Donaldson HY-PRO™

PFHB Saves Recycling Plant $150,000+ Per Year

Reduces Pump Failures and Eliminates Motor Failures in Hydraulic System

The Problem

A company shredding discarded grocery bags and other plastic films to produce recycled products was experiencing frequent hydraulic motor and charge pump failures on a closed loop hydraulic system driving a bag shredder. Microscopic slivers of the plastic generated by the process would find their way into the fluid and cause the pump or motor to fail. These failures created a large cloud of debris particles in the hydraulic fluid which would travel to the next component and further repeat this sequence of failure and increased fluid contamination until the failure is catastrophic throughout the system.

Generally occurring twice a year, these instances would cost the company approximately $110k in repairs, not taking into account the added cost for the downtime and maintenance hours. The frequency of these catastrophic failures needed to be reduced to increase profitability and plant efficiency. To make matters worse, because of the need to reverse the flow direction within the system, standard unidirectional filtration would not be sufficient to protect components from the ingested plastic.

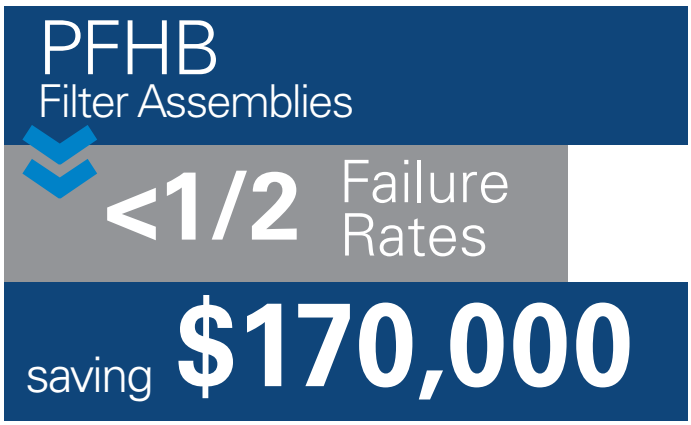
The Solution

All elements were upgraded to Donaldson Hy-Pro DFE Rated G8 Dualglass filter elements. PFHB bi-directional flow filter housings were also installed on each hydraulic line leading to and from the pump to isolate each component in case of a failure. With bi-directional filtration on both sides of the motors, all contamination traveling to and from the motor would be captured by a filter and the failures they were experiencing would be prevented

The Results

Failure rates have been reduced by more than half since upgrading to Donaldson Hy-Pro elements and installing additional filtration. The debris cloud dumped into the hydraulic fluid during a recent pump failure was isolated by the filter elements inside the new PFHB filter assemblies. This saved the company over $60k compared to previous incidents where the motors would have been destroyed as well.

	Failures per Year	Cost per Failure	Failure Cost per Year	Failure Cost Over 10 Years
Before Donaldson Hy-Pro	2	$110,000	$220,000	$2,200,000
After Donaldson Hy-Pro	1	$50,000	$50,000	$500,000
Savings	1	$60,000	$170,000	**$1,700,000**



Want to find out more? Get in touch.

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