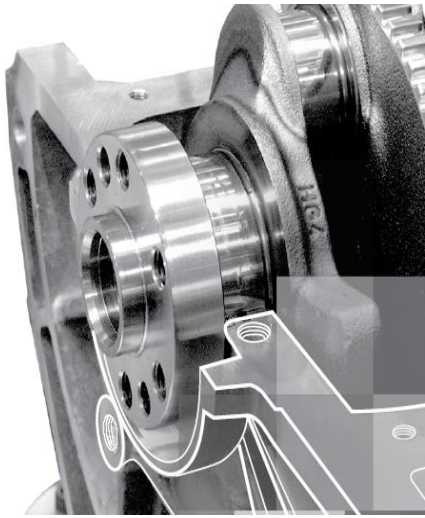
AUTOMOTIVE (USA)

ENGINES – Connecting Rods

Castrol Syntilo® 9918

ANNUAL SAVINGS: $18,000



- Castrol synthetic coolant replaces a neat oil in broaching connecting rods

THE SITUATION

A leading automotive manufacturer has a dual broach system machining the piston pin hole on their connecting rods. The customer was losing significant uptime due to high contamination in the machines following the broach. They also had very high oil usage due to carry off and chip removal.

Castrol was challenged to provide a solution to the high costs and downtime.

BEFORE

- Competitor's neat oil running at 100% concentration
- High carry-over & contamination in the following processes
- Tool life of 7500 parts per broach bar
- Frequent downtime

AFTER

- Castrol synthetic coolant @ 8-10% concentration
- Fluid carry-over and downtime are eliminated
- Tool life increased to 11,000 parts per broach bar
- Fluid usage reduced by 70%

THE SOLUTION

- Castrol engineers knew from experience that this neat oil system could be converted to a Castrol water-based synthetic coolant.
- Successes at other major automotive plants were presented to the customer.
- Castrol had a team on-site to assist with change-over of the system. We inspected broaching fixtures and tooling to gather baseline data and set goals for the trial.
- The drilling and spot facing processes after the broach were also converted to Syntilo 9918 to eliminate the contamination problem.
- Castrol continues to monitor this application to determine if broach speeds can be increased.

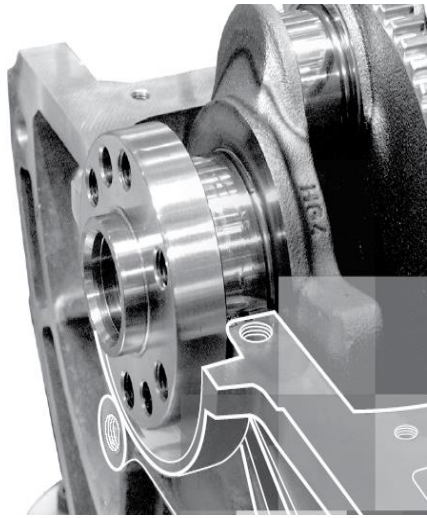
RECOMMENDATIONS

The lubrication package in Syntilo 9918 actually performs best under extreme pressures and temperatures at the point of cut. Neat oils typically provide better tool life and part finish over water-based coolants, but in this case, the exceptional lubricity of Syntilo 9918 allowed tool life to actually increase while reducing the high cost associated with neat oils.

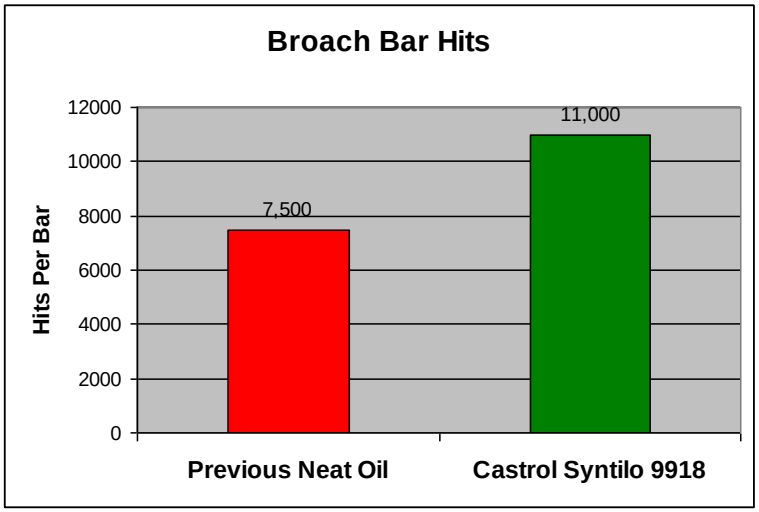
CONCLUSION

Syntilo 9918 proved to maintain key process parameters while reducing fluid costs by 70% and eliminating downtime. In addition, operator acceptance of the new fluid has been great.

The result was $18,000 in total savings.



CUSTOMER QUOTE:
"(Since the conversion) I can't believe how much better my clothes smell after working at the same job all day."



OTHER POTENTIAL APPLICATIONS

Castrol Syntilo 9918 is a high performance synthetic coolant designed for multi-metal applications. It provides excellent lubricity, bio-resistance, and low overall operating costs.