



Cost Savings Case Study

**Manufacturer of Military Parts
FST Program Implemented May 2012**

Background Information

This company is a large manufacturer of Military Parts located in the Southwest United States. This company has 100 mid to large CNC machines. Average sump size is 125 gals per machine.

Scope work for Fluid Service Technologies- Coolant Program

FST Techs check machine concentrations and pH for each machine daily and enter the data on the Tech Tool App. Machines sumps are topped off as necessary and premixed coolant is added at the concentration necessary to bring the coolant in the machine to the required concentration. If the coolant needs to be replaced the tech will sump the used coolant and replace the coolant with fresh coolant. All coolant taken from a machine is evaluated using pass /fail matrix in order to determine if the coolant is eligible to be recycled. Recycled coolant is put in the recycling process and coolant that is not recyclable is placed in the proper containers for disposal. Coolant usage beginning March 2012 - FST service began April 2012 to Current.

FST Value Add / Process Improvements

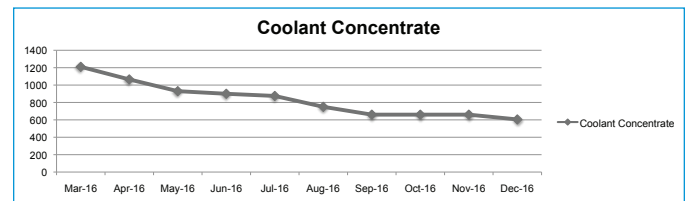
Cost Saving Summary

In the first year after implementation of FST Fluid Management Services this FST customer experienced a 50% reduction in coolant concentrate usage, a 60% reduction in waste haul off, and a 100% reduction in scrapped parts and associated machine downtime. **The resulting annual cost savings for the first year were \$300,504.**

Coolant Concentrate

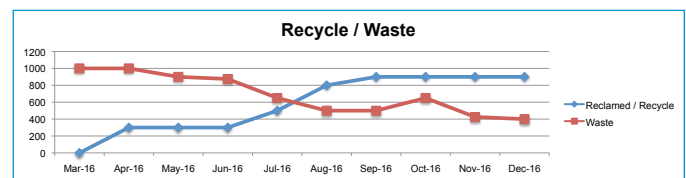
Average monthly usage for 12 months beginning April 2011 and running through April 2012 was over 1200 gallons per month. Monthly usage beginning in May 2012 and running through December 2012 was reduced to 660 gallons per month. Average cost per gallon for coolant during this period was \$22.00 per gallon.

The saving from reduced coolant usage is \$12,100.00 monthly or annual saving of \$145,200.00 - **50% Savings**



Waste / Disposal

Average monthly waste / disposal for 12 months beginning April 2011 and running through April 2012 was 1000 gallons per month. Monthly spent coolant disposal beginning in May 2012 and running through December 2012 was decreased to 400 gallons monthly. Average cost per gallon for was \$1.57 per gallon. The savings from reduced disposal was \$942.00 monthly or annual saving of \$11,304.00. - **60% Savings**



Recycle / Reclaim

Average monthly recycle/reclaim for 12 months beginning April 2011 and running through April 2012 was zero gallons per month. Monthly reclaim was implemented via centrifuge program beginning in May 2012 and running through December 2012 was increased to 900 gallons monthly. This allowed an effective maintenance program with high quality recycle blend to be used for distribution throughout the facility. These processes are directly reflected in usage reduction and reduced waste disposal.

Production / Downtime

Prior to service during 12 months beginning April 2011 and running through April 2012 on average 6 parts were scrapped every month due to improper coolant maintenance. Average downtime for the machine was 4 hours for every scrapped part. Coolant cleanouts were required and spent coolant was disposed of. Monthly cost from scrapped parts and downtime beginning May 2012 to December 2012 was reduced to no scrapped parts or downtime required. Estimated savings from production loss is \$12,000.00 monthly or annual savings of \$144,000.00 - **100% savings.**