

NC Ultra Lite Eliminates Varnish & Reduces Usage

MACHINERY MANUFACTURE (USA)

FIREARMS MANUFACTURING

Castrol Performance Bio[®] NC Ultra Lite*



THE SITUATION

A major firearms manufacturer was using a plant-based cutting oil in their Swiss automatics. This oil had some environmental benefits, but it left varnish in the machines and had high carry-off on the parts, leading to high usage.

BEFORE

- Competitor B (22 cSt grade) plant-based cutting oil
- Varnish and residues in the machines
- High oil usage

AFTER

- Performance Bio NC Ultra Lite plant-based cutting oil
- Varnish eliminated
- Oil usage reduced

THE SOLUTION

- Performance Bio NC series was developed to eliminate the typical problems associated with plant-based lubricants.
- The NC series was formulated to provide the high lubricity of plant-based lubricants but eliminate the typical downfalls of poor oxidation resistance, varnish / residue creation, and short sump life.
- NC Ultra Lite was recommended here to eliminate the varnish (it actually cleaned up the existing residues) and reduce usage from carry-off.

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RECOMMENDATIONS

The customer was using Swiss automatics to produce firearm parts made of 4130 & 4140 steel and 410 & 416 stainless. Operations performed included turning, shaping, cut-off, threading, and tapping. NC Ultra Lite has excellent lubricity and is well suited to handle this variety of machining, ranging from medium to heavy duty.

CONCLUSION

The customer was happy to convert to an environmentally responsible fluid that could be successful in their machining ops, while avoiding the typical negatives such as varnish and oxidation.

Overall, they have found a fluid that assists in their environmental goals while maintaining high performance in their operations.



OTHER POTENTIAL APPLICATIONS

Castrol Performance Bio NC series fluids are part of Castrol's "environmentally responsible" offer. They are based on renewable plant-based lubricants with very high flash points, low VOCs, high lubricity, and high viscosity index. With multiple viscosities available, they can cover a wide range of neat cutting oil operations

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