AEROSPACE (USA)
ENGINE MANUFACTURING
Castrol Syntilo® 9954
TOTAL SAVINGS: $93,000

THE SITUATION

This customer was experiencing short sump life and poor surface finishes on nickel-alloy jet engine components. The equipment normally grinds these parts with a competitive product in a Campbell ID grinder with a Hoffman vacuum filter. Sump life was about two weeks before an objectionable odor and poor performance would occur. The machine would be pumped out at a cost of $700 and coolant disposed of at a cost of $0.60/ gallon. There would be two hours of machine downtime.

BEFORE

- Poor sump life
- Unplanned downtime costs $9,600 per machine
- Periodic burn marks
- $10,080 in waste costs
- Excessive coolant turnover
- Poor operator acceptance

AFTER

- Clean coolant
- Improved uptime
- Reduced coolant usage
- Pleasant work environment

THE SOLUTION

- Past experience in form grinding showed long term stability and high performance using Castrol Syntilo 9954.
- Castrol engineers worked closely with the machine operators to prove performance of a synthetic product, *vs.* years of a soluble oil.
- Knowledge of the Hydroflow vacuum allowed team to make slight adjustments for improved filtration.
- Supplied cost justification to plant management for increased cost per gallon for coolant and time to convert equipment.

- Right product for the right application
- Reduced usage
- Application of expertise

RECOMMENDATIONS

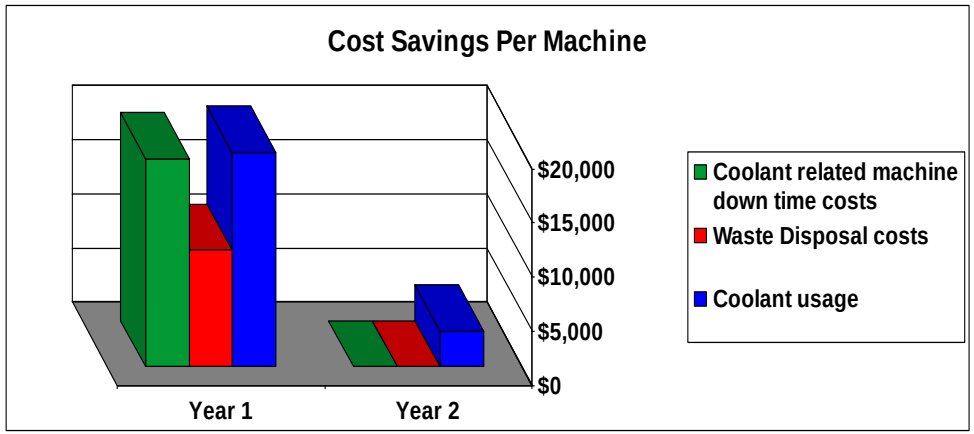
The customer needed to optimize the investment in this grinding department. Each grinder cost over $1M dollars and was shut down for many hours per year due to poor coolant quality.

A part was run to determine a base line for tooling, finish and cycle time. After the conversion, surface finishes improved and sump life was extended from 14 days to six months.

Operator acceptance is outstanding, promoting further expansion in this department. Waste disposal and coolant usage were reduced dramatically for $19,000 cost savings.

CONCLUSION

Castrol Syntilo 9954 has proven to be an extremely effective synthetic coolant capable of replacing soluble oils in the critical operation of grinding jet engine components. Castrol has been able to take these experiences and improve surface finishes, increase sump life and improve operator working conditions. These conversions have resulted in significant dollar savings and an enhanced work environment for the customer.



OTHER POTENTIAL APPLICATIONS

A key benefit to using Castrol Syntilo 9954 is its ability to perform in a multitude of applications including milling, drilling, turning and grinding of most 'difficult-to-machine' materials. This allows a plant to reduce the number of different kinds of metalworking fluids.