



**Emission Solutions**

# RETROFIT SOLUTION.

# DOC + CCV.

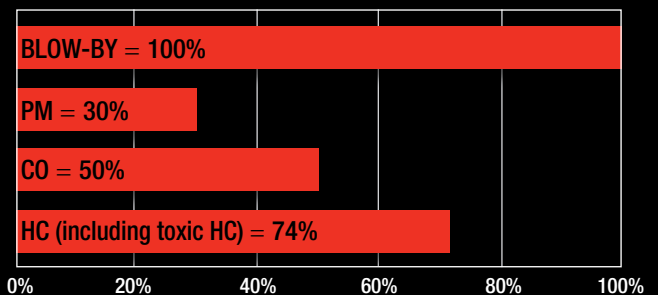
- Verified by EPA, the Cummins Emission Solutions DOC and the Cummins Filtration CCV Kit combine for a cleaner engine and environment.



- The Cummins Emission Solutions Diesel Oxidation Catalyst – Market leading technology and engineering with over 1,000,000 in service today.

- The CCV Kit eliminates 100% of engine compartment blow-by.

### DOC + CCV reduces:\*



\* Actual reductions depend on engine emissions and duty cycle. Verification credits are represented in the above table.

## Real Solutions.

The Cummins Filtration Closed Crankcase Ventilation (CCV) Retrofit Kit protects the engine and provides an excellent solution for crankcase emissions by eliminating 100% of engine blow-by.

The Cummins Emission Solutions Diesel Oxidation Catalyst (DOC) builds on our legacy of technology, our 30 years experience in exhaust engineering and manufacturing and our partnerships with leading component suppliers to provide a high level of dependability and performance.

**Now, these two products are verified together by the Environmental Protection Agency (EPA) to not only reduce emissions but to also provide a cleaner, safer operating environment, regardless of engine manufacturer.**

## Real Performance.

The Cummins Filtration CCV Kit and the Cummins Emission Solutions DOC provide best-in-class engineering and performance. When combined and used with ULSD diesel fuel ( $\leq 15$  ppm sulfur content), the DOC + CCV provide the following reductions:

Technology	Fuel (Sulfur Content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %
DOC + CCV System	$\leq 15$ ppm	30	50	74

## Real Technology: Cummins Emissions Solutions DOC.

- Over 1,000,000 in service around the world
- Easily installs
- Needs no maintenance
- Requires no monitoring
- Applies to many applications
- May be used in a catalytic exhaust muffler to reduce noise as well as emissions
- Distance of turbo outlet pipe to DOC inlet is one of the longest on the market at 155". This provides for excellent installation and service options.

*Cummins Emission Solutions and Cummins Filtration products are covered by performance and emissions warranties that meet or exceed warranty requirements for retrofit verification coverage.*



*The DOC + CCV Kit provide customers with top performing products and best-in-class sales and service support from Cummins.*

## Real Technology: Cummins Filtration CCV Kit.

- Eliminates 100% of engine compartment blow-by
- Mounts easily in the engine compartment
- Provides up to 3 times longer service intervals than the competition
- Real world tested for over 3,000,000 miles

## Application Guidelines.

- All on-highway heavy and medium-duty diesel engines model years 1991-2003, **regardless of engine manufacturer.**
- Engine blow-by should not exceed 12 CFM.
- Engine should be well maintained and should not consume lubricating oil at a rate greater than specified by the engine manufacturer
- Engine exhaust temperature must be at least 150 degrees C during the duty cycle
- Closed crankcase ventilation system filter cartridges must be replaced every year or 1000 engine hours, whichever occurs first

## Connect to a World of Diesel Expertise.

Cummins Emission Solutions and Cummins Filtration provide technologies to protect your equipment and keep it running clean and strong. Supported by the Cummins North American Distributor Network and Cummins worldwide, our systems bring real value to you – from installation through the life of the product. Choose the emission-reduction leaders backed by the Cummins legacy of technology. Choose Cummins Emission Solutions and Cummins Filtration.



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