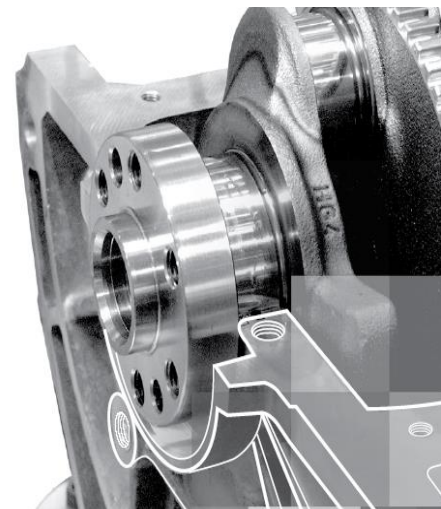


AUTOMOTIVE (USA)

ENGINES

Castrol CareCut® ES2

ANNUAL SAVINGS: \$31,887



THE SITUATION

This member of the “Big 3” wanted to reduce the process cost and improve the tool and filter life on a crank line.

BEFORE CASTROL

- Competitor neat oil (Product X)
- January 2006 – May 6, 2006 hone stone usage cost = \$142,110
- Overall CPU for cranks = \$0.64960
- Mineral oil-based neat oil

AFTER CASTROL

- CareCut ES2
- Overall CPU for cranks = \$0.40619
- Vegetable/ester based neat oil technology
- Lower cost

THE SOLUTION

- Provide a technologically advanced product (fits into the total product compatibility the customer is looking for)
- Dedicated on-site personnel Six Sigma trained, technical support and product development all played a roll in the project.
- The customer is always looking to improve products and process while reducing the overall costs
- Six Sigma tools where used to analyze and monitor the process and final outcome
- The operators had been called upon to provide detailed filter and tool life as well as management was needed to verify tooling/savings calculations
- A team effort between on-site Castrol, Castrol engineering and customer personnel all played a role.

- 37% reduction in CPU for this process
- Technologically advanced products coupled with problem solving expertise
- Customer buy in and support throughout

RECOMMENDATIONS

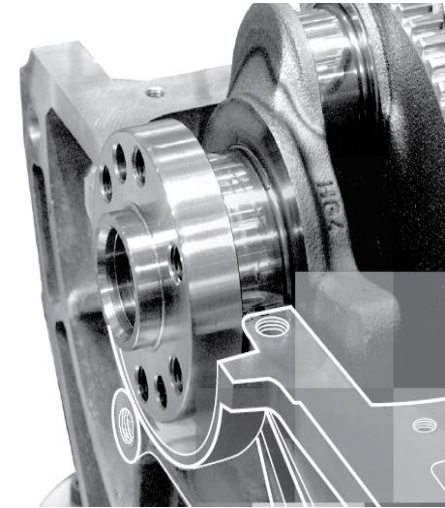
Using advanced technology and looking to future fluid consolidation / compatibility, Castrol recommended a product that would cover it all – Castrol CareCut ES 2.

OFFER DETAILS

With dedicated support, engineering, technical monitoring and cutting edge product development, Castrol offered a total package solution. The project has been followed, documented and communicated by all levels of the customer and Castrol. This has been a joint effort to make sure this was a success and driven at all levels.

CONCLUSION

By using documentation driven product performance and benchmarking, Castrol was able to prove the success of the neat oil product trial. With assistance from the customer the process was closely monitored and detailed accurate information gathered. This information was then plugged into a Six Sigma methodology to arrive at an unbiased conclusion – Castrol CareCut ES2 outperformed the competitor neat oil (Product X).



OTHER POTENTIAL APPLICATIONS

This success can now be utilized to leverage additional customer locations as well as other automotive manufacturers.

Average Engines Produced per 3M Filter			
Product	Engines	CPU	
Product X	740	\$	0.254163963
CareCut ES2	1068	\$	0.176066597

Average Engines Produced per Gun Drill			
Product	Engines	CPU	
Product X	224	\$	0.298913043
CareCut ES2	435	\$	0.139438085

Average Engines Produced per Crank Drill			
Product	Engines	CPU	
Product X	435	\$	0.096528228
CareCut ES2	463	\$	0.090686785

Change in CPU		\$	0.243413767
For Year 2005		\$	31,887
Plus associated Scrap and Downtime Reduction			

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