

Air Filtration Testing



A system that performs perfectly in the lab can fail when dust, debris, and harsh operational conditions hit. At the Air Flow Laboratory (AFL), we put air filtration systems through the challenges they'll face in the field—revealing true performance limits and ensuring mission-ready reliability. As an ISO/IEC 17025–accredited laboratory, AFL delivers rigorous, repeatable, and unbiased testing for first-article evaluation, design validation, and production quality surveillance. Every test produces actionable data, giving you the confidence that your filtration systems will protect engines and vehicles under the harshest conditions.

Partner with AFL to validate performance, reduce risk, and ensure your vehicle air filtration systems protect engines and passengers in the harshest environments.

Trusted Testing for Vehicle Air Filtration Performance

We provide a comprehensive suite of component-level testing capabilities focused on one objective: delivering defensible data that ensures reliable filtration performance across the full vehicle lifecycle.

Dust Performance Testing: Proving Protection Where It Matters

A filtration system's value is defined by its ability to keep contaminants out under sustained exposure. AFL conducts controlled dust testing to demonstrate and validate the performance of new and legacy air filtration devices. These tests expose weaknesses in filtration efficiency, restriction buildup, and durability before they can degrade engine performance or readiness.

Benefit: Validate filtration effectiveness, reduce engine wear, and prevent dust-induced failures in operational environments.

Design Evaluation & Optimization: Engineering for Efficiency

From new air cleaner concepts to add-on components, AFL evaluates how design changes impact airflow, restriction, and dust-holding capacity. Our testing identifies performance tradeoffs early, enabling informed design decisions and optimized system configurations.

Benefit: Improve system efficiency and performance while avoiding unintended impacts from design changes or add-on components.

Failure Analysis & Fielded System Support: Solving Real Problems

When fielded systems underperform, AFL provides targeted troubleshooting to identify root causes and failure modes. We also assess proposed maintenance strategies to improve service intervals and sustainment efficiency.

Benefit: Resolve in-service issues faster, enhance vehicle availability, and improve long-term sustainment outcomes.

First-Article & Production Surveillance Testing: Confidence at Scale

AFL performs unbiased first article dust testing and ongoing production quality surveillance to ensure systems meet requirements before and after vehicle implementation.

Benefit: Reduce program risk, ensure compliance with MIL specifications, and maintain consistent performance across production lots.

Standards-Compliant, Mission-Focused

AFL supports critical military specifications, including **MIL-PRF-46736F**, **MIL-PRF-62048C**, and **MIL-PRF-62565**, along with general performance testing for add-on air cleaner components. From early development through sustainment, AFL delivers the trusted data you need to ensure air filtration systems perform reliably—no matter how severe the environment is.

AFL - Filtration: Where filtration performance is proven, not assumed.