

CASE STUDY

Die Casting :

€15.000 Reduction in Total Costs of Ownership (TCO)

QUINTOLUBRIC® 888-46

The Challenge

A major global manufacturer of ventilation systems operating 6 die casting units was experiencing major issues with their HFC (water glycol) hydraulic fluid. The problems reported were high maintenance costs, and unreliable hydraulic system performance.

The local OEM proposed the manufacturer convert to a HFD-U synthetic water-free fire resistant hydraulic fluid. After switching all 6 machines to HFD-U fire resistant hydraulic fluid they experienced lubrication issues, and a quick aging of the fluid. This resulted in a rapid increase in the fluid's acid number and failing pumps, forcing the manufacturer to drain all of their hydraulic systems.

To help improve operations, increase fluid lifetime, and reduce the total costs, QUINTOLUBRIC® 888-46 was tested as an alternative HFD-U fire resistant hydraulic fluid.

The Solution

First, Quaker Houghton analyzed the account's current situation, checking the condition of the hydraulic fluid in use and its fast degradation time. From laboratory evaluations and extensive field experience with the competitive product in use, Quaker Houghton was able to show the benefits of converting to QUINTOLUBRIC® 888-46 (polyol ester based HFD-U). The advantages of QUINTOLUBRIC® 888-46 compared to the competitive fire-resistant hydraulic fluid included:

- Superior lubrication properties
- Best in class fluid lifetime
- Excellent metal compatibility, especially on yellow metals

Although the costs for QUINTOLUBRIC® 888-46 was higher, the anticipated reduction in total cost of ownership (TCO) would compensate for the cost difference.

The Benefits

The manufacturer tested QUINTOLUBRIC® 888-46 in one of their hydraulic systems and saw improved performance. As a result the account decided to switch all 6 die casting machines to QUINTOLUBRIC® 888-46. Analyzing the hydraulic systems over a 3 year period, the manufacturer recognized the following benefits:

- Elimination of pump failures
- Extended routine maintenance intervals on pumps and other components
- Expected fluid lifetime >8 years; reduced fluid consumption

Changing from the competitive HFD-U to QUINTOLUBRIC® 888-46 the Total Costs of Ownership (TCO) was reduced by €15.000 per year.

Recognized Benefits

	WATER GLYCOL (HFC)	COMPETITOR HFD-U	QUINTOLUBRIC® 888-46	IMPACT
Pumps	Severe wear	Last 1 year	Elimination of failures	Cost reduction
Unplanned downtime	High	Medium (pump failures)	None	Increased production
Fluid refreshments	1 time a year (minimum)	1 time per year	Expected fluid lifetime >8 years	Reduction in fluid consumption
Pump and motor noise	Very noisy	Low, until pump failure	Much less noise, pumps run smoother	Extended lifetime - less stress on the motor and pump





The Product

QUINTOLUBRIC® 888-46 was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist. QUINTOLUBRIC® 888-46 can also be used in environmentally sensitive hydraulic applications without compromising the overall hydraulic system operations. This fluid does not contain water, mineral oil, or phosphate ester, and is based on high-quality, synthetic, organic esters and carefully selected additives to achieve excellent hydraulic fluid performance. QUINTOLUBRIC® 888- 46 offers the lubrication level of premium, anti-wear hydraulic oils, and can be used with hydraulic components from all major manufacturers.

