

MACHINERY MANUFACTURE (USA)

AGRICULTURE & CONSTRUCTION - COMPONENTS

Castrol Hysol® AMG

\$6,780 Fluid Savings + 40% Cycle Time Reduction



THE SITUATION

A major hydraulic component manufacturer was experiencing problems in their new Gioria grinders producing steel cylinder rods. Key issues that arose with the use of the existing synthetic coolant included: grinding wheel loading, poor wheel dress rates, part burning, and aggressiveness towards the machine components.

A high concentration was used to combat the part burning, potentially leading to some of the other issues mentioned. Reportedly, these machines were not designed to handle synthetic coolants.

BEFORE

- Fully synthetic coolant
- Cycle time of 64 min per part
- Frequent wheel loading
- Concentration of 10-12%
- Aggressiveness towards the machines
- No foam or bacteria

AFTER

- Castrol Hysol AMG soluble coolant
- Cycle time of 39 min per part
- No wheel loading
- Concentration of 5-7%
- Excellent compatibility with machine components
- No foam or bacteria

THE SOLUTION

With more Gioria grinders scheduled for commission, a new coolant was sought. The customer and Castrol worked together to select a soluble oil coolant, Castrol Hysol AMG, for trial due to its success in a number of other plant grinders.

The trial success would be based on the coolant's ability to be run at lower concentrations, preferably 6%, while eliminating part burning, eliminating machine aggressiveness, reducing wheel loading, and providing improved wheel dress rates. At the same time, the coolant would have to provide acceptable sump life, bacterial control, and foam resistance that was provided by the existing synthetic coolant.

Hysol AMG eliminates part burning and reduces cycle time by 40%!

RECOMMENDATIONS

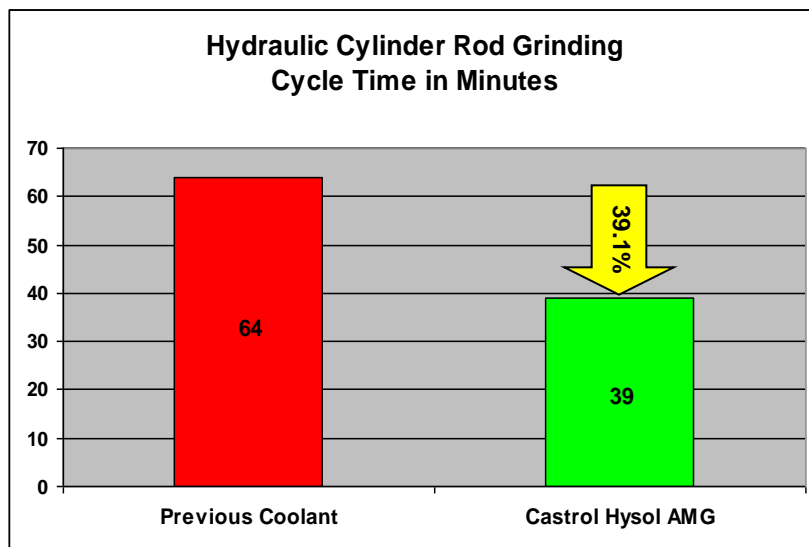
The trial of Hysol AMG began in one machine and was scheduled to last several months. Due to the success in the first machine, it was charged in the second grinder within 3 weeks.

The cycle time was reduced by increasing the feed rate which was now possible due to elimination of part burning. Cycle time will continue to be monitored, as it is believed that the Hysol AMG technology will allow feed rates to be increased even further.

CONCLUSION

Castrol Hysol AMG provided higher performance at a lower cost, as represented by the elimination of part burning and the reduced cycle times. This made a huge impact on plant production rates and number of grinders needed to produce parts.

Aggressiveness towards machine components was eliminated while sump life, biological resistance, and foam resistance remained equal.



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OTHER POTENTIAL APPLICATIONS

Castrol Hysol AMG is an advanced soluble oil with high lubricity, optimum EP package, and excellent foam & bacteria control. It is well suited for applications with difficult to machine alloys, high metal removal rates, or any requiring exceptional lubrication.