

Titanium Milling Success

AEROSPACE (USA)

Aircraft Component Machining

Castrol Hysol® SL 45 XBB

ANNUAL SAVINGS: \$19,432

THE SITUATION

An aerospace component manufacturer, specializing in 4 and 5 axis milling, produces parts in 42 machines from aluminium, titanium, and high temp alloys. They were encountering multiple issues with their metalworking fluid, including fluid foam-overs, high usage, elevated concentration levels, and residue build-up on equipment. These problems were disrupting production and driving up costs due to the need for tank-side coolant additives.

BEFORE

- Concentration of 13% in titanium applications
- Lost production of 26 hrs annually due to foam
- Residue build-up
- Coolant usage of 2300 gal annually

AFTER

- Concentration of 8%
- No foam issues
- No residues
- Coolant usage 20% lower
- Improved part surface finish
- Lower price per gallon

THE SOLUTION

- Coolant usage: Reduction of over 500 gal per year
- Operator Acceptance: Machine cleanliness drastically improved, allowing operators to see through machine windows
- Maintenance: No downtime due to foam-overs
- Sump Life: Customer will achieve 12 month sump life or beyond

- **20% reduction in coolant usage**
- **Reduced maintenance cost**
- **High operator acceptance**
- **Better surface finishes**



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RECOMMENDATIONS

Some components have a 7-day cycle time to complete a single part, so this customer needed a reliable coolant to provide uninterrupted performance. Castrol Hysol SL 45 XBB provided this superior performance while also being approved for use by Boeing (BAC 5008 approval). This approval aids in compliance during audits by Boeing.

CONCLUSION

Hysol SL 45 XBB has delivered value across the board in obtaining better part finish, reduced usage, lower maintenance costs, and elimination of coolant additives.

The result was an annual savings of \$19,432 and a very happy customer!



OTHER POTENTIAL APPLICATIONS

Hysol SL 45 XBB is a high performance metalworking fluid approved by major aerospace manufacturers such as Boeing, Airbus, and SAFRAN. It is suitable for all aerospace materials including ferrous and non-ferrous applications.

