TOTAL FILTRATION SERVICES

Reducing Hazardous Waste Costs in an Automotive Plating Application

Customer Case Study

PROFILE

The company is a Tier-1 automotive supplier producing exterior trim components for major OEMs including GM, Ford, and BMW. Their plating operations in Evansville, IN and Morehead, KY rely on high-efficiency air filtration to capture particulate associated with hexavalent chromium processes—requiring strict handling and disposal procedures

Total Filtration Services supports both locations through a Vendor Managed Inventory (VMI) program, with on-site visits to review inventory levels, engage maintenance and engineering teams, and proactively identify filtration optimization opportunities.

CHALLENGE

The customer's plating operations utilized metal-framed HEPA filters with aluminum separators.

Each filter changeout triggered specialized hazardous-waste disposal requirements due to hexavalent chromium contamination and the presence of metal components. Disposal fees averaged $6,000 per changeout per facility, driven by the need for regulated handling and landfill processing.

With approximately four changeouts per year and eight filters per location, disposal costs alone exceeded $48,000 annually, not including the higher unit cost of the filters themselves. Additionally, the frequent changeouts increased labor demands and employee exposure risk during filter handling.

The customer asked TFS to identify a non-metal HEPA filter solution that could eliminate disposal fees while maintaining performance and production consistency.

THE TFS SOLUTION

Leveraging technical expertise and preferred supplier partnerships, TFS recommended the Rensa Superflo® HEPA filter—a metal-free, high-efficiency (99%, MERV 15) solution designed for clean-air and plating applications.

TFS worked closely with the customer's plating engineers to review performance data, validate compatibility, and initiate a controlled trial at the Morehead facility.

During the three-month trial period, filter performance was monitored through pressure and airflow measurements to ensure consistent operation and proper loading behavior.

The trial confirmed that the Rensa Superflo® filters met performance requirements and exceeded expectations for service life. Based on these results, the same solution was implemented at the Evansville facility, and the previous HEPA filters were fully phased out the filtration system.

RESULTS

- Eliminated $6,000 per changeout disposal fee by removing metal components
- Reduced total annual costs by approximately $52,000 across both facilities
- Extended filter life from 2–3 months to 3–6 months depending on site conditions
- Reduced maintenance frequency by at least one changeout per site per year
- Improved employee safety by minimizing exposure during filter handling
- Decreased overall waste volume through fewer changeouts and simplified disposal

The customer reported that the Rensa Superflo® filters maintained stable airflow and pressure over longer service intervals, improving operational consistency while significantly reducing total cost of ownership.

Rensa Superflo®