

PRECISION PERFORMANCE IN ALUMINIUM MACHINING



IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.

 **ALUSOL**

DON'T LET BUILT-UP EDGE COMPROMISE THE PRECISION OF YOUR ALUMINIUM MACHINING



CASTROL ALUSOL MAKES PRECISION MACHINING A REALITY FROM THE FIRST CUT

The demand for lighter products from automotive, machinery and fabricated-metal-goods businesses is driving the need for precision-made aluminium components. Today's component manufacturers have to be creative when it comes to machining aluminium to meet complex designs and tight tolerances.

This can be a challenge because aluminium can adhere to tool surfaces, creating a built-up edge. This changes the tool shape and reduces dimensional control in the machining process. The result: rejected components, wastage and rework.

Castrol Alusol has been formulated to help address these challenges. Its outstanding properties deliver essential lubrication to

the point of cut, which helps reduce built-up edge on the tool. So no matter how creative or progressive your ambitions for aluminium components are, Castrol Alusol helps you achieve them by making precision machining a reality from the first cut.

The Castrol Alusol product range has been formulated to:

- Provide essential lubrication to cutting processes to improve machinability.
- Generate a high-quality surface finish and reduce staining.
- Help lower costs by extending fluid life and reducing downtime for maintenance.



MAKE PRECISION MACHINING A REALITY ACROSS A RANGE OF APPLICATIONS

Castrol Alusol is a comprehensive range of soluble and semi-soluble metalworking fluids. Our Liquid Engineers have applied a deep understanding of the demands of machining aluminium alloys to create a series of product variants designed to meet different machining requirements. The Castrol Alusol range includes products* that are:

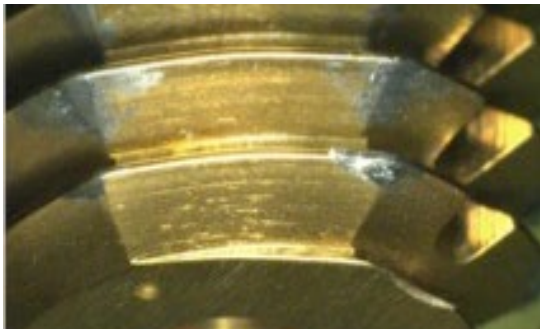
- Formulated to provide superior performance on automotive aluminium.
- Inherently resistant to microbial growth for long-lasting effective performance.
- Specifically created for multiple applications to enable product consolidation.

* Not all products are available in all locations. Please consult your Castrol representative or refer to the Lubricant Oracle at castrol.com.

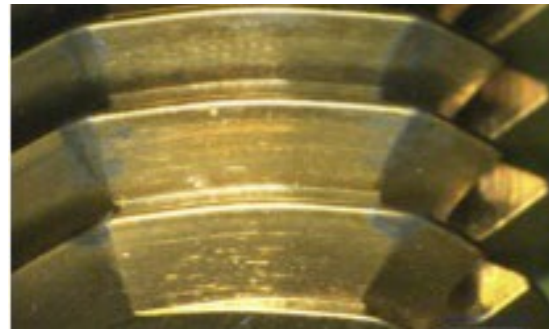


PROVEN BENEFITS DELIVERED BY THE CASTROL ALUSOL RANGE

Precision Performance

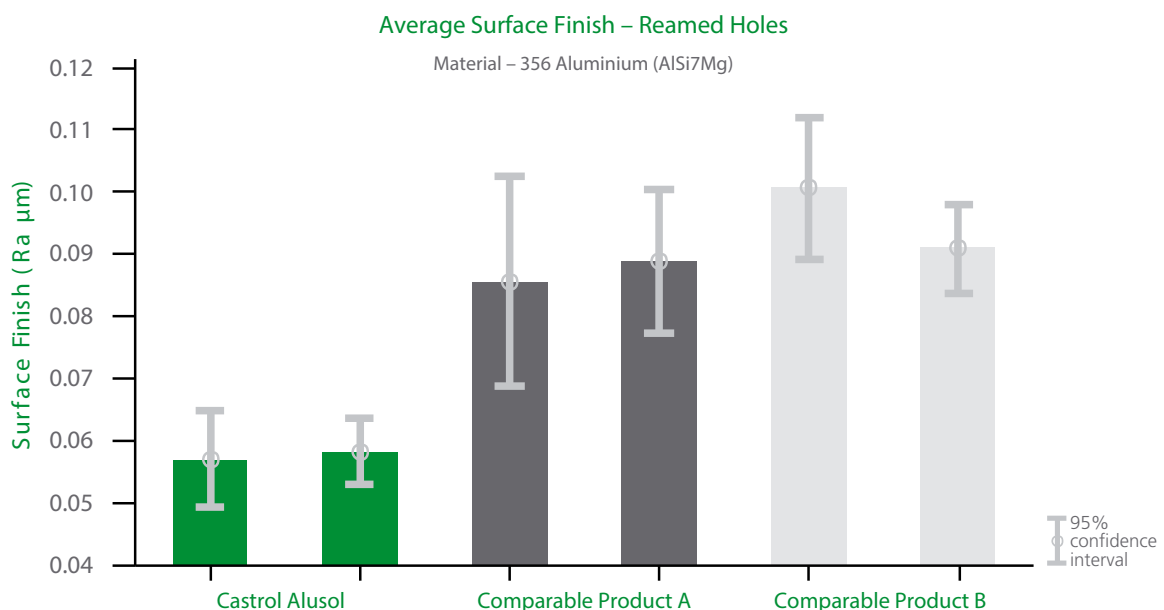


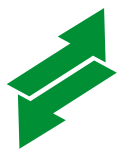
Aluminium build-up on the tool edge changes the shape of the tool and reduces surface-finish quality



Castrol Alusol minimises metal build-up on the tool

Tests show that Castrol Alusol can produce a consistently higher-quality surface finish versus comparable metalworking fluids.





INCREASED PRODUCTIVITY, REDUCED COST

The images below show the difference between good and poor lubrication on automotive-grade cast aluminium. You can see the vast improvements in surface finish that can be achieved using a Castrol Alusol product.



Good lubrication from Castrol Alusol produces a high-quality finish, 0.1 Ra (Roughness average) for precision components



Poor lubrication reduces surface finish, 0.8 Ra, and can lead to parts being rejected

- Switching to a Castrol Alusol product helped two aluminium component manufacturers reduce the concentration of coolant used from 10% to 7% and from 14% to 8% respectively.
- An automotive brakes manufacturer reduced its spend on anti-foam additives by switching to a Castrol Alusol product recommended specifically to meet the company's foaming issue.

Please contact us today for further information.

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