



CONSERVATION OF RESOURCES

Condition Monitoring, Reducing Element Change Out & Higher Machine Availability

Technical Application Bulletin

PROJECT BACKGROUND

DISCOVER

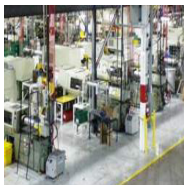
- Customer was experiencing frequent downtime due to pump failures on their Nissei Injection Molding Machines.
- The customer was not able to achieve targeted ISO code of 19/17/14. Hitting ISO codes 23/21/18.
- Upon auditing machines it was found that the customer was not using good quality filter elements on the machines and had many leak points that allowed dirt ingress.



DIAGNOSE

- It was noticed that the customer was using reclaimed oil and not filtering properly before filling the machines.
- Due to the leakage and contamination issues, the customer was tossing the fluid every 3-6 months and adding new, reclaimed fluid to the machines.
- Customer is a tier 1 automotive supplier and faces stringent delivery times for Lean production.
- Machines did not come with adequate filtration.

INDUSTRIES



DESIGN

What We Did:

- Educated the customer on the dangers of using reclaimed oil and also did a lunch and learn on contamination ingress, effects, and better filtration practices.
- Presented Schroeder (Synthetic) Z-Media® and Offline Filter System.
- Took oil samples on all of the machines, as well as from the bulk oil supply to establish bench marks.
- Proved that the reclaimed oil was bad and was a major cause for system failures.

Course of Action:

1. Address all leaks on the machines to minimize dirt ingress.
2. Get customer to stop using reclaimed oil and flush and put new oil in the machines.
3. Propose renting an OLF-60/60 and moving the unit from machine to efficiently clean up machine hydraulic systems and prove the concept.

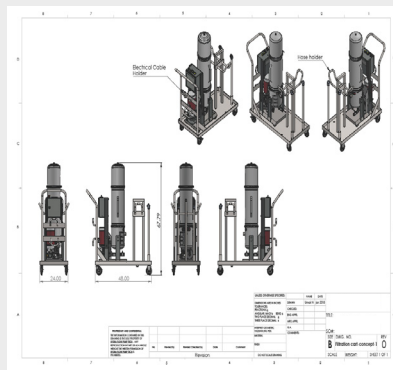
DELIVER

Schroeder Solution:

OLFCM-60/60-S-P60-Z-C/FA3-ACS

Use for online filtering of all the machine hydraulic systems as well as for bulk fluid containers:

By putting the OLFCM-60/60 on a filter cart, the customer is now able to use it as a mobile cart to filter all the hydraulic systems in the plant and document cleanliness class codes of each system. The customer now has the ability to "set and forget" by setting their desired ISO code for each system, and letting the filter cart filter to said set point, and then shut off.



Savings in elemtn changeouts

By letting the OLFCM-60/60 do most of the filtering and using the large dirt holding capacity of the dimicron element.

Nissei Machine	Without OLFCM60	With OLFCM60	Savings
Element change interval	4-6 times a year	2 times a year	67% =\$2,520
	\$63x10machx6 =\$3,780	\$63x10machx2 =\$1,260	
Labor costs, external company	4-6 times a year	2 times a year	\$3,750
Total Order Value:			\$25K

CUSTOMER BENEFITS

- Fast efficient filtering of all hydraulic systems and bulk fluid totes.
- Data logging and quality document production capabilities.
- Ability to prove to auto manufacturers that machine predictive maintenance and fluid quality is being documented.
- Reduction in machine downtime by maintaining good fluid quality.

FURTHER APPLICATION AREAS

- New press to be added to produce engine mounting components. Opportunity for CMU, OLFCM, and sensor package to do full predictive maintenance and alarm setting.
- Replacement element business.

ROI

Element change-out savings per year



+\$2.5K

Pump life expectancy and machine availability



▲ 45%

Labor & fluid replacement cost per year



-\$75K

PRODUCT SPECS

**OLFC-60/60 |
Dimicron Element**

Flow: 60 L/min

Op. Pressure: 85 psi

Temp. Range: -15°F to 175°F

Housing Material: Cast Aluminum

Other Technical Specifications:

- Supplied with (4pcs) 2 micron dimicron elements 4.4lbs of dirt holding capacity
- Contamination Sensor
- Aqua Sensor
- Sensor monitoring unit
- 575VAC with On/Off switch with motor circuit breaker and cutout when filter is clogged and/or target cleanliness is achieved