MACHINERY MANUFACTURING (USA)

AGRICULTURAL & CONSTRUCTION - COMPONENTS

Castrol Hysol® MB 20

ANNUAL SAVINGS: $186,000

THE SITUATION

A major manufacturer of piston pumps for hydrostatic transmissions was experiencing excessive coolant foam, resulting in below expected tool life in approximately 250 lathes. High-precision pump parts are drilled & turned from 1018 steel and require a surface finish of 3.2 Ra with a 5µm tolerance

Castrol was challenged to reduce the foam and associated maintenance of the machines.

BEFORE CASTROL

- Traditional semi-synthetic coolant
- Excessive foaming, even in very hard water (21-27 gpg)
- Periodic foam-overs
- Poor tool life

AFTER CASTROL

- Latest technlogy semi-synthetic coolant
- Low foam, even at coolant pressures up to 1060 psi
- No foam-overs
- Excellent tool life ($186,000 savings)

THE SOLUTION

- Castrol Hysol MB 20 at 5-6% concentration allowed for higher coolant pressures to be achieved without foam or the use of defoamers.
- The increased foam resistance eliminated expensive and messy foam-overs, which were the norm with the previous coolant.
- The tool life improvement on TiN-coated carbide inserts varied from 17 to 37% on critical operations.
- Yearly tooling savings of $744.00 per machine (3,000 parts x $0.00496 x 50 weeks) was achieved totaling $186,000 on 250 lathes.

Hysol MB 20 eliminates foam and greatly improves tool life!

RECOMMENDATIONS

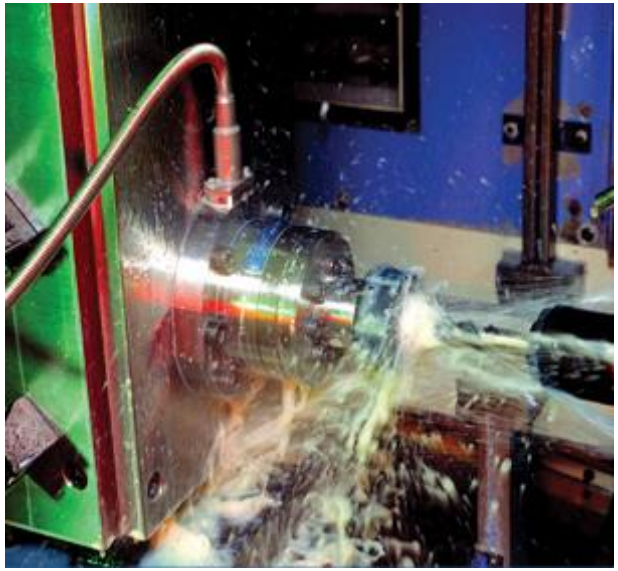
Conversion to Hysol MB 20 coolant has resulted in the ability to increase coolant pressures and extend tool life.

The foam resistance and high performance lubrication package of Castrol Hysol MB 20 allowed for significant tool savings.

CONCLUSION

Hysol MB 20 generated savings of $186,000 annually in 250 individual machine sumps due to elimination of foam and increased tool life.

Hysol MB 20 resists foaming even at pressures of 1,000 psi!



OTHER POTENTIAL APPLICATIONS

Castrol Hysol MB 20 is an excellent choice for any coolant application where multi-metal machining, foam resistance, long sump life, and increased tool life is desired. In addition, the biostability is excellent, leading to higher acceptance among operators and Health & Safety personnel.