

Die Casting : 91% Pump Wear Reduction with a Polyol Ester (HFD) Hydraulic Fluid

QUINTOLUBRIC® 888

The Challenge

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
- Had unacceptable pump wear and pump lifetime

The Solution

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

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, the product provides excellent biodegradability and low aquatic toxicity, making it ideal for use where better environment protection is required. It is approved by FM Global as a less hazardous hydraulic fluid.

QUINTOLUBRIC® 888 is unique in the industry because the same product is available worldwide and it outperforms competitive products in fluid life with consistent performance.

Quaker Houghton is recognized as the leader in HFD-U fluids by major builders and end users around the world.

The Product

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 Benefits

With the use of QUINTOLUBRIC® 888, the results were:

- 91% wear reduction in the vane pump
- 5 times longer pump life
- Increased seal life by 2.5-3 times
- Elimination of required fluid adjustments
- Noise reduction in the pump and motor
- Decreased power consumption by 5%.

	BEFORE - WATER GLYCOL	AFTER - QUINTOLUBRIC® 888
Vane Pump Wear After 3,000 Hours	5724 mg	509 mg
Estimated Pump Life-time	2 years	10 years
Estimate Seal Lifetime	3 -4 years	10 years
Frequency of Fluid Adjustments	4 times/year	Not Needed
Pump Noise	88.0 dB	82.2 dB
Motor Noise	90.2 dB	83.4 dB
Power Consumption	338 kW per pump/day	319 kW per pump/day