



EVERY™ ADVANTAGE.

CUMMINS PARTICULATE FILTER

Cummins Particulate Filter

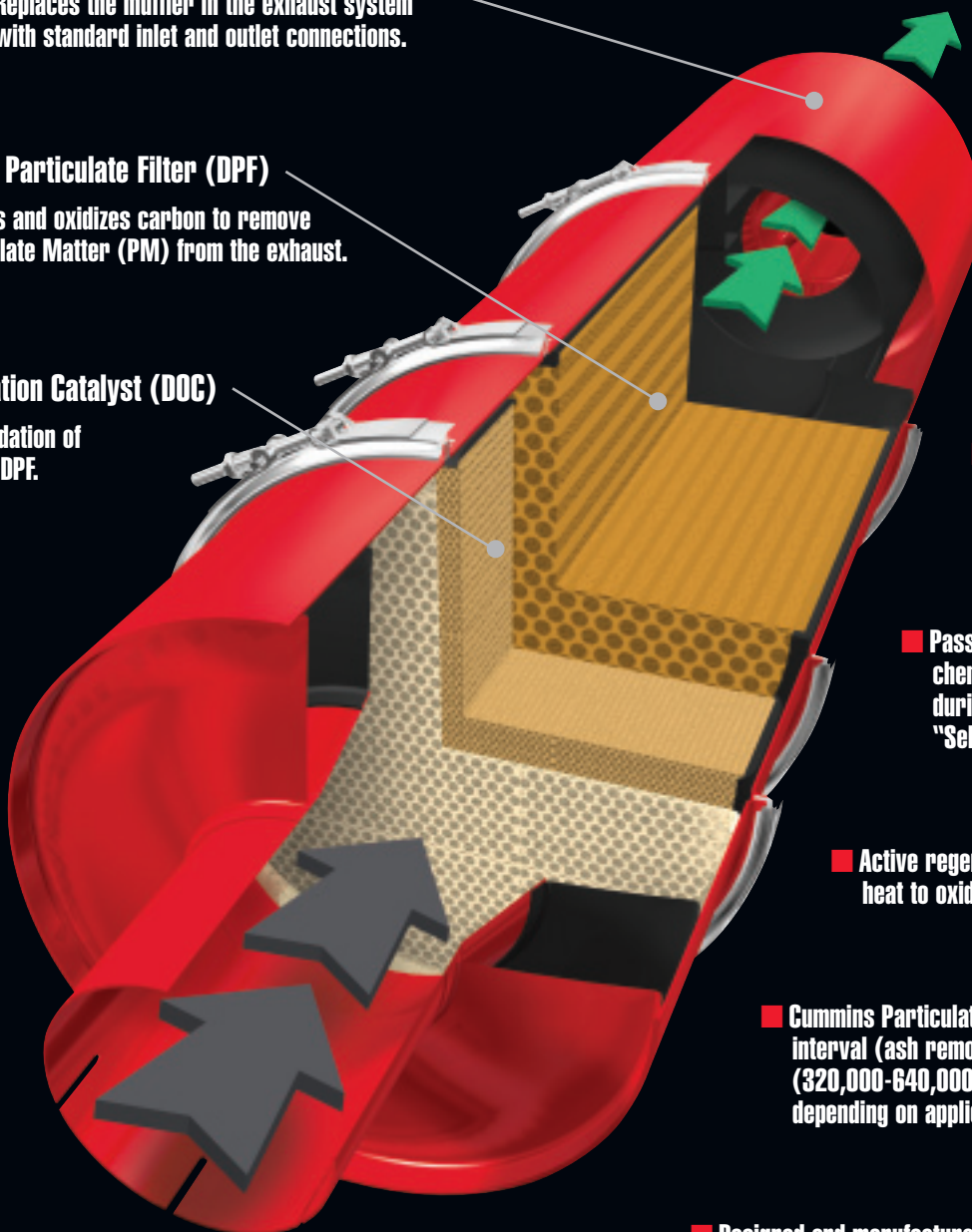
Replaces the muffler in the exhaust system with standard inlet and outlet connections.

