

Hydraulically Driven Leach Pad Stacker

Case Study

**FilterMag saved \$2.2–\$3.5 million in
repairs and lost production.
Particle counts $\geq 4\mu\text{m}$ reduced by 90%.**

Increase Reliability • Extend Equipment Life • Lower Maintenance Costs

Hydraulically Driven Leach Pad Stacker Case Study

The hydraulic pump had a history of failing every six months.

This is because of a highly contaminated operating environment. Repair and system restoration from a pump failure would result in five to ten days of down time and millions of dollars in lost production.

Pump, filter, and oil replacement takes one day to replace. Physically swabbing out (pigging) all contaminated hydraulic lines could take a minimum of four days and up to 12 days if there was a "total pump melt down."

Four FilterMag CT4.9s were installed on each of four high-pressure filters positioned immediately after the pump.

The single return filter received four additional CT4.9s.

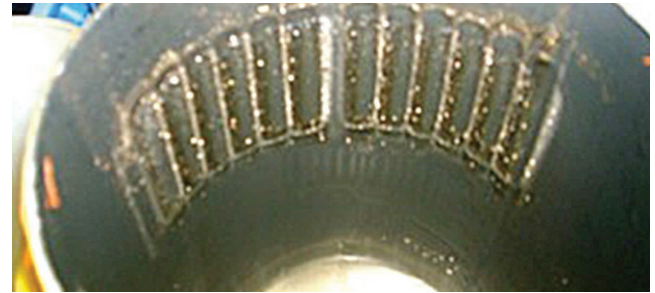
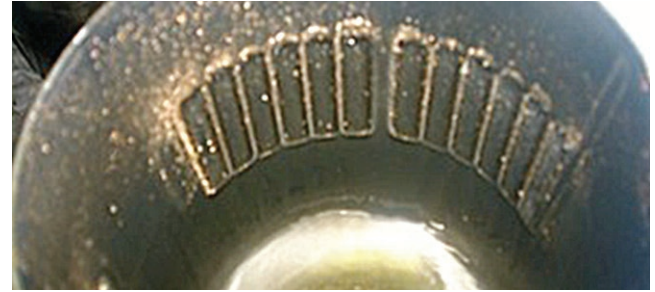
Three weeks after installation a pump failure generated a storm of particles from the Nibral (nickel bronze aluminum alloy) impeller. Nickel is highly susceptible to magnetism.

FilterMag caught millions of particles that would have passed through the 10 μ m filters contaminating the hydraulic piping system and degrading the process equipment.

The entire repair and system restoration took only one day. Four to five days of production losses were avoided saving the company a minimum of \$3.5 million.

The lack of shiny Nibral particles in the return system filter (photo at right) convinced the operator that the balance of the system (after the high pressure filters) was clean enough to go with an expedited repair and restoration.

FilterMag results from four high-pressure pressure filters.

