



# Cincinnati Radiator

*DIESEL PARTICULATE  
FILTER CLEANING*





## WHAT YOU NEED TO KNOW...

## CLEANING OF A DPF...

### How do they work?

The Diesel Particulate Filter (DPF) is designed to reduce particulate matter from coming out of the exhaust stream. The internal Cordierite or Silicon Carbide substrate is a wall-flow filter containing alternating blocked channels that forces exhaust gas through its porous walls, therefore capturing the particulate matter. Your equipment's on-board regeneration system heats the DPF's internal substrate to breakdown or oxidize the captured Particulate Matter. The by-product of each regeneration cycle is ash and other inert debris that will remain in the filter.

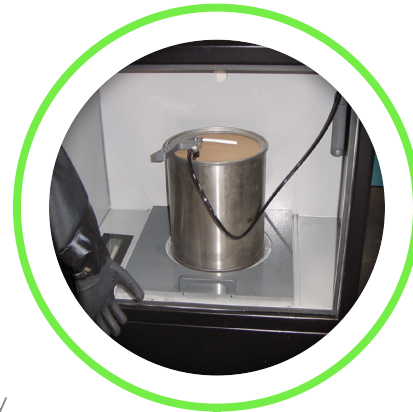
Be aware that a DPF will mask all previous inherent or diagnostic signs. Historically poor engine performance could be noted by the exhaust i.e. black, blue, or white smoke. With a DPF system installed, there is no longer any visible smoke. Some filters may need to be cleaned in shorter intervals depending upon vehicle maintenance and duty cycle.

### Why do I need to have these filters cleaned?

Lack of DPF maintenance, by not having the ash and other inert debris removed, will increase the exhaust's back-pressure and will cost you by:

- Increasing fuel usage.
- Increasing vehicle downtime.
- Making the vehicle non-compliant to EPA and CARB regulations.

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### EvacuBake™

Designed to facilitate the cleaning process of dirty filters. In some cases a filter may need to be baked due to high levels of wet soot, unburned hydrocarbons, etc. and must be baked in order to regenerate the soot to ash. The controller is programmed to ramp up the temperature at a rate that will not crack the substrate of the filter and holds the temperature constant for two hours to ensure a complete regeneration of the filter. The controller then automatically decreases temperature at a controlled rate to protect the filter's substrate.

### EvacuBlast™

Carefully designed to be manually operated for specific reasons such as:

- It allows cleaning to be focused on certain areas of the filter. Many filters will not have a consistent color and often times will have dark spots where the soot build up is heavier. Manual operation allows us to focus on the darker areas to ensure the filter is efficiently cleaned.
- It has a built in viewing window to show the soot flowing out of the filter. This also allows us the means to determine if there are any problems with the filter such as clogged cells (i.e. no visual flow of soot departing the filter when vacuum/air pressure is applied).

Call us today!  
513.874.5555



## Diesel Emissions - Glossary Of Terms

**Active Regeneration System:** A system providing extra heat to the diesel particulate filter to enhance the regeneration cycle. [OE or retrofit]

**Catalyzed Diesel Particulate Filter (CDPF):** Catalyzed honeycomb wall-flow filter that traps and oxidizes PM. The oxidation process cleans, or regenerates, the filter. Also dramatically reduces CO and HC. Can be packaged in combination with a muffler or silencer. [OE or retrofit]

**Closed Crankcase Ventilation (CCV):** Device that captures and returns crankcase emissions to the engine, re-directing pollutants back to the intake system for re-combustion. [OE or retrofit]

**Continuously Regenerating Trap (CRT):** Device relying on NO<sub>2</sub> to regenerate a non-catalyzed diesel particulate filter. The NO<sub>2</sub> is generated by a diesel oxidation catalyst placed before the diesel particulate filter. [OE or retrofit]

**Diesel Oxidation Catalyst (DOC):** Flow-through catalyst that oxidizes pollutants in the exhaust stream. Reduces HC, CO and to a lesser extent, PM. Can be packaged in combination with a muffler or silencer. [OE or retrofit]

**Diesel Particulate Filter (DPF):** A wall-flow filter containing alternating blocked channels that forces exhaust gas through its porous walls, capturing PM. Diesel particulate filters are used for the reduction of particulate matter. Can be packaged in combination with a muffler or silencer. [OE or retrofit]

**Exhaust Gas Recirculation (EGR):** Device that re-circulates part of the engine exhaust back into the engine to cool peak combustion temperatures, this in-turn reduces NO<sub>x</sub> emissions. [OE or retrofit]

**Low Temperature Combustion (LTC):** An engine management system that precisely controls combustion to maintain thermal efficiency and avoid forming emission pollutants which normally form due to incomplete combustion. [OE]

**Non-Selective Catalytic Reduction (NSCR):** NO<sub>x</sub> reduction catalyst, also known as a three-way catalyst that uses CO and HC over a catalyst to reduce NO<sub>x</sub>. [OE or retrofit]

**NO<sub>x</sub> Absorber Catalyst (lean NO<sub>x</sub> trap LNT):** A device used to reduce NO<sub>x</sub> emissions from a lean-burn internal combustion engine, whereas NO<sub>x</sub> is adsorbed into the catalyst and during the regeneration cycle is changed into N<sub>2</sub> and H<sub>2</sub>O. [OE or retrofit]

**Selective Catalytic Reduction (SCR):** As related to emissions, a process to reduce NO<sub>x</sub> emissions from a lean-burn engine or oxygen-rich exhaust. Typically a reductant, such as ammonia, is injected into the exhaust where it reacts with NO<sub>x</sub> over a catalyst to yield N<sub>2</sub> and H<sub>2</sub>O. [OE or retrofit]

**Three-Way Catalyst (TWC):** Catalyst used with spark-ignited engines to reduce CO, HC and NO<sub>x</sub> emissions. The reduction process of these emissions is called three-way conversion. [OE or retrofit]



**Complete Cooling System Sales and Service**

3400 Port Union Road, Fairfield, Ohio 45014

Phone: 513.874.5555 Fax: 513.874.4587

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