

CASE STUDY



40% REDUCTION IN NEAT OIL CONSUMPTION

QUAKERCUT® 020 XP

CHALLENGES

A world-leading automotive manufacturer was looking to replace the mineral oil based neat oil they were using for connector rod deep hole drilling. They were also looking to make the following efficiency improvements:

- » Improved tool life
- » Reduced consumption
- » Improved working environment

THE SOLUTION

Quaker Chemical Corporation ("Quaker") reviewed the deep hole drilling operations at the customer and recommended QUAKERCUT® 020 XP, based on the following:

- » Potential for cost reduction from a decrease in consumption
- » Improved tool life due to the unique ester technology
- » Reduced environmental impact and improved operator acceptance

At the onset of the trial, one 1,500 liter system was converted to QUAKERCUT® 020 XP. After the conversion, the customer observed higher machine productivity and reduced consumption.

- » **40% reduction in consumption**
- » **25% improvement in tool life**
- » **Improved safety due to QUAKERCUT® 020 XP higher flash point**
- » **Total annual savings approximately 11,500€**

Not only did QUAKERCUT® 020 XP lead to a cost savings, but converting from a mineral oil based to a biodegradable neat oil also had a positive effect on the environmental impact of the company.

- » Improved working environment - elimination of oil mist and skin irritation
- » Reduction in chemical usage and discharge
- » Reduction in cutting tools and energy used due to improved tool life

PROCESS AND EQUIPMENT

Parts	Conrods
Material	High alloyed steel, C70
Machine	Mollart
Operation	Deep hole drilling
Filtration	Magnetic 40 µm Bollfilter

THE PRODUCT

QUAKERCUT® 020 XP is a high performance neat cutting oil based on advanced ester technology from renewable raw materials. It is particularly suited for heavy-duty metalworking operations in ferrous and non ferrous materials. The high polarity gives optimal wetting and lubricating properties ensuring high

surface finish quality and improved tool life. Part of the QUAKERCUT® XP series, QUAKERCUT® 020 XP has a proven track record of bringing operational, Health & Safety and environmental benefits to a broad range of customers in the automotive and mechanical industries.

THE EXPERTISE

Metalworking lubricants represent a very minor part of the costs in a metalworking process, typically less than 1%. This case illustrates the importance of correct fluid selection. The impact of the fluid can be a multiple of its costs, making the price of a metalworking fluid insignificant. That is why Quaker focuses on developing fluids with the highest performance without compromise, fluids that sharpen your competitive edge.