

### Challenges

A major Japanese automotive manufacturer was investigating new coolants in order to achieve cost savings yet maintain quality performance for the manufacturing of cylinder blocks in a facility in China. Ream performance was a key issue, as it was extremely important that the chosen fluid be able to achieve a smooth finish during reaming.

Quaker recommended QUAKERCOOL® 588. Quaker wanted to show that this coolant would not only support cost-savings initiatives but also obtain the necessary high-quality performance demanded from the fluid.

### Providing Solutions

The manufacturer introduced QUAKERCOOL® 588 into a 1,500 liter individual sump. During the initial trial over several months, QUAKERCOOL® 588 provided a 72% cost savings to the manufacturer as well as maintained the high-quality performance the reaming process demanded.

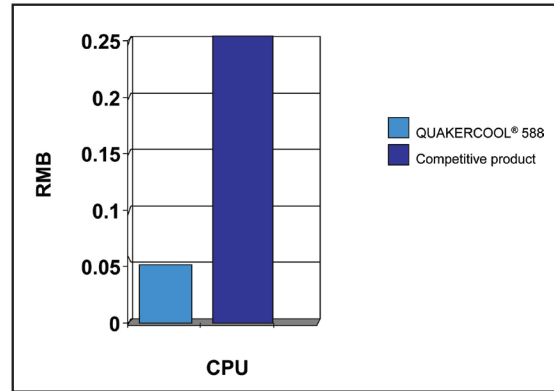
QUAKERCOOL® 588 continues to be expanded to additional applications in the facility, with favorable results.



The reaming process on an engine block.

The table and graph below illustrate the results of the trial and cost savings achieved by the manufacturer after converting to QUAKERCOOL® 588:

Parameter	Quaker's QUAKERCOOL® 588	Competitor
Cleanliness	Improved	Baseline
Maintained Concentration %	6-8%	7-9%
Monthly Makeup	10-13 kg	40-50 kg
Production/Month	5000	5000
Carry Off	Less	Baseline
Ave Reaming	6.3 Ra	6.3 Ra
Monthly Ave Cost	351 RMB	1,247 RMB



### Product Description

QUAKERCOOL® 588 is designed for heavy-duty Machining & Grinding operations requiring a high degree of cleanliness, lubrication, cooling, and corrosion protection. Engineered on proprietary, advanced ester technology, it is especially recommended for applications where good surface finish at a competitive price is required. It provides excellent machining performance on both ferrous and nonferrous materials – a perfect fit for automotive and industrial applications where customers are seeking to lower their overall process costs, while at the same time increasing demand on the fluid. QUAKERCOOL® 588 belongs to the fungi-free product line from Quaker.

### Process & Equipment

<b>Part:</b>	Cylinder Block
<b>Machine:</b>	Dalian Pingri Machine Tool
<b>System Size:</b>	1,500 liter Individual Sump
<b>Diameter:</b>	25 mm
<b>Spindle Speed:</b>	5,305 RPM
<b>Water Hardness:</b>	50 ppm
<b>Concentration:</b>	6-8%
<b>Application Pressure:</b>	1.5-2.5 Kg
<b>Tool Material:</b>	Carbide PVD
<b>Tool Life SOP:</b>	300 pieces
<b>Specific Operation:</b>	Reaming

## Award



QUAKERCOOL® 588 was recently awarded a 2010 CIMES Top 20 Innovative Products Award by Vogel.

## Product & Process 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.