

Race Grind Success with XBB and SmartControl Technology

MACHINERY MANUFACTURING (USA)

BEARING MANUFACTURING

Castrol Hysol® SL 36 XBB

ANNUAL SAVINGS: \$108,122



THE SITUATION

A major bearing manufacturer in the Midwest was experiencing high rates of coolant turnover and health & safety concerns due to misting and surface accumulation using a straight oil in a central system.

The customer was seeking to convert to a water soluble fluid which had to meet or exceed the performance of the straight oil with regards to surface finish and pitch diameter without reducing grinding speeds.

The customer performs steel race grinding for bearings and CV joints.

BEFORE

- High fluid carryout on parts due to nature of straight oil
- Excessive levels of oil mist and slippery floors near machines
- High usage rate of coolant

AFTER

- Oil mist and slip/fall concerns were greatly reduced while maintaining grinding performance
- Two water soluble central systems converted to Hysol SL 36 XBB based on its exceptional performance
- Coolant usage in those systems was reduced by 30+%
- SmartControl unit installed to monitor coolant parameters in real time

THE SOLUTION

- Castrol Hysol SL 36 XBB was tested alongside multiple competitors
- The fluid provided the same surface finish quality as the neat oil without reducing grinding speeds
- Hysol SL 36 XBB achieved this performance at 8% concentration while competitors could not achieve it even at 30% concentration
- The fluid is designed to reduce foam even in soft water systems, so it works well with customer's RO water
- Castrol's SmartControl alerted to a low pH situation (caused by large volume of tramp oil) which allowed for quick correction of the system without affecting production

- Over 30% reduction in coolant usage
- Advanced coolant technology that is boron and biocide-free
- Castrol's SmartControl fluid management program

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SMARTCONTROL 

CONCLUSION



*Continuous coolant monitoring
on Race Grind system*

Castrol Hysol SL 36 XBB showed outstanding grinding performance, matching that of the neat oil while greatly reducing costs and health & safety concerns. After coolant conversion and addition of **SmartControl**, the data shows improvement in usage, longer sump life and better system performance in the 3 central systems (1 was previously straight oil and the other 2 were water soluble).

Hysol SL 36 XBB combined with **SmartControl** technology lead to better management of concentration and pH, providing a **usage reduction of 30% and over \$100,000 in cost savings.**



OTHER POTENTIAL APPLICATIONS

Hysol SL 36 XBB is an excellent coolant for medium duty grinding and machining of multi-metal parts, even in soft water systems. The boron-free and biocide-free technology meets regulatory compliance and improves operator acceptance while its tighter emulsion reduces usage rates and extends coolant life.