Fleetguard®

CRANKCASE

EcoVent™ Recirculator

The Pioneer in Crankcase Ventilation Filtration

REAL™ Dependability.

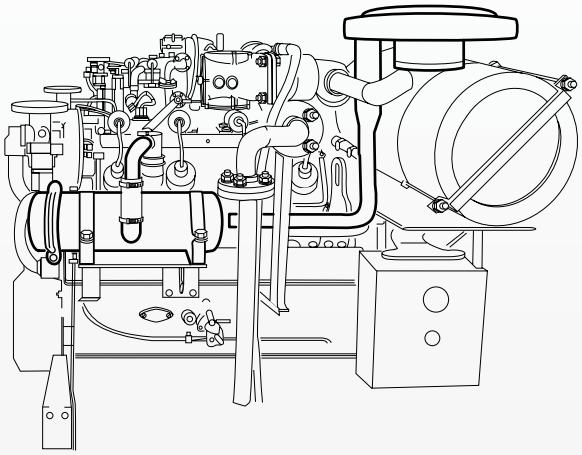
Reducing Crankcase Emissions for over 40 Years

EcoVent™ Function

The Fleetguard® EcoVent Recirculater removes oil mist coming from the engine crankcase vent. This provides for a cleaner, healthier and safer environment. Engine room maintenance costs are also reduced.

Cummins Filtration pioneered the development of crankcase ventilation filters, formerly known as Crankcase Emission Absorbers (CEAs), over 40 years ago. The name has changed to EcoVent Recirculator, but the product is the same dependable and proven design. Today they are used on nearly every major make of industrial diesel and natural gas engine in North America and Europe. They have been used and specified by:

- U.S. Navy
- Coast Guard
- Hospitals
- Foreign Governmental Agencies
- Yacht Owners and Ship Builders
- Engine Builders and Packagers for both Marine and Industrial Applications
- Natural Gas Compression Packagers



These filters were originally developed to prevent oily crankcase fumes from fouling the intake air filters and coating the engine room walls, but now offer many other advantages.

Cleaner Environment

The Fleetguard EcoVent Recirculator removes 99% of oil mist and airborne particles. This makes it possible to duct the now clean blow-by fumes into the air cleaner for a completely closed crankcase ventilation system. The closed system removes 100% of blow-by mists and gases from the atmosphere without danger to the engine.

Reduced Oil Consumption

After the oil droplets are removed from the gases, they pass through an absorbent depth media, which cleans them so they can safely be returned to the oil sump.

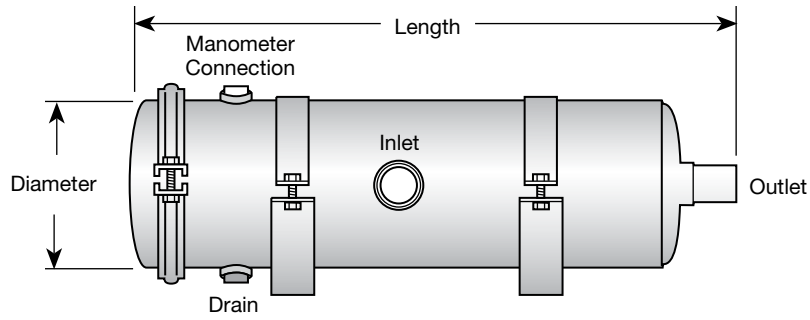
Easy Maintenance

Because the separation of air and oil is accomplished through a static absorbent filter, there are no moving parts or periodic cleaning necessary, only changing of the filter element.

These systems are applicable to marine, industrial, diesel, gasoline or natural gas engines.

REAL™ Flexibility.

