



Global HVAC Industry Leader Cuts Production Costs With TRIM® MicroSol® 692XT

Our customer is a manufacturer recognized as a global leader in the field of high-precision metal components, especially those with single-digit micron tolerances. The company has over a dozen facilities worldwide and provides components for several industries, including automotive, HVAC, consumer goods, and fluid power.

THE CHALLENGE

The customer has three drill machines dedicated to manufacturing metal shafts for compressors. The machines required 10 gallons of makeup coolant per day to maintain proper concentrations, leading to a high consumption rate and coolant costs. From past experience, the shop floor manager was aware the cutting tools were not lasting as long as they should. So, the company approached Master Fluid Solutions to find a cost-effective way to mitigate coolant makeup rates and extend tool life.

THE SOLUTION

After an on-site consultation and review with a Master Fluid Solutions district sales manager, the customer took advantage of our FIRST CHARGE NO CHARGE® Program and began a one month trial of TRIM® MicroSol® 692XT. The high-lubricity, semisynthetic, microemulsion coolant was perfectly suited to materials they were machining. This next-generation formulation provides greater biostability and foam control while extending sump life compared to the semisynthetic microemulsions of the past. Immediately, the customer discovered that MicroSol® 692XT maintained proper coolant concentrations with half the amount required by their previous cutting fluid.

THE RESULTS

After upgrading from their previous cutting fluid to TRIM® MicroSol® 692XT, the coolant makeup rate was cut by **50%**, and the customer went from using 10 gallons of coolant to only 5. With MicroSol® 692XT as their coolant, tool life was increased substantially. The company only had to change tools 813 times per year, down from 1,083, a **25%** decrease. By extending tool life, each drill processed 800 metal shafts before needing replacement, compared to 600 with their previous coolant solution.

These factors contributed to a massive increase in productivity with substantial cost savings. Total cost per part was reduced to **\$0.2114**, down from **\$0.2310**. This

brought annual costs of production down to **\$142,688** from **\$156,807**. Though TRIM® MicroSol® 692XT costs more than the company's previous coolant solution, the increased productivity and lower production costs translated to **\$14,119** in savings annually.

THE NUMBERS

- **50%** reduction in coolant application rates
- **8.48%** reduction in cost per part
- **25%** extended tool life
- **\$14,119** in annual savings