

CONSERVATION OF RESOURCES

Schroeder
INDUSTRIES

Tank Optimization and BRT In-Tank Filtration Save 19 Gallons Per Unit for Refuse Industry OEM

Technical Application Bulletin

CHALLENGE

An OEM manufacturing a variety of hydraulic refuse trucks sought ways to improve the design and efficiency of their side loader model. Their existing design utilized a fabricated metal tank with 75 gallon capacity.

APPROACH

Tank Optimization analysis of the customer tank discovered the the jet-like entry of fluid into the reservoir through the conventional return filter was likely causing surface disruption and air entrapment. As an alternative, Schroeder Industries developed a rotomolded reservoir design utilizing BRT filtration. BRT filters utilize patented deaeration windows and provide smooth, consistent, laminar flow throughout the reservoir with reduced velocity overall. The updated design provides a reduction in oil volume and weight while offering improved flow and deaeration capabilities.

RESULTS

- Efficiency improvements and overall downsizing of the tank assembly through optimization and BRT filtration:
 - 19 Gallon Volume Reduction
 - Tank Weight Savings: 202 lbs
 - Oil Weight Savings: 133 lbs
 - Overall Weight Savings: 335lbs per unit
- Initial oil cost savings of \$380 on a single fill; cost benefits compound over equipment life
- Initial CO₂ reduction of 450lbs; sustainability benefits compound over equipment life

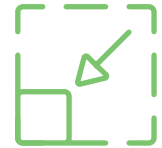
◆ Tank Optimization: Uses cutting-edge simulations and CFD analyses to discover inefficiencies in existing tank assemblies and develop efficient solutions

◆ BRT Filtration: Engineered for smooth, laminar flow within the reservoir with patented de-aeration windows to more effectively tackle air contamination



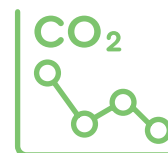
CUSTOMER SEEKING IMPROVEMENTS THROUGH TANK OPTIMIZATION

19 GAL
RESERVOIR VOLUME
REDUCTION



335 LBS
WEIGHT REDUCTION
PER TANK ASSEMBLY

\$380
INITIAL OIL COST
SAVINGS PER UNIT



450 LBS
INITIAL CO₂
REDUCTION