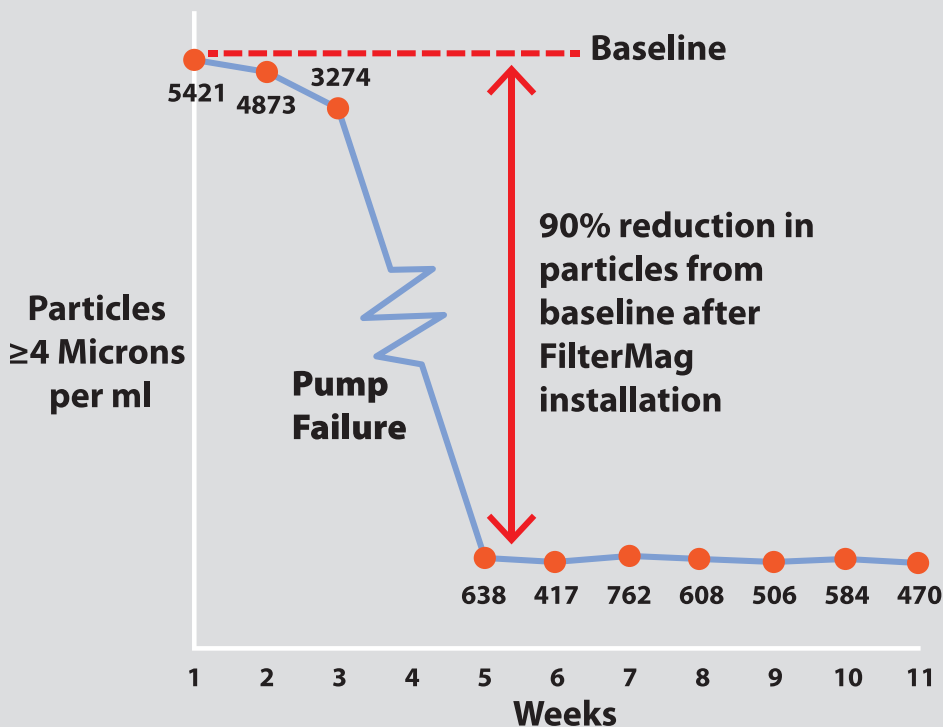


Nibral particles captured by FilterMag in each of the four high pressure filters.

FilterMag results from the single return filter. Notice the absence of shiny Nibral particles.



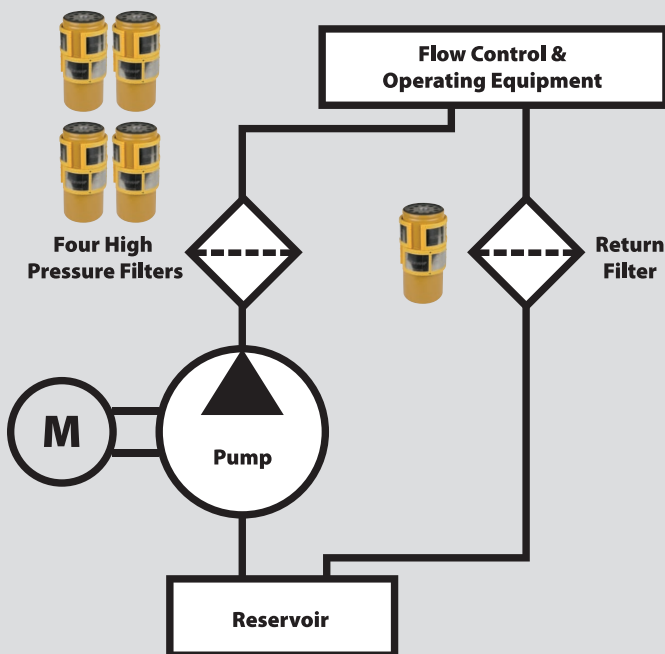
90% Reduction in Particle Contamination with FilterMag.



- \$2.2–3.5 million savings from greatly reduced time to repair and elimination of 3 to 5 days of lost production.
- 70% projected increase in system reliability and longevity was enabled by the reduction in contamination.*

*Projection by NORIA Life Extension Chart for hydraulics.

FilterMag placement on high pressure and return filters



FILTERMAG ***RESULTS***
Outside... Inside

See these results for yourself.

Contact FilterMag and ask for an evaluation. You will be surprised how easy it is. More importantly, you'll be impressed by how much more life and reliability you can get from your process equipment.

FilterMag is simple, easy to install, and reusable. Buy it once and use it over and over again. FilterMag Industrial products are backed with a five year warranty.

FILTERMAG

CT for Spin-on Filters



Order part # based on oil filter diameter

Applications:

- Gas & Diesel Engines • Rotating Equipment
- Hydraulic Systems • Diesel Fuel Filtration
- For most spin-on filter applications

