

Direct Flow™ Frequently Asked Questions

Why are two types of Direct Flow™ models available?

The Cummins applied models are manufactured with a TBAP (Temperature Barometric Air Pressure) sensor that is tailored for specifics of a Cummins applied engine system. The standard models are manufactured for a broader range of systems.

How is Direct Flow™ different from a traditional cylindrical air cleaner?

The Direct Flow filter element utilizes a rectangular “V-Block” configuration which allows the filter media to be packaged in a smaller volume, improving performance while reducing size. The rectangular design allows the Direct Flow air cleaner to take advantage of the wasted space in the inner diameter of the conventional air cleaner. The benefits of Direct Flow system are an increase in total dust holding capacity and a decrease in size. These features allow for a longer service interval, less maintenance and vehicle down time, a lower cost of ownership, and the ability to mount the air cleaner in location previously unobtainable with a conventional air cleaner. The Direct Flow air cleaner also includes an integrated pre-cleaner and integrated mounting feet.

How long will it last?

The Direct Flow™ air cleaner has been designed to package the optimal amount of filter media in the smallest volume, increasing life and service interval. Compared to an equivalent traditional cylindrical air cleaner, the Direct Flow air cleaner will outperform and outlast conventional cylindrical air cleaners.

Where can I get replacement Elements?

Direct Flow aftermarket replacement filter elements and service parts will be available at hundreds of Cummins Filtration® and Fleetguard® worldwide retail locations. Visit cumminsfiltration.com for the nearest location.

How do I mount this air cleaner?

The Direct Flow air cleaners have integrated mounting feet on both the top and bottom sides of the housing which allow for easier and more convenient installations. Additional mounting band clamps are no longer required as compared to the conventional cylindrical air cleaners. The Direct Flow air cleaner can be mounted either vertically or horizontally.

What does the sensor do?

The sensor is located in the outlet of the air cleaner housing, which provides a consistent location for the sensor while communicating air flow data to the ECM, optimizing engine and system performance.

Why is Direct Flow required for Tier 4?

The Direct Flow air cleaner has been designed and integrated with the Cummins Engine Business in order to understand and match the engine performance requirements and industrial specifications for the air intake system. The sensor must be mounted at a specific location in the airstream for accurate calculations, therefore, the Direct Flow housing has been specifically designed to minimize variation and achieve optimized system performance.

What does a pre-cleaner do?

A pre-cleaner is used to remove about 75% of all incoming dust from reaching the filter element. A pre-cleaner uses centrifugal force to move dust particles out of the air stream and then expels these particles back into the environment.

What is aspiration?

Aspirating the air cleaner increases the efficiency of the pre-cleaner by pulling a small vacuum and extracting the large dust particles from the pre-cleaner. Typically, the efficiency of most pre-cleaners is 75%, an aspirated pre-cleaner is normally 90% efficient. This increase in efficiency increases the life of the filter element about 250%. Aspirating the air cleaner is done by installing an aspirator within the exhaust flow; the aspirator uses a venturi to create a pressure differential which provides the vacuum pressure to the air cleaner. For more information, contact Technical Assistance at 1-800-22FILTER.

Can Direct Flow™ be used for Tier 3 applications?

Absolutely. The Direct Flow™ air cleaner has been designed to operate in any air filtration environment.