

FILTERMAG[®]



OILFIELD APPLICATIONS GUIDE

**Reduce Wear • Increase Reliability • Extend Equipment Life
Longer Service Intervals • Lower Maintenance Costs**

FILTERMAG[®]

CONTAMINATION CONTROL TECHNOLOGY

When's the last time . . .

You saw a product that made a **SERIOUS** difference in the life of your equipment?

Within the tight clearances of a modern engine, normal wear generates tiny steel particles that are carried away in the oil. These particles are so small they will pass right through *any* oil filter.

When the oil circulates back into the engine these steel particles are ground into every lubricated part. This particle-laden oil will continue to lubricate but it will also cause an exponential increase in wear. *The longer you use the oil, the greater the wear, the lower the reliability and the shorter the engine life.*

FilterMag[®] extends equipment life by capturing and holding wear causing particles on the inside walls of the filter.

Multiple independent studies show reducing wear causing particles will extend lubricated component life 30 to 200%.

***Longer component life means . . .
less unplanned maintenance***



FilterMag

on the outside . . .

Results

on the inside . . .

***Extend equipment life . . .
Reduce unplanned maintenance . . .
And save money?***

FilterMag saves money by extending oil change intervals. When used in conjunction with a comprehensive oil analysis program (including ISO4406 Particle Count) most oil change intervals may be safely extended.

FilterMag will pay for itself by reducing planned and unplanned maintenance.

FilterMag is one time investment that provides years of protection. It is easily transferred to new equipment in less than a minute.

Highest Quality Components

Powerful - Focused

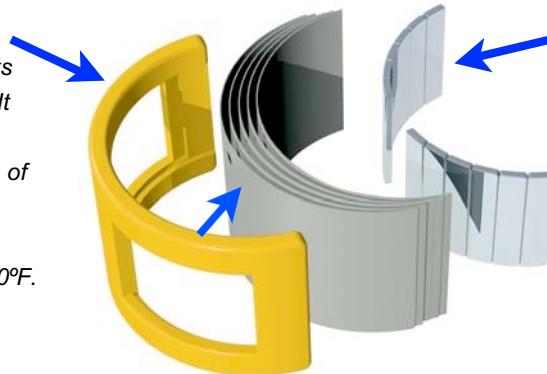
Magnetic Field Optimization

Multi-discipline Engineering

Magnetic Field Technology

Years of Field Testing

1. PROPRIETARY NYLON FRAME encases and protects the elements of a FilterMag. It provides the flexibility for FilterMags to fit a wide range of filter diameters. The frame withstands temperature extremes from -100°F to +300°F.



3. ULTRA-POWERFUL, HEAT RESISTANT NEODYMIUM ALLOY MAGNETS are specifically formulated to remain effective in extreme environments. Most magnets lose their magnetism at 180°F. FilterMag is guaranteed to remove particles from oil operating up to 300°F.

2. PATENTED FLUX CONTROL TECHNOLOGY Magnetic flux emanates 360° around its source. 50% of its useful flux is wasted in the wrong direction - away from your filter. That wasted flux can damage electronic components in the engine compartment. Our patented Flux Control Technology redirects part of the wasted flux into the filter while simultaneously stopping ANY flux from escaping into the engine compartment. The shielding is so effective, not even a paper clip will stick to the outside of a FilterMag.



REDUCE WASTE STREAM EXPENSES UP TO 50% WHILE SHRINKING YOUR CARBON FOOTPRINT

Extending your oil change interval translates into less oil and filter usage. Less usage means less waste and a lower carbon footprint. Expensive disposal and environmental fees for your waste streams are reduced.

With FilterMag you can be green

FILTERMAG

Buy it once, use it for years . . .

Providing fluid contamination control products since 1999, FilterMag is the most widely used system in the world.

FilterMag delivers the best fluid contamination control technologies for lubricating oil, hydraulic fluid and diesel fuel - all at extremely affordable prices.



Typical FilterMag Installation on a spin on filter

FILTERMAG for Spin-on Filters	Filter Dia. (in) Min - Max	Filter Dia. (mm) Min - Max	OIL, FUEL AND HYDRAULIC FILTERS
CT3.2	2.8" to 3.2"	74 to 81mm	To start protecting your equipment, just snap a CT part on your filter. Its powerful magnets will hold it in place. When its time to change your oil, just slide the FilterMag off and snap it on to the new filter.
CT3.8	3.3" to 3.8"	108 to 124mm	
CT4.9	4.2" to 5.5"	108 to 124mm	



Replacement fill plugs for 793 and other Final Drives

FINAL DRIVE FILL PLUGS			
FD785-789	FilterMag's proprietary magnetic technology outperforms all OEM parts to increase reliability and extend final drive life.		
FD793	Fill plugs are available for wheel loaders, haul trucks and dozers from every major manufacturer.		
FD330			



FIXED CANISTER AND CARTRIDGE SYSTEMS FOR HYDRAULIC AND ROTATING EQUIPMENT	
XT4	Removing microscopic wear debris from hydraulic fluids can improve reliability and extend the life of seals, pumps and actuators. FilterMag XTs