DIE CASTING

CASE STUDY

HFD HYDRAULIC FLUID

QUINTOLUBRIC® 888

CHALLENGES

An automotive parts manufacturer was looking to replace the water glycol (HFC) fire resistant hydraulic fluids being used to operate their die casting equipment. The fluid being used had the typical lubricating properties of water glycol fluids. The following were unacceptable attributes to this manufacturer:

- Poor Pump Lifetime
- Increase in Pump Wear

To help improve operations, the manufacturer tested QUINTOLUBRIC® 888 polyol ester (HFD) fluids as a potential replacement.

THE SOLUTION

QUINTOLUBRIC® 888 is a synthetic fluid that can be used in equipment designed for traditional mineral oil fluids and provides better performance than fluids containing water. In addition to fire-resistance, QUINTOLUBRIC® 888 provides excellent biodegradability and low aquatic toxicity, making it ideal for use where better environment protection is required.

QUINTOLUBRIC® 888 is unique in the industry because the exact same product is available worldwide. Out performs competitive products in fluid life and consistent performance. Quaker is recognized as the leader in HFD-U fluids by major builders and end users around the world. Approved by FM Global as a less hazardous hydraulic fluid.

THE PRODUCT

Quaker's QUINTOLUBRIC® HFD fluids are fire-resistant hydraulic fluids that do not contain water. HFD fluids are usually based on synthetic base stocks or esters that combine reasonable to good fire-resistant properties with excellent lubrication performance. HFD fluids are designed to operate in oil hydraulic equipment.

THE EXPERTISE

Quaker was the first company to offer HFD-U fluids and has been the market leader in this type of technology. Quaker's current HFD-U fluids are based on both synthetic organic compounds and naturally occurring esters. QUINTOLUBRIC® 888 Series synthetic polyol esters and QUINTOLUBRIC® 855, which is based on natural esters are industry leaders in ester-based technology. Quaker HFD-U fluids are readily biodegradable and have low aquatic toxicity, making them ideal for use where environmental protection is required. Quaker HFD-U fluids are globally available and give outstanding performance in fireresistance, lubrication and long service life.

FM APPROVED

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IMPACT

	BEFORE Water Glycol	AFTER QUINTOLU-BRIC®888	IMPACT
Vane pump wear after 3,000 hours	5,724 mg	509 mg	91% wear reduction
Estimated pump lifetime	2 years	10 years	5 times longer pump life
Estimate seal lifetime	3-4 years	10 years	2 ½ to 3 times longer seal life
Frequency of fluid adjustments	4 times/yr	Not Needed	Elimination of fluid
Pump Noise	88.0 dB	82.3 dB	Reduction in pump noise
Motor Noise	90.2 dB	83.4 dB	Reduction in motor noise
Power Consumption	338 kW per pump per day	319 kW per pump per day	5% reduction in power consumption