

Variocut C Moly Dee Eliminates Chlorinated Paraffin

AUTOMOTIVE (USA)

Shock Manufacturing

Castrol Variocut® C Moly Dee*

Impressive Chlorine-free Tapping Performance



THE SITUATION

A racing component manufacturer was using a chlorinated tapping compound to form tap threads into shock tubes. They wanted to get away from the chlorinated paraffin for health and safety issues that have recently arisen. The manufacturer assumed there would be lower performance with the non-chlorinated oil and was willing to accept it to get away from the health concerns.

BEFORE

- Chlorinated straight oil
- Very good form tap life on 316 stainless steel
- Tap temps: 115 - 120°F
- Tap life 450 - 500 parts

AFTER

- Non-chlorinated straight oil
- Thread quality as good as chlorinated fluid
- Tap temps: 135 - 140°F
- Tap life achieved 90% of chlorinated fluid

THE SOLUTION

- Variocut C Moly Dee was used to produce formed threads in a very difficult 316 stainless steel metal.
- The taps were dipped into the Variocut C Moly Dee before each part was threaded.
- Tap life held to 90% of the chlorinated oil on a very severe operation.
- The thread quality was as good as those made with the chlorinated oil.
- With no use of chlorinated paraffins, there is less chance for thread fatigue from chlorine having reacted with the surface of the metal.
- The elimination of the chlorinated paraffin reduced the health concerns in the plant.

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RECOMMENDATIONS

Variocut C Moly Dee was used to successfully form tap threads into 316 stainless steel. The tubes were 4.325" long with the thread being formed in the whole internal length of the tube. The outside diameter is 1.0" with an inside diameter of 0.625". The percentage of thread formed was 50 - 55% to meet the proper quality.

CONCLUSION

The Variocut C Moly Dee performed very well in a very difficult thread forming operation. The customer was pleased to remove chlorinated paraffin from their facility and still achieve good tool life. The parts were easily cleaned in a solvent cleaner and shipped to race teams.



OTHER POTENTIAL APPLICATIONS

Variocut C Moly Dee is a viscous tapping fluid designed for severe-duty thread forming or cutting operations where other EP oils fail. It is typically hand applied and used in small quantities. The Moly Dee brand name is well recognized as a performance leader in the tapping industry.

**"We were surprised
how well the non-
chlorinated product
performed"
– Tooling / Prototype
Specialist**

*Shock
absorber parts
are used in
Nascar*



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