



Success with UCON Trident 68 AW Hydraulic Fluid

Case Study

Conversion of a Billet Sawing Unit to UCON Trident 68 AW Hydraulic Fluid in Canada

The Problem

A steel Mill in Canada was using three different types of hydraulic fluids in their facility; a phosphate ester fluid, a blend of phosphate ester and mineral oils and a mineral oil fluid. The company's insurance underwriter suggested that all the mill's hydraulic systems use fire resistant fluids or install sprinkler systems throughout in the mill. Installing sprinklers in the mill would entail using both water and dry chemical type of systems and would be very costly.

The company was also dissatisfied with the phosphate ester fluid and the blend of phosphate esters and mineral oils that they were using in their hydraulic systems, due to corrosion and sludge formation. The normal fluid maintenance required the mill to replace 50% of the fluid every 3 to 4 months, based on oil analysis results from the fluid supplier. The mill wanted a fire resistant fluid that would perform better than mineral oil and not require them to install a sprinkler system. The company required an ISO 68 hydraulic fluid for their equipment.

The Solution

In November of 2001, the mineral oil based hydraulic fluid in a Stacker Billet was replaced with UCON Trident 68 AW Hydraulic Fluid

The Results

Samples were taken of the UCON Trident 68 AW Hydraulic Fluid initially at the time of conversion, after one week of operation, after one month of operation, and after three months of operation. The samples were analyzed for viscosity, pH, total acid number, metal wear, and methanol insolubles. After 3 months hours of operations, the UCON Trident fluid had no indication of metal wear or unwanted residue and showed excellent performance in this service.

UCON Trident 68 AW Hydraulic Fluid was used in this Billet Sawing Unit form November 2001 until April 2002, at which time the equipment was taken out of service and replaced with a new unit. The customer was pleased with the performance of the fluid and is interested in purchasing additional Trident fluid for use in their hydraulic systems.

**Equipment: Motor – Brook Crompton Model: X87404
HP/RPM: 30/1730 Drives both main pumps**

Pumps	Model	Function	Pressure	Speed
Vickers	PVE20LS20-CC11	Main; stacker	1500psi	1730
Vickers	PVE10RSY31-CC11	Main; saw	1500psi	1730
Vickers	Vane pump	Circulation		1.5HP/1730

Hydraulic System: Capacity: 120 gallons
Max Pressure: 1500psi
Seal Material: Buna N
Filter MFG: Pall – Discharge, 3 micron
Return, 10 micron

Product Description

UCON Trident AW Hydraulic Fluids are high performance hydraulic fluids designed for demanding industrial applications requiring environmental sensitivity, water solubility, fire resistance, and excellent anti-wear properties over wide temperature ranges. These polyalkylene glycol (PAG) based fluids, which are available in three viscosity grades, are anhydrous (water-free) and are rated as anti-wear. UCON Trident Hydraulic Fluids do not breakdown to form sludge, and they do not hydrolyze in the presence of water. Furthermore, because of their high viscosity indices and low temperature characteristics, one UCON Trident viscosity grade fluid may replace two or three mineral oils. These hydraulic fluids are ideal for use in applications such as dockside/marine, forestry amusement, and industrial operations.

Product Stewardship

Dow encourages its customers and potential users of Dow Products to review their applications from the standpoint of human health and environmental aspects. To help ensure that Dow products are not used in ways for which they are not intended or tested, Dow personnel will assist customers in dealing with environmental and product safety considerations. Dow literature, including Safety Data Sheets, should be consulted prior to the use of Dow products.

For More Information

If you are interested in more information about UCON Trident AW Hydraulic Fluid or any other UCON fluids and lubricants, please contact the Dow Customer Information Group at 1-800-447-4369 (U.S. and Canada) or 1-989-832-1560 (from other global region). Additional information can be found on the Dow website at www.ucon.com.

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