Success in Systems with High Tramp Oil

AUTOMOTIVE (USA)

GEAR AND AXLE

Castrol Syntilo® 1023

ANNUALIZED SAVINGS: $266,772

THE SITUATION

Two central coolant systems were using a low cost soluble oil to machine cast iron rear axle carriers and cases. Excessive leakage from hydraulic, way, and spindle oil was heavily contaminating the coolant. To deal with this tramp oil, the customer was renting a centrifuge and moving it from system to system. The centrifuge was removing a portion of the coolant concentrate with the tramp oil. In addition, the coolant was not able to resist biological growth and frequent biocide additions were required. Complaints from the area employees and surrounding community were routine.

BEFORE

- Average monthly cost of operating the two systems: **$25,514** including concentrate usage, biocide and pH buffer.
- Centrifuge rental: **$5,500/mo** to remove tramp oils

AFTER

- Systems converted to Syntilo 1023 and the average monthly cost to operate the systems dropped to **$8,533**.
- Biocide and pH buffer usage was almost eliminated.
- Skimmer purchased for a **one time cost of $3,000**. Monthly centrifuge rental eliminated.

THE SOLUTION

- Castrol analyzed the situation and determined that an oil-dispersing synthetic fluid would best suit these applications.
- Syntilo 1023 provides sufficient lubrication for the machining operations while temporarily dispersing the tramp oil to prevent the cast iron chips from forming “clinkers”.
- Syntilo 1023 rejects the tramp oil with settling time, allowing the use of low cost skimmers or coalescers instead of costly centrifuges. This dramatically reduces equipment cost and coolant waste.
- Biological issues have significantly improved and odor complaints have been eliminated.
- Reduced carryout on parts and chips also contributes to significant savings for the customer.

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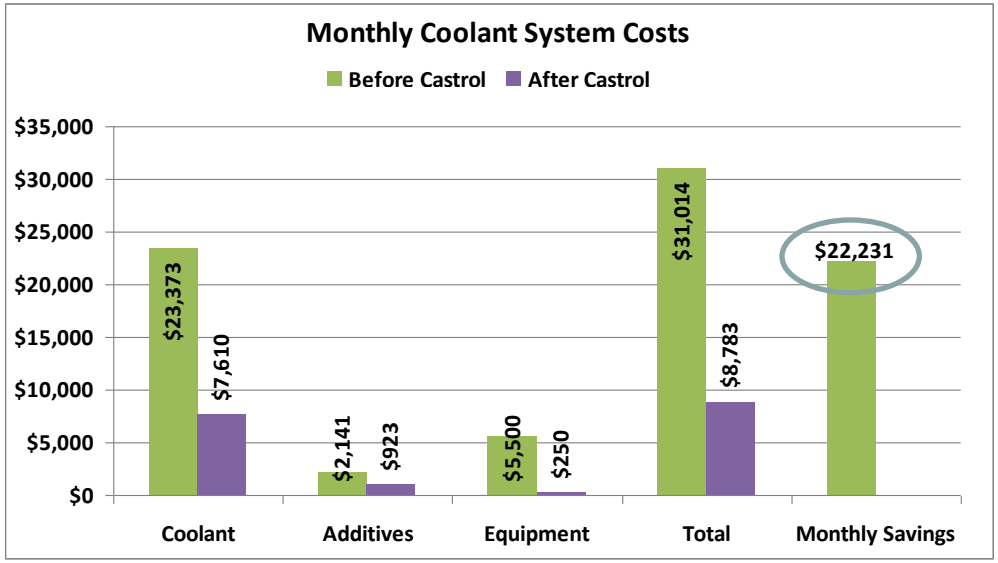
RECOMMENDATIONS

The unique chemistry of the Syntilo 1023 allowed for most of the tramp oil to be rejected in the main coolant tank. Low cost skimming devices were all that was needed to remove the oil and eliminate the costly centrifuge rental. The excellent bio-resistant properties dramatically reduced the need for additives.

CONCLUSION

This documented savings was signed off by the customer and led to the proliferation of Syntilo 1023 across several other machining systems in the plant.

The overall result was an annual savings of $266,772 in coolant and equipment costs.



OTHER POTENTIAL APPLICATIONS

Syntilo 1023 is an oil-dispersing synthetic coolant that is ideal for systems with heavy tramp oil contamination, where machining and grinding of ferrous components occurs.