only for environmental protection, but to protect the public from breathing in pollutants released from diesel exhaust. According to the EPA the particulate matter and NOx emissions found in diesel exhaust can pose serious public health problems. Exposure to the pollutants can cause lung damage and aggravate existing illnesses such as asthma. DPF's help keep the environment and people safe from these pollutants.

## CERAMEX HELPS CLEAR THE AIR

Every DPF we restore results in multiple contributions to the preservation of our environment and air quality resulting in the following environmental wins:

- Reduction in landfill waste—restoring filters to “like new” reduces waste equivalent of eliminating 258 million tons of waste from going to landfills.
- Reduction in CO2—A reduction in carbon emissions because less energy is consumed in restoration than it takes to manufacture a new product
- Reduction in raw materials—Restoration preserves much of the material in the original product, using less new materials, thus preserving those materials for future use
- Reduction in energy use—Less energy is consumed in the restoration process by limiting the amount of raw materials extracted, as well as decreasing the energy used in manufacturing of new materials.



**THANKS TO OUR GLOBAL LEADING RESTORATION PROCESS, TENS OF THOUSANDS OF OLD DIRTY DPF'S THAT ARE FILLED WITH SOOT AND ASH DO NOT WIND UP IN LANDFILLS, BUT INSTEAD ARE RESTORED TO 95%+ OEM ORIGINAL PERFORMANCE.**





**Springfield, MO  
NORTH AMERICA  
HEADQUARTERS**

## **X'PERIENCE THE CERAMEX DIFFERENCE**

Ceramex® North America LLC is an industry leader in DPF/DOC maintenance. Emissions service is one of the largest expenses truck owners face today. Managing your emissions systems with our component exchange program delivers longer service intervals, fewer regens, better fuel economy and less unplanned maintenance than the competition, hands down.

Technology makes the difference. Head- to-head comparisons consistently prove our patented X-Purge® technology removes two to three times more contaminants from your filter, returning components to like new performance. Once cleaned, each component is tested with our proprietary validation processes. Only Ceramex can validate that the cleanliness, integrity, and performance of each unit meets the original specifications.

Case studies have demonstrated that fleets who use our exchange program can reduce fleet emissions service costs by up to 50% compared to on-site cleaning or replacing with new.

Contact Ceramex to take ownership of your fleet maintenance costs today.

Ceramex is a joint venture between SRC Holdings Corporation of Springfield, Missouri, and Hexadex Limited, a UK-based company. SRC Holdings has been at the forefront of the remanufacturing industry in North America and a trusted OEM partner for over 35 years. Hexadex Limited designs and produces cutting edge proprietary exhaust and emission solutions for the heavy diesel market globally.

## **CERAMEX IS YOUR INTERNATIONAL LEADER IN AFTERTREATMENT SYSTEM MAINTENANCE AND VALIDATION.**

### **Our Products:**

Diesel Particulate Filters  
Diesel Oxidation Catalysts

### **Accessories:**

Clamps and Gaskets

CERAMEXNA.COM /

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DPF Restoration***

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