# AFTERTREATMENT 101 COMMON INDUSTRY TERMS & ACRONYMS

FROM REDLINE EMISSIONS PRODUCTS®

## DPF

### DIESEL PARTICULATE FILTER

is an aftertreatment device designed to remove diesel soot (PM) from the exhaust stream of a diesel engine before it's released into the atmosphere. DPFs have a PM (particulate matter) reduction rate of 85% – 100%; successfully oxidizing (burning) accumulated particles either passively (while the vehicle is driving down the road) or actively (through an outside heat, fuel, or electric source). DPFs need to be removed & cleaned regularly to avoid ash buildup & sintering.


## DEF

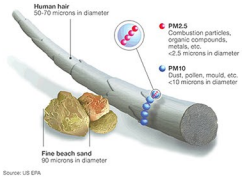
### DIESEL EXHAUST FLUID

is a non-hazardous solution, which is 32.5% urea and 67.5% de-ionized water. DEF is sprayed into the exhaust stream of 2010 and newer diesel vehicles to allow the SCR to break down dangerous NOx emissions into harmless nitrogen and water. This is an integral part of the aftertreatment system, as the EPA has strict emissions standards for NOx. DEF presence is generally identified by a black plastic tank with a blue cap.

**will reduce the usable mass of a DPF and is difficult or impossible to remove.** **SINTERING**

make (a powdered material such as ash) coalesce into a solid or porous mass by heating it (often compressing) without liquefaction.

## PM




### PARTICULATE MATTER

comprised of all solid and liquid particles suspended in air – many of which are hazardous. This complex mixture includes both organic and inorganic particles, such as dust, pollen, soot, smoke, and liquid droplets. One function of the aftertreatment system is to filter out the particulate matter before it can be released into the environment.

## BP BACK PRESSURE

the back pressure of a diesel engine; a measurement of exhaust gas pressure. Back pressure is carefully calibrated in a diesel engine, & a clogged DPF or DOC can cause problems such as increased fuel consumption & overheating of the engine.

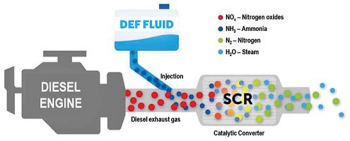
## DOC

### DIESEL OXIDATION CATALYST

is an aftertreatment component that is designed to convert carbon monoxide (CO) and hydrocarbons into carbon dioxide (CO2) and water. It breaks down pollutants in the exhaust stream from a diesel engine, helping to reduce particulate matter (PM). Typically located before the DPF in the emissions system, it conditions the exhaust gases to allow the DPF to regenerate. Just like the DPF, if the DOC is not cleaned regularly, it can accumulate buildup, causing problems upstream & downstream.

**The process of converting exhaust gas pollutants into harmless gases.** **OXIDATION**

In a DPF this process "burns" off the PM leaving ash in the filter.




## SCR

### SELECTIVE CATALYTIC REDUCTION

an advanced active emissions control technology system that uses diesel exhaust fluid (DEF) sprayed through a special catalyst in the exhaust stream of a diesel engine. The SCR system reduces almost all of the NOx emissions. SCRs can be cleaned when the DEF dosing system malfunctions & the unit is filled with crystalized fluid.

## DUTY CYCLE

**conditions in which the diesel vehicle operates on a daily basis.**

This is important to define as factors like load weight, miles driven, idling, & environment can all affect the wear rate on a vehicle.

## OEM


### ORIGINAL EQUIPMENT MANUFACTURER

a company that produces parts & equipment that may be marketed by another manufacturer, i.e., manufacturer of a specific truck brand. In terms like "OEM performance" & "OEM fit," it means that a replacement fits & functions as well as the original.

## REMANUFACTURED REMAN

Typically, is a component that has been disassembled and all wear parts replaced prior to reassembly. When used in reference to a DOC or DPF, a reman part is one that has been reconditioned (cleaned) and deemed okay for service. When considering a reman component, look for a warranty from the seller.
Caution, a reman part generally has a core charge.