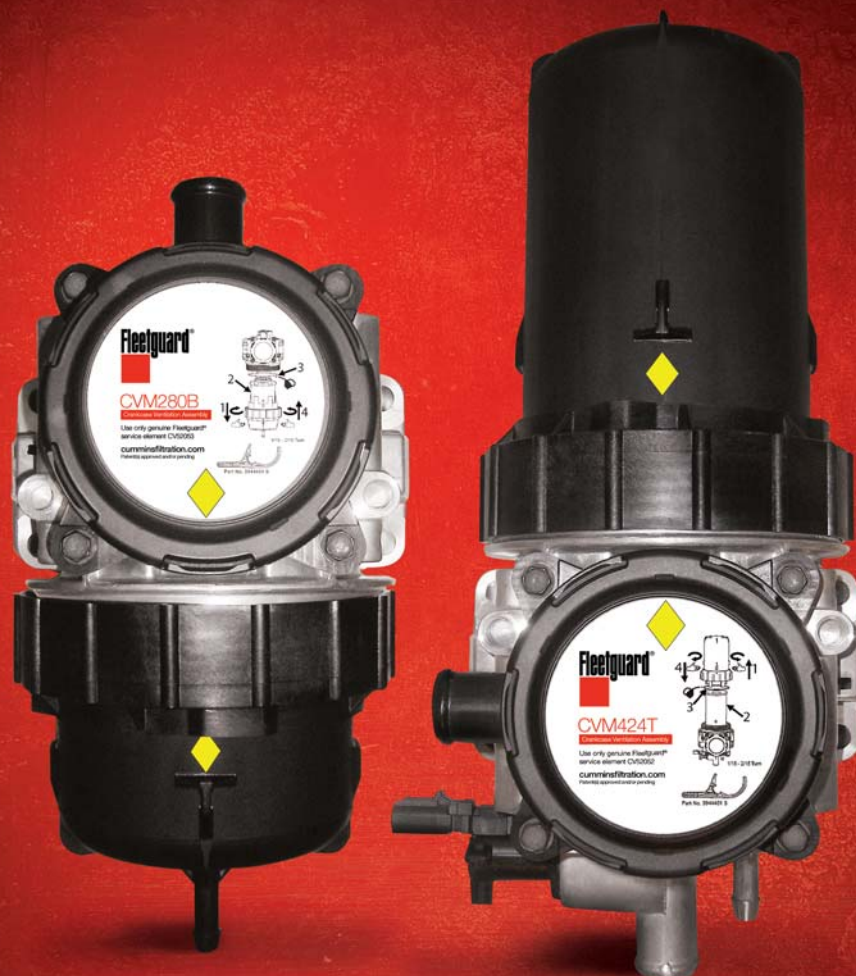




# Crankcase Ventilation Manager CVM280 and CVM424

Crankcase Ventilation Blow-by Gas Management  
for Emissions Compliance and a Cleaner Environment

CRANKCASE



# Fleetguard Crankcase Ventilation

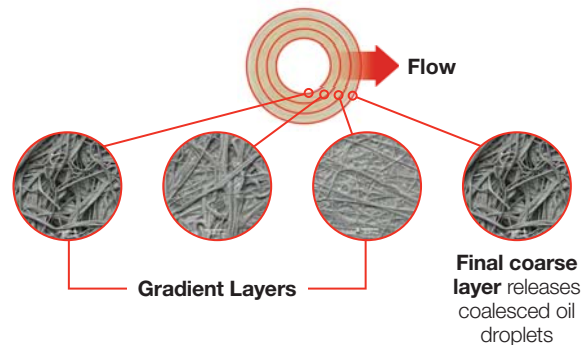
## Genuine Solutions You Can Depend On

For optimal engine performance and to support emissions regulations compliance, your diesel engine blow-by should contain minimal oil aerosol before routing to the engine intake air system (closed) or direct to the atmosphere (open). Cummins Filtration's new Fleetguard® **CVM series** of crankcase ventilation (CV) solutions ensure crankcase ventilation systems for your emissions-certified engines do not compromise engine performance or the environment with oil mist and drips. The CV product line offers the industry's highest blow-by oil mist separation efficiency in a cost effective and versatile package.

### Anatomy of Fleetguard Crankcase Ventilation Management

#### Advanced oil separation – StrataPore™ CV

Designed and manufactured by Cummins Filtration, the unique polymer webs of the media are tailored for optimal oil droplet removal from the blow-by gases. The varied fiber sizes are arranged in an effective gradient structure. This creates optimal particle capture and coalescence to protect the environment and/or the intake air system.



#### Threaded collar

for quick and easy removal of the reusable nylon shell at the time of service without the need to disconnect hoses

#### Integral aluminum mounting bracket

with 154 mm x 65 mm (6" x 2.5") bolt pattern

#### Clean blow-by gas outlet

**(25.4 mm hose barb):**

Returns clean blow-by to the atmosphere, or engine air intake (variable orientation)

#### Crankcase pressure sensor (FCI/Apex®

**3-pin connector):**

Optimize service intervals

#### Blow-by gas inlet

**(25.4 mm hose barb):**

Blow-by inlet from engine

#### Glass reinforced nylon shell

for light weight, heat resistance and containment of the oil coalescing element (bottom access also available)

