CONSERVATION OF RESOURCES

# Tank Optimization & Air Fusion Technology Give Ride-On Snowplow Competitive Edge

*Technical Application Bulletin*

## CHALLENGE

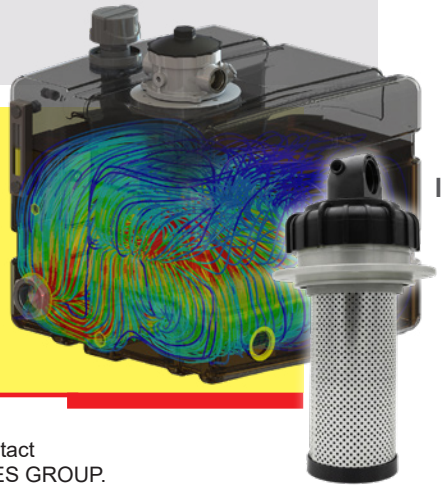
An OEM producing ride-on snow removal equipment, wanting to be more competitive in the market, sought solutions to improve their hydraulic oil cleanliness and optimize their systems.

## APPROACH

Schroeder Industries began with Tank Optimization analysis of the customer's existing 9-gallon metal hydraulic reservoir. By improving the tank structure and utilizing Air Fusion Technology filtration in place of the existing in-tank filter, Schroeder determined that the snow plow's hydraulic reservoir could be downsized to 2 gallons while maintaining optiumal filtration/deaeration.

## RESULTS

- Applying Air Fusion Technology for improved deaeration allowed for increased tank downsizing
- **Reduction** in reservoir size from **9 to 2 gallons** provided a variety of benefits, including:
  - Oil volume **reduced by 7 gallons**, providing oil-related cost savings to both the OEM and end user over the machine's lifespan
  - **Initial cost savings of $98** per unit
  - Weight of tank assembly **reduced by 51lbs**
  - Increased machine space enabled customer to upsize their fuel tank, **doubling** their equipment's runtime versus the competitor
  - **165lbs of $CO_2$ saved** per tank assembly



- **Tank Optimization uses cutting-edge simulations and CFD analyses to reduce volume and fluid velocity for an improved hydraulic reservoir**
- **Air Fusion Technology can enhance Tank Optimization potential through its advanced deaeration capability**

CUSTOMER SEARCING FOR OPPORTUNITIES TO OPTIMIZE/IMPROVE

**7 GAL**
REDUCTION IN RESERVOIR VOLUME

**51 lbs**
REDUCTION IN TANK ASSEMBLY WEIGHT

**2x LONGER**
EQUIPMENT RUNTIME VERSUS COMPETITOR

**NEARLY $100**
INITAL COST SAVINGS PER UNIT

**165 lbs**
INITIAL $CO_2$ SAVINGS PER TANK ASSEMBLY

HYDRAULIC ACCESSORIES