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Filtration can help to control climate change



Published 3 months ago on April 16, 2024

By [admin](#)



Niranjan Kirloskar, Managing Director, Fleetguard Filters, elaborates on the importance of filtration and its profound impact on efficiency, longevity and environmental sustainability.

Tell us about the core principle of filtration.

Filtration is segregation/separation of matter by density, colour, particle size, material property etc. Filtration is of four basic types:

- Separation of solids from gas
- Separation of solids from liquids
- Separation of liquids from liquids
- Separation of Solids from solids.

As applied to engines/equipment, the main objective of filtration is to purify the impurities

Filtration improves engine performance as it filters and prevents dirt, dust, and debris from entering into the engine. This ensures that the quality of air or fluid that reaches the combustion chamber is as per the specific requirements of optimal performance of the engine. It also extends engine life by filtering out contaminants. Efficient filtration ensures optimal performance of the engine/equipment over its entire operating life. Filtration also improves fuel efficiency as a clean filter allows for a better air-fuel mixture in the engine, thus improving combustion efficiency, which in turn results in better fuel economy. It keeps emissions under control as fuels burn more efficiently leading to lesser harmful residue in the environment. Thus, to sum up, an optimal filtration solution ensures better performance, prolonged engine life and less hazardous waste in the environment.

What is the role of technology in the process of filtration?

Innovation, research and development as well as technology play a pivotal role in catering to the ever-evolving environmental norms and growing market demands. At FFPL we have NABL Accredited labs for testing, we have ALD Labs for design, and a team of R&D experts constantly working on providing advanced solutions to cater to the evolving market needs. We have robust systems and advanced technologies that make high-quality, high-precision products. Our state-of-the-art manufacturing facilities use advanced technologies, automation, robotics and also Industry 4.0 as applicable to provide the best products to our customers. To ensure each product delivered to market is of utmost precision, advanced quality equipment such as CMM, scanning systems and automated inspection technologies for real-time monitoring and quality control during the manufacturing of filtration systems and to comply with standard quality requirements are used.

Tell us about the impact of good filtration on health and the environment.

Good filtration of equipment is to the environment what a good respiratory system is to the body. There are various benefits of an efficient air filtration system as it improves the air quality by ensuring optimum combustion of fuel thereby reducing/controlling emissions to the environment. Efficient lube filtration ensures low wear and tear of the engine thereby extending life of the engines and maintaining optimal performance over the entire operating life of the engine. Efficient fuel filtration ensures low wear and tear of expensive and sensitive fuel injection thereby ensuring perfect fuel metering resulting in best fuel efficiency and saving of precious natural resources. This efficient filtration can help to control climate change as it reduces the carbon footprint due to combustion in the environment.

Can your products be customised and integrated with other machinery?

Fleetguard Filters have been known as a leading solutions provider for decades. With relevant experience and close customer relations, we understand the market/applications requirements and develop solutions to address the pressing technical challenges our customers face concerning filtration solutions. Filters can be customised in terms of size, shape and configuration to fit specific requirements. Customised filters can be designed to meet critical performance requirements. Filtration systems can be designed to integrate seamlessly with any auto and non-auto application requirements.

What are the major challenges in filtration solutions?

Major challenges faced in filtration solutions are:

- With every emission regulation change, filtration requirements also keep changing.
- Engines are being upgraded for higher power ratings.
- Space for mounting filtration solutions on vehicles/equipment is shrinking.
- For fuel injection systems, the water separation efficiencies are becoming more and more

- Customers prefer higher uptimes and longer service intervals to ensure lower maintenance and operating costs.

We, at Fleetguard, strive continuously to ensure that all the pains experienced by our customers are addressed with the fit to market solutions. Balancing the cost of filtration solutions with their performance and durability can be challenging, especially where the requirements of high filtration standards are required. Also, wrong disposal methods for used filters can have environmental impact.

- –Kanika Mathur

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Published 2 weeks ago on June 14, 2024

By [admin](#)