

MACHINERY MANUFACTURING (USA)

AGRICULTURAL & CONSTRUCTION - ENGINES

Castrol Syntilo® 9954

ANNUAL SAVINGS: \$5,300



THE SITUATION

A major construction equipment manufacturer was concerned with the high frequency of tool breakage which was causing downtime and high operating costs in their crank line gun drill. Castrol was asked to investigate the causes of the high tool cost and recommend ways to prolong tool life.

BEFORE

- Decreased tool life
- Insufficient chip removal from cutting zone
- High operating costs

AFTER

- Reduction in tool cost per part: \$0.12
- Chip flush lines correctly installed
- Reduction in tool and bushing guide breakage.

THE SOLUTION

- “Root Cause Analysis” pointed toward several factors causing decreased tool life.
 - Insufficient lube level in coolant
 - Poor chip removal from cutting zone
 - Tool material
 - Over use of tool
 - Feed rate/RPM ratio
- Castrol engineers worked with the customer to determine the primary cause of tool breakage.
- The recommendation was made to switch to a high lube containing coolant and inspect and repair chip flush lines.
- Castrol utilized ‘Best Practice Transfer’ from other customers running similar operations.

- Castrol utilizes “Knowledge Transfer”
- Improved tool life methods yields customer savings

RECOMMENDATIONS

From past experience and extensive coolant application knowledge, Castrol recommended changing to a higher lube level containing fluid, inspection & repair of chip flush lines, and monitoring length of tool usage.

CONCLUSION

The outcome was increased tool life, reduced downtime and cleaner running coolant. By switching to a higher lube containing coolant and repairing chip flush lines, the tool life was extended allowing for improved operating costs.



OTHER POTENTIAL APPLICATIONS

This type of process improvement can be utilized on most coolant systems having tooling problems. Proper investigation and root cause analysis allows for proper identification and resolution of tooling related problems.