

Real-Life Stories

Case Study: TRIM® Coolant Speeds Up Production of Valuable Compressors Needed to Fight COVID-19 Pandemic

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Due to the COVID-19 pandemic, medical centers and pharmacies have had an unprecedented need for refrigeration units to help store lab specimens, medications, and vaccines. Therefore, refrigerator manufacturers have required a high volume of compressors on extremely short notice. The demand has become so high that several companies — including plants based in Asia producing bearings and rollers for rotary compressors — have seen their lead time increase from two to eight weeks, significantly slowing down the production of these life-saving components.

THE CHALLENGE

The customer grinds large amounts of cast iron and steel to produce compressor components. Despite replacing their synthetic coolant every three months, the customer struggled with the effects of dirty coolant, foam, and inadequate rust protection. This led to inconsistent finishes and the need to rework parts. The downtime for cleaning machines and changing coolant, grinding wheel replacement, and scrap parts lowered throughput and overall productivity. This was very costly from a production standpoint as well as delaying the delivery on life-saving components.

THE SOLUTION

The customer switched from their existing synthetic coolants to the TRIM® cutting fluids from Master Fluid Solutions™. The signature coolants provide improved sump life, foam control, filtration capability, tramp oil rejection, and reduced carry off compared to competitors. Many also have the multi-metal compatibility demanded by the HVAC manufacturing industry. Several of Master Fluid Solutions' TRIM fluids meet the requirements of the ASHRAE 97 standard sealed tube tests, and we will run additional individualized manufacturer tests as needed. TRIM C380 and TRIM C270 offer a wide range of ferrous compatibility and corrosion protection; and semisynthetic solutions such as TRIM MicroSol® 585XT and the new HyperSol™ 888NXT are chlorine-free, offering a lower environmental impact. HyperSol 888NXT is also a USDA Certified Biobased Product due to its sustainability profile.

THE NUMBERS

- Reduced coolant consumption by **50%**
- Reduced cutting fluid costs by **30-40%**
- Reduced machine downtime and additives for foam
- Extended coolant life to **8 months** and counting
- **Eliminated** machine downtime needed for system cleanouts

THE RESULTS

After switching to TRIM, the customer experienced an immediate improvement in their productivity. TRIM coolants stay cleaner for longer, reducing the amount of machine downtime, disposal odors, and mist in the environment. Foam was also significantly reduced, leading to improved filterability and increased productivity. TRIM is so successful at rejecting tramp oil, the customer has not had to replace their coolant in over eight months, eliminating machine downtime for system cleanouts. Both plants have cut their coolant consumption by 50 percent and reduced fluid costs by 30 to 40 percent. The higher quality of TRIM cutting fluids has led to more consistent finishes and eliminated the need for costly rework. The increased productivity and reduction of waste have caused profits and productivity to soar for both facilities.

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