Diesel Particulate Filter (DPF)

Collects and oxidizes carbon to remove Particulate Matter (PM) from the exhaust.

Diesel Oxidation Catalyst (DOC)

Increases oxidation of carbon in the DPF.



■ The Cummins Particulate Filter is fully integrated with and constantly monitored by the Cummins Electronic Control Module (ECM).

■ Aftertreatment information is available with Cummins QuickCheck 5100 or Cummins RoadRelay™ 4.

■ Reduces particulate matter emissions by 90%.

■ DOC increases passive regeneration for improved fuel economy.

■ Passive regeneration is an ongoing chemical process to oxidize carbon during a vehicle's normal operation. "Self-Cleaning"

■ Active regeneration is a process that increases heat to oxidize excess carbon in the DPF.

■ Cummins Particulate Filter cleaning maintenance interval (ash removal) 200,000-400,000 miles (320,000-640,000 km) or up to 6,000 hours, depending on application.

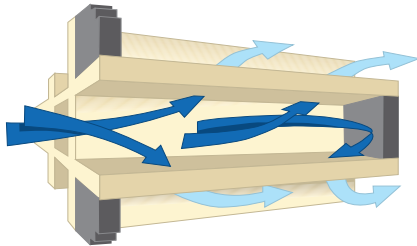
■ Designed and manufactured by Cummins Emission Solutions.

■ During normal operation, no driver interaction required. Operator will be alerted if driver action is needed.

Aftertreatment System – How It Works.

The Cummins Particulate Filter is part of the Cummins aftertreatment system.

Exhaust flows out of the engine and into the Cummins Particulate Filter. It passes through the Diesel Oxidation Catalyst (DOC) and then into the Diesel



Particulate Filter (DPF), where Particulate Matter (PM) is collected on the walls of the DPF. The carbon collected is then oxidized to remove it from the DPF. This process is called regeneration.

Passive Regeneration – occurs when the vehicle's duty cycle and exhaust temperature drive the continuous oxidation of carbon. No incremental actions are required by the engine or operator to keep the DPF clean.



Active Regeneration – required when the duty cycle does not generate enough heat to convert all the carbon being collected in the DPF. In this case, the ECM will initiate an active regeneration by injecting a small amount of diesel fuel into the exhaust stream which generates heat as it enters the DOC. The additional heat ensures that the excess carbon is oxidized without any operator intervention.

Indicator Lamps And Switches – What You'll See.

With the Cummins aftertreatment system, there may be new dash indicator lamps and switches installed by the OEM.

Aftertreatment Diesel Particulate Filter Lamp – indicates the DPF is approaching the need for regeneration.



High Exhaust System Temperature (HEST) Lamp – illuminates to indicate that high exhaust temperatures may exist due to aftertreatment regeneration.



Manual Regeneration Switch – allows an operator to perform an active regeneration while parked.

Inhibit Switch – is used to prevent or stop an active regeneration.

Consult your vehicle Owners Manual for specific lamp and switch information.

Operator Actions – What You'll Need To Do.

The Cummins Particulate Filter has been designed for minimal driver interaction and maintenance.

- If the DPF lamp illuminates, it is an indication that a regeneration needs to occur within the next 2-6 hours of operation. Regeneration will be initiated by changing the vehicle's duty cycle or by performing a "parked" regeneration.
- If the DPF lamp is flashing, a regeneration needs to occur within 1-2 hours.
- When the HEST lamp illuminates, be aware that high exhaust temperatures may exist. Therefore, use caution around the exhaust system.
- Unnecessary or excessive use of the inhibit switch may result in the need to service or replace the DPF.
- The only maintenance requirement of the Cummins Particulate Filter is to remove ash from the DPF which is a result of lube oil consumed by the engine. The regeneration process only removes carbon from the filter. Cummins expects cleaning maintenance intervals between 200,000-400,000 miles (320,000-640,000 km) or up to 6,000 hours, depending on the application. Intervals will depend on duty cycle, oil consumption and type of oil being used.



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