Donaldson HY-PRO™

A Holistic Approach to Fluid Cleanliness

A Total Systems Approach Prevents Downtime & Costs

The Problem

Saw mills operate multiple pieces of large equipment faces unplanned downtime due to important components becoming fouled from contaminated fluid, profits decrease while production costs in-crease. This causes a huge financial burden that can feel exponential as components must be repaired or replaced.

When all factors such as maintenance personnel hours, replacement parts, fluid consumed, and decrease in profitability are considered, it is easy to understand the substantial cost impact that occurs due to fluid that is poorly cared for. Identifying fluid contamination issues provides an excellent opportunity to lower operating costs and increase efficiency.

The Solution

Applying a total systems cleanliness approach is necessary to maximize uptime, extend component life, extend fluid life, reduce maintenance resource demands, and reduce fluid disposal costs. For example, upgrading from cellulose to fiberglass filter elements, installing desiccant breathers, and installing off-line filtration can be quite effective in improving hydraulic fluid cleanliness. Applying the following strategies can prove to be very effective.

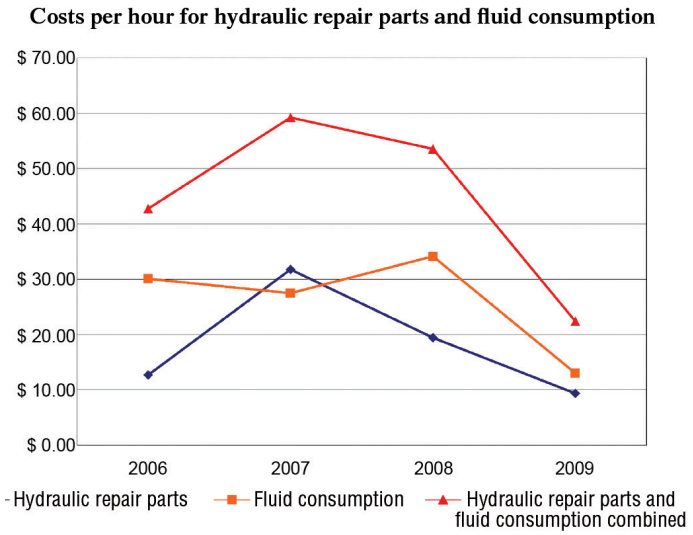
- Set a target for fluid cleanliness to be verified by periodic oil analysis.
- Install high efficiency glass media or desiccant breather on all gearbox vent ports.
- Change the criteria for replacing the oil from a time interval to a decision based on the oil condition determined by oil analysis.
- Install a dedicated filtration system on each individual gearbox to filter the oil continuously during operation.

The Results

In one instance, a twin planer infeed hoist was one of the most contaminated hydraulic systems in the mill. The ISO fluid cleanliness code of the system fluid was 21/17/13 before implementing a total systems cleanliness approach. Two return filters, a pressure line filter, and a recirculation line filter were upgraded to Donaldson Hy-Pro DFE filter elements with equivalent micron ratings. The reservoir's breather was upgraded to a Hy-Dry desiccant breather to control particulate and water ingression. In less than 30 days the ISO cleanliness code of the fluid improved to 16/13/10.

Furthermore, the mill's twin sorter system was suffering from inadequate filtration. It was decided to add an FPL off-line filtration panel to achieve the target ISO cleanliness code. As with the twin planer infeed hoist, the twin sorter's return line filter was upgraded to a Donaldson Hy-Pro DFE rated filter element with equivalent micron rating, and its reservoir breather was upgraded to a Hy-Dry desiccant breather to control particulate and water ingression. In less than 30 days the ISO cleanliness code improved from 21/17/11 to 14/12/8.

When OEM specified filtration is either lacking in pressure, return, or servoactuator lines, or if housings are sized only to function with coarse media elements, effective results can be achieved by adding dedicated off-line filtration systems. Off-line systems can use high efficiency elements down to 1 µm to reduce contamination load on in-line filters to extend their life. Off-line filters can also be serviced without having to interrupt machine operation.



Customer's Savings
after the 1st year
with **Donaldson Hy-Pro's Help**

$389,375

Want to find out more? Get in touch.

hyprofiltration.com
info@hyprofiltration.com
+1 317 849 3535

© 2024 Donaldson Hy-Pro Corporation. All rights reserved

Donaldson HY-PRO™

F119844 - 110424 - TF