Pairs		Fits Spin-on Filter Diameters		Dimensions			
Part #	Qty.	Minimum	Maximum*	Height	Thickness	Arc (Max)	Weight
CT3.2PR	2-ea.	2.9 in (74 mm)	3.5 in (89 mm)	2.65 in (67 mm)	.34 in (8.6 mm)	360°	18 oz (.52 kg)
CT3.8PR	2-ea.	3.6 in (91 mm)	4.3 in (109 mm)	2.65 in (67 mm)	.35 in (8.9 mm)	360°	28 oz (.80 kg)
CT4.9PR	2-ea.	4.4 in (112 mm)	5.5 in (140 mm)	2.95 in (75 mm)	.36 in (9.1 mm)	360°	38 oz (1.08 kg)
Single Replacement—Special Order							
CT3.2	1-ea.	2.9 in (74 mm)	3.5 in (89 mm)	2.65 in (67 mm)	.34 in (8.6 mm)	180°	9 oz (.26 kg)
CT3.8	1-ea.	3.6 in (91 mm)	4.3 in (109 mm)	2.65 in (67 mm)	.35 in (8.9 mm)	180°	14 oz (.40 kg)
CT4.9	1-ea.	4.4 in (112 mm)	5.5 in (140 mm)	2.95 in (75 mm)	.36 in (9.1 mm)	180°	19 oz (.54 kg)

XT for Spin-on Filters



Order part # based on outside diameter of filter housing

Applications:

- Rotating Equipment • Hydraulic Systems
- Gas & Diesel Engines • For most cartridge filters

Pairs		Fits Outside Housing Diameters		Dimensions			
Part#	Qty.	Minimum	Maximum*	Height: Faceplate/Endcap	Thickness: Faceplate/Endcap	Arc (Max)	Weight
XT4PR	2-ea.	3.8 in (96 mm)	4.8 in (122 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	330°	7.0 lb (3.2 kg)
XT5PR	2-ea.	4.8 in (122 mm)	5.8 in (147 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	340°	9.0 lb (4.1 kg)
XT6PR	2-ea.	5.8 in (147 mm)	6.8 in (173 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	344°	11.0 lb (5.0 kg)
XT7PR	2-ea.	6.8 in (173 mm)	7.8 in (198 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	348°	13.0 lb (5.9 kg)
XT8PR	2-ea.	7.8 in (198 mm)	8.8 in (224 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	350°	15.0 lb (6.8 kg)
Single Replacement—Special Order							
XT4	1-ea.	3.8 in (96 mm)	4.8 in (122 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	165°	3.5 lb (1.6 kg.)
XT5	1-ea.	4.8 in (122 mm)	5.8 in (147 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	170°	4.5 lb (3.0 kg.)
XT6	1-ea.	5.8 in (147 mm)	6.8 in (173 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	172°	5.5 lb (3.5 kg.)
XT7	1-ea.	6.8 in (173 mm)	7.8 in (198 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	174°	6.5 lb (2.9 kg.)
XT8	1-ea.	7.8 in (198 mm)	8.8 in (224 mm)	2.7" (68mm)/3.24" (82mm)	.9" (23mm)/1.4" (36mm)	175°	7.5 lb (3.4 kg.)

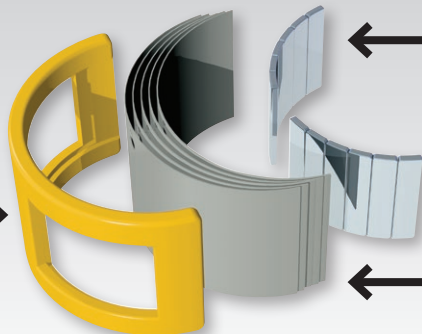
Operating Temperature Range: -40F to +302F (-40C to +150C) • **Magnet Type:** N42SH (High Temperature Nd-Fe-B alloy) with Ni-Cu-Ni plating

*Maximum size may be significantly less on Aluminum and Plastic Housings.

FilterMag CT: Powerful—Focused—Magnetic Field Technology

1. RUGGED FLEXIBLE FRAME

encases and protects the elements of a FilterMag while providing enough flexibility to fit a range of filter diameters. Our proprietary design and materials are rated for temperatures from -40°F to +300°F.



2. POWERFUL, HEAT-RESISTANT NEODYMIUM ALLOY MAGNETS are engineered to focus a magnetic field inside your filter. Specifically formulated to remain effective in the most extreme environments, our magnets are guaranteed to remove particles from oil operating at up to 300°F while most magnets start losing magnetism at 180°F.

3. PATENTED FLUXCON™ SHIELDING TECHNOLOGY stops magnetic flux which could damage electronic components. Not even a paper clip will stick to the outside of a FilterMag. Our FluxCon™ system also redirects a portion of that magnetic power back into the filter to increase filtration efficiency.