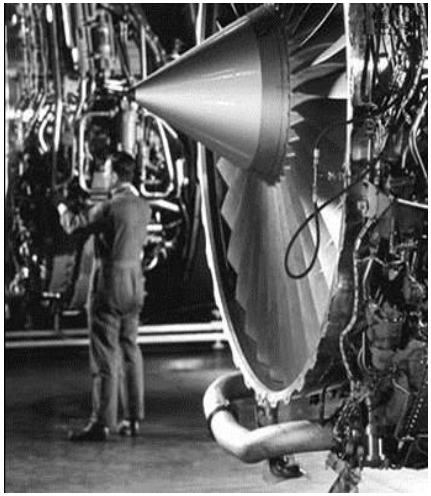
# Alusol AU 70 Greatly Extends Sump Life



## AEROSPACE (USA)
### Engine Components
### Castrol Alusol® AU 70
### ANNUAL SAVINGS: $36,370

## THE SITUATION

An aerospace engine manufacturer needed to improve the sump life of the coolant used in their creep feed grinders in the vane grinding department. A cell of six individual sump grinders had been transferred from another production site where the parts were qualified with a competitive emulsion coolant. While using this fluid, they had short sump life, odor, and lost production time due to unscheduled dumps.

Castrol was invited to offer a candidate to gain extended sump life beyond the 2 to 4 weeks they experienced with the competitor fluid.

## BEFORE

- Short sump life (2-4 weeks)
- Foul odor
- Lost production time
- Used Micron grinders conditioned with emulsion coolants

## AFTER

- Longer sump life (6 months or more)
- Bland, neutral odor
- More uptime
- No seal repairs due to coolant change

## THE SOLUTION

We would typically offer a high performance synthetic fluid based on excellent past success in this application. But based on customer's overall needs, our latest technology emulsion was tested.

Alusol AU 70 provided everything this customer was looking for:

- Low Odor
- Extended sump life
- Good wheel life
- Good part finish
- No foam issues (up to 1,000 psi)
- No downtime issues due to coolant
- Excellent machine compatibility

- **Long sump life**
- **Foul odor eliminated**
- **Great part quality**
- **Great wheel life**
- **No lost production time**

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## RECOMMENDATIONS

The customer is happy with the performance of Alusol AU 70 and has run successfully across a number of wheel types, including aluminum oxide, plated CBN and vitrified CBN (Saint Gobain). It has worked in both Micron and Blohm grinders. Their workpieces are all Inconel high nickel material.

Most of their operations can run between 6 and 8% concentration, with the exception of the plated CBN wheel, which will run at 10 to 12% when in control.

The long term desire is to use oil-containing water-based grinding coolants for better machine tool compatibility. Their experience with synthetic coolants has involved issues with peeling paint and cabinet door component failures after several years of service. The testing to date on Alusol AU 70 has been very promising to meet the need of good machine compatibility and great grinding performance.

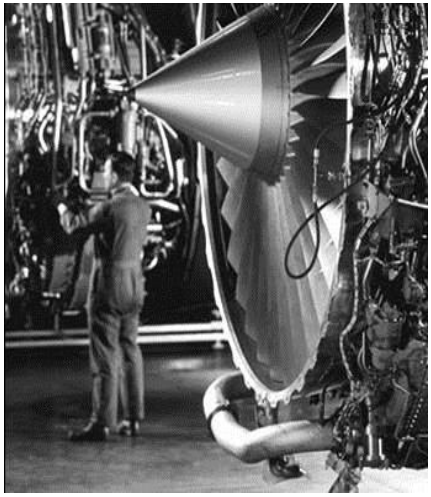
## CONCLUSION

This customer has been happy to work with Alusol AU 70, as they are able to keep running without the need to change coolant due to odor issues. Some sumps have been running for more than six months.

Operator acceptance has been very good – they are really glad to work without foul odors constantly being a problem.

Their maintenance staff is also happy. They can plan to do other projects besides pumping out sumps every few weeks.

**Overall annual savings are $36,370 in just six machine tools.**



## OTHER POTENTIAL APPLICATIONS

Alusol AU 70 is a great choice for machining and grinding tough workpiece materials. It has excellent lubricity, with EP additives to prevent burning and tool loading. Aerospace alloys and high alloy steel components are typical materials that call for the high performance of AU 70.