Available in multiple sizes

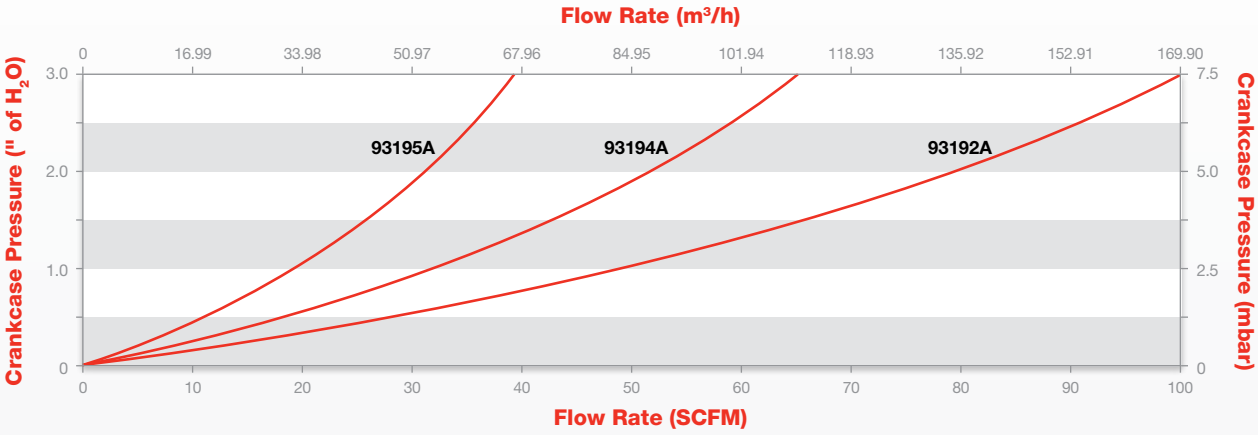


EcoVent™ Specifications

Part #	Element Part #	Diameter	Length	Inlet/Outlet O.D.	Max Crankcase Emission Flow Rate With Clean Element SCFM (m^3/h)
93195A	88467A	6.0" (152 mm)	23.5" (584 mm)	1.5" (38 mm)	8 SCFM (13.6 m^3/h)
93194A	88365A	8.6" (218 mm)	30.2" (767 mm)	1.75" (45 mm)	15 SCFM (25.5 m^3/h)
93192A	88465A	8.6" (218 mm)	38.1" (968 mm)	2.25" (57 mm)	25 SCFM (42.5 m^3/h)

For large engines or engines with multiple crankcase vents. Several units can be used in parallel to balance the flow and/or provide capacity for applications exceeding 25 cfm.

Flow Versus Crankcase Pressure



Sizing and installation of the EcoVent Recirculator require an initial maximum pressure of 0" to 0.3" H_2O (0-0.75 mbar) at engine load with a clean element.

REAL™ Easy.

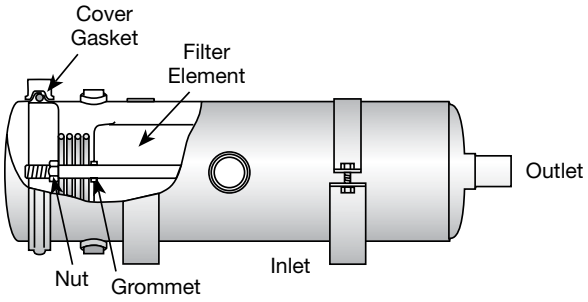
Fleetguard® EcoVent™ Installation

Installation

The Fleetguard EcoVent Recirculator is mounted in a horizontal position on or adjacent to the engine, and above the crankcase oil level. A connection using flexible heat resistant hose or rigid piping is made between the EcoVent inlet and the engine crankcase breather tube.

The oil free engine crankcase fumes can be directed back into the engine creating a closed-loop system by connecting the EcoVent outlet to the engine air inlet stream. These engine crankcase fumes can either be returned ahead of, or after the engine air cleaner. When the engine crankcase fumes are returned ahead of the engine air cleaner, the piping or hose end must be positioned so that the vacuum created by the engine air flow produces a 0" to 0.3" H_2O (0-0.75 mbar) positive pressure reading at normal engine operating load and speed. A U-tube manometer gauge is provided with each EcoVent. When directly tapping into the engine air stream after the cleaner, a control valve is installed to regulate the initial vacuum so that a 0" to 0.3" H_2O (0-0.75 mbar) positive pressure reading is achieved at normal engine operating speed. After these adjustments are made, no further adjustments are required.

The oil collected by the EcoVent can be returned to the engine, depending on the fuel, by connecting a tube connection from the bottom drain of the EcoVent to the engine oil sump. The end of the oil drain tube must be located below the oil level line in the engine oil sump. An alternative would be to periodically drain the oil collected into a waste oil reservoir for proper disposal or connect the oil drain line to a separate dedicated waste oil collection tank.



Parts List

Description	Part #		
EcoVent Assembly	93195A	93194A	93192A
Filter Element	88467A	88465A	88465A
Cover	Q57849	Q57028	Q80170
Cover Gasket	Q58510	Q585403	Q58510
Cover Clamp Assembly	Q52615	Q53087	Q53087
Grommet	Q58521	Q58521	Q58521
Nut	Q53714	Q01428	Q01428
Mounting Brackets*	Q53006	Q53017	Q53017

* 2 brackets are required

Filtration

For more information, visit cumminsfiltration.com

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