#### Crankcase Depression Regulation (CDR) valve

protects the crankcase from excess vacuum in a closed configuration

#### Oil drain port

**(10 mm hose barb)**

routes separated oil back to the oil sump

#### Optional heating system

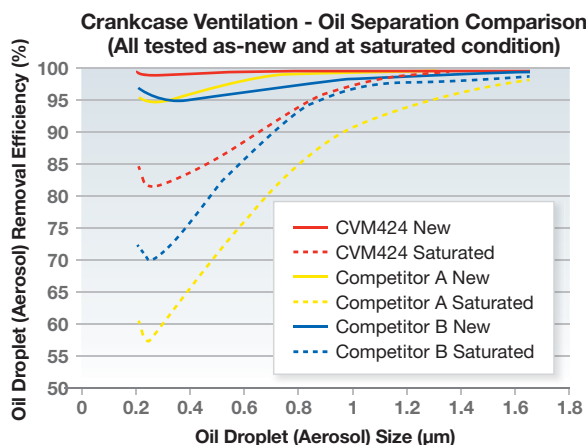
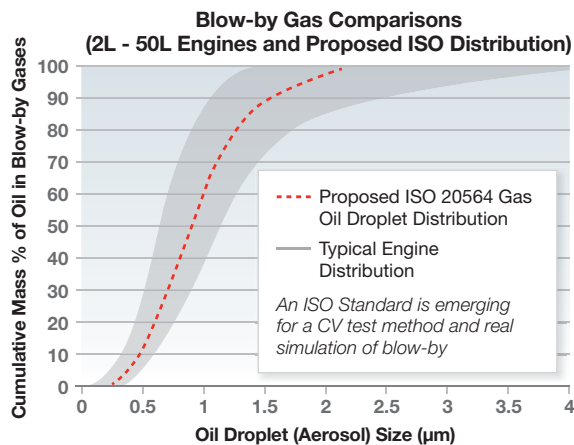
available for cold environments



# Advancing Performance in Crankcase Ventilation Management

While there have been major advances in emissions management, crankcase ventilation management is a relatively new practice in the global diesel engine market. As a result, crankcase emissions can significantly contribute to the total engine particulate emissions. Cummins Filtration employs analysis and testing to develop solutions that properly remove oil mist from the engine blow-by. The leading industry approach is the proposed ISO 20564 test method which utilizes an oil droplet size distribution similar to the blow-by gas of most turbocharged diesel engines.

Cummins Filtration is participating in the development of new test methods and is uniquely positioned with OEM engine makers to ensure the highest CV management performance and system functionality.



## Science Yields Dependable Solutions

- ▶ Cummins Filtration “fingerprinted” blow-by gas distributions for engines from 2L to 50L displacement
- ▶ Proposed ISO 20564 blow-by distribution correlates to real-world engines
- ▶ Over 50% of the real-world blow-by gas mass is less than  $0.90\ \mu\text{m}$  droplet/particle size
- ▶ Crankcase blow-by gas management at small droplet/particle sizes is critical to engine compliance, performance and reliability

## Superior Crankcase Ventilation Management

- ▶ The CVM series offers the highest oil & particle removal efficiency
- ▶ High saturated efficiency is key to emissions regulation compliance, long service intervals and reliability of the engine air handling components
- ▶ The Fleetguard® CVM series maintains superior saturated oil removal efficiency for the droplet (aerosol) sizes that comprise blow-by gases
- ▶ The saturated condition of the crankcase ventilation system accounts for up to 95% of the total service life

## Expertise in Crankcase Ventilation




Cummins Filtration meets the demands of crankcase ventilation management through the use of multiple patented technologies. In particular, the technologies related to the StrataPore™ CV coalescing media achieve service life that is up to 3X the life of competitive coalescing products. Cummins Filtration expertise provides a crankcase ventilation solution that helps to reduce your equipment operating costs. The coalescing technology reflected in the new CVM series has been installed on more than a **half-million engines** with more being built each day.




# Fleetguard CVM Products - Designed for Versatility

## CVM280 and CVM424 – Features for Versatile Integration

- › High efficiency oil coalescing via a serviceable element
- › Bottom service access and top blow-by inlet – CVM280B and CVM424B
- › Top service access and bottom blow-by inlet – CVM280T and CVM424T
- › 3-direction orientation, oil-free blow-by outlet
- › Aluminum head with 154 mm x 65 mm (6" x 2.5") mounting pattern
- › Electric crankcase pressure sensor
- › Optional heating system for cold environments




### CVM280 – Up to 280 l/min




CVM280T	Base Unit with Pressure Sensor	Blow-by Outlet Orientation
		CV52023
	CV52021	
	CV52019	

CVM280B	Base Unit with Pressure Sensor	Blow-by Outlet Orientation
		CV52015
	CV52034	
	CV52008	

Service all CVM280 units with CV52053 coalescer element.

### CVM424 – Up to 424 l/min

CVM424T	Base Unit with Pressure Sensor	Blow-by Outlet Orientation
		CV52028
	CV52017	
	CV52007	

CVM424B	Base Unit with Pressure Sensor	Blow-by Outlet Orientation
		CV52009
	CV52006	
	CV52016	

Service all CVM424 units with CV52052 coalescer element.

All crankcase ventilation management configurations can be upgraded to include a heating feature for use in cold environments. Order optional kit number SP01008.

**Coming Soon:** Optional electric heating (250 or 300 watt)

## Custom Crankcase Ventilation Management Applications

A technical web portal is available for OEM engineers, providing 24-7 access to datasheets, envelope models and drawings. Please contact your Cummins Account Representative for more information.



For more detailed information on Fleetguard® crankcase ventilation, please refer to the **Fleetguard Technical Information Catalog – LT32599** or visit **Fleetschool** at [cumminsfiltration.com](http://cumminsfiltration.com).

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For more information, visit [cumminsfiltration.com](http://cumminsfiltration.com)

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