

# AUTOMOTIVE (Mexico) ENGINES

Castrol Hysol® MB 50

**ANNUAL SAVINGS: \$46,909**



Hysol MB 50 eliminates fungus, foam, and the need for tankside additives

## THE SITUATION

The customer was using a competitor's soluble oil in their automotive machining operations. The ops include drilling, milling, reaming, and form tapping on 6061 aluminum parts. The coolant lubrication was performing well, but the bio-resistance and foam control were problems.

The customer was looking for better performance at reduced overall costs.

## BEFORE

- Average usage of 134 ml/hr
- Bad odors due to frequent fungus issues
- Regular biocide and defoamer additives in use

## AFTER

- Average usage of 109 ml/hr
- Bio problems were eliminated along with the odors
- Biocide is no longer needed and defoamer is used only rarely

## THE SOLUTION

- Castrol Hysol MB 50 was tested for 1 year in a single Heller machine.
- Castrol supported the trial with regular lab analysis to verify fluid performance.
- The machine was not cleaned well, showing fungus on the walls. This was a difficult challenge for the new fluid to overcome.
- The customer also reused stagnant coolant from the chips by adding back to the sump.
- The fluid was able to fight off the challenging bio conditions and was put in 33 other CNCs.
- At the end, the customer obtained a 21% savings on fluid & additive usage and an estimated 15% savings on tooling.

## RECOMMENDATIONS

### Fluid maintenance

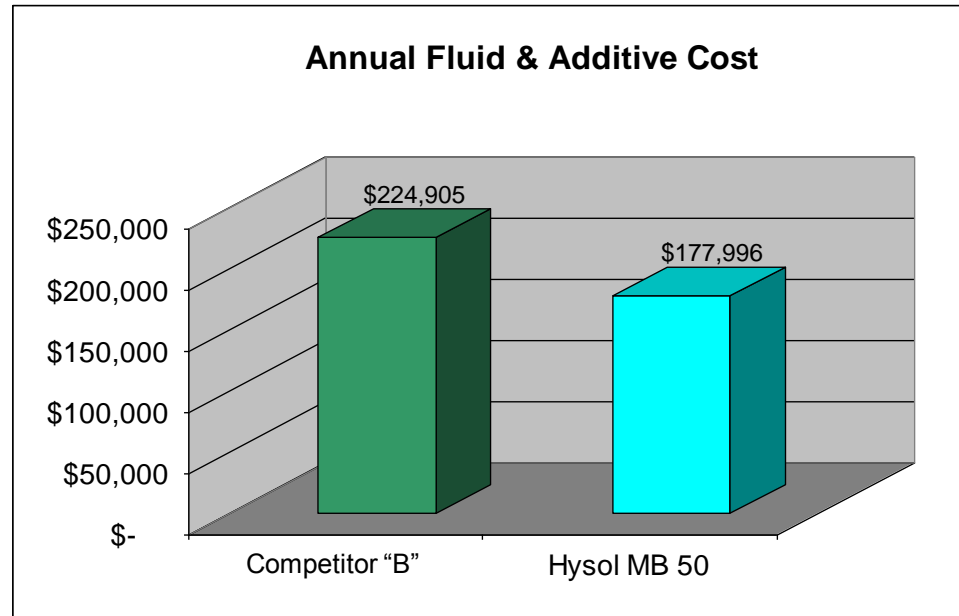
Keep concentration over 5% in order to maintain rust protection on equipment.

Coolant make-up should be added regularly to maintain the expected performance.

## CONCLUSION

The customer was expecting similar performance as the competitor's fluid, however the usage and tool life was outstanding in comparison. In addition, the improved cleanliness reduces the cost associated with preventive maintenance labor.

**The result was \$46,909 in fluid & additive savings alone.**



## OTHER POTENTIAL APPLICATIONS

**Castrol Hysol MB series** semi-synthetic coolants were designed for exceptional bio-resistance, excellent foam control, and outstanding machining performance. Experience has also found that concentrate usage is low due to reduced carry-out.

Castrol, the Castrol logo and Hysol are trademarks of Castrol Limited, used under license.