

Engine Honing Success with Alusol AU 68

AUTOMOTIVE (MEXICO) ENGINES

Castrol Alusol® AU 68

ANNUAL SAVINGS: \$202,219 USD

THE SITUATION

A major automotive manufacturer has three central systems (8000 liters each) to conduct cylinder bore honing (Gehring machines) on their latest generation aluminum engine blocks.

These coolant systems were having problems on surface finish due to poor lubricity (built-up edge), damaged tools, and downtime to regularly cleanout the machines. Coolant usage was very high and service from the supplier was poor.

BEFORE

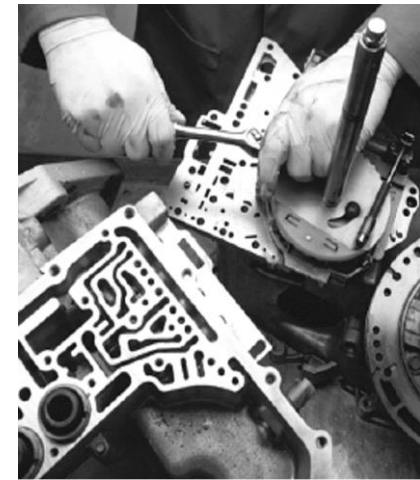
- Poor surface finish of the honed cylinder bores (steel liners)
- Metal fines were building up on the tools and causing damage.
- Sump life of only 5 weeks lead to very high usage & downtime

AFTER

- Castrol Alusol AU 68 semi-synthetic fluid in use
- Surface finish greatly improved
- Correct tool life reached
- Sump life extended to six months, dramatically reducing usage
- Much improved cleanliness

THE SOLUTION

- Alusol AU 68 performance information and case studies were presented to the customer to demonstrate capability of replacing the competitor's fluid.
- Our advanced product was formally approved by the customer's corporate group. This is a difficult approval that requires field testing of the fluid.
- Alusol AU 68 was recommended as our newest and highest performing fluid for machining automotive aluminum.
- The result with Alusol AU 68 was excellent machining performance, great part finish and customer validation of proper tool life.



- Improved part finish
- Reduced CPU
- Extended tool life
- Greatly increased fluid life

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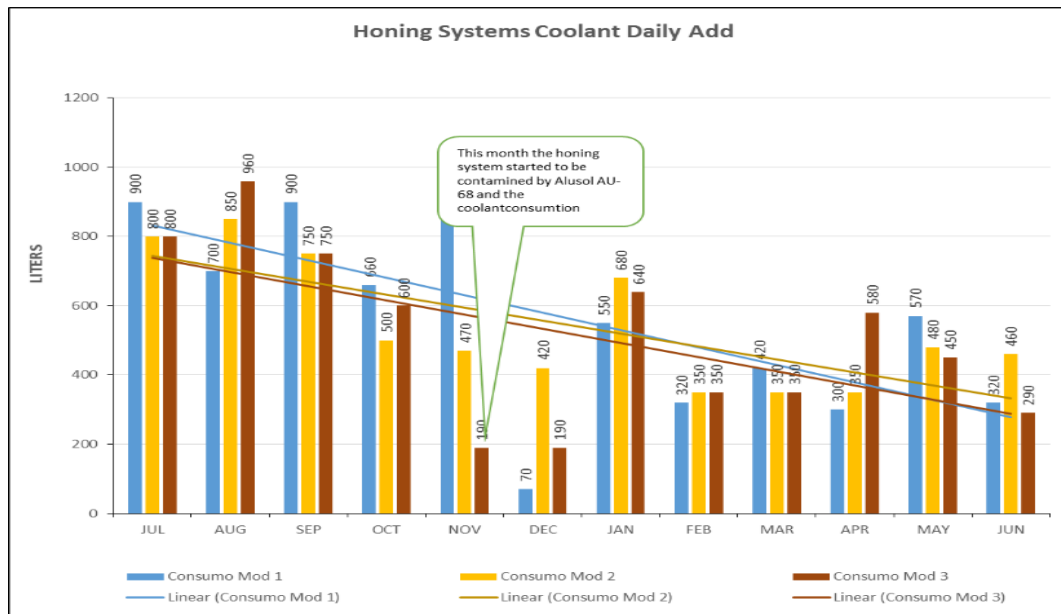
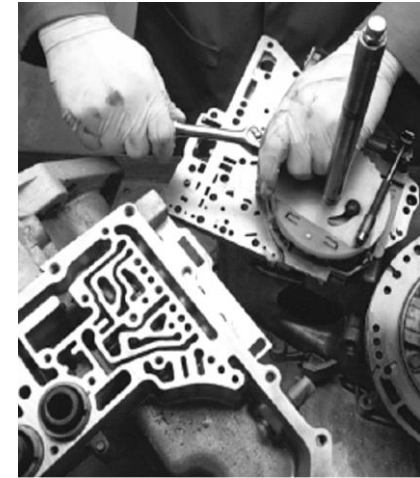
RECOMMENDATIONS

Castrol Engineers had previous experience with Alusol AU 68, having successfully replaced older technology coolant in honing operations at other automotive facilities. This experience allowed Castrol and the customer to confidently test the fluid in their critical operations.

CONCLUSION

With Alusol AU 68, the customer was able to achieve the part finish and tool life that they desired.

The result was \$202,219 annual savings by reducing usage from change-outs.



OTHER POTENTIAL APPLICATIONS

Alusol AU 68 is a high performance machining fluid for multiple metals. It is designed for maximum lubricity while providing excellent bio-resistance and meeting the latest, most stringent health and safety requirements of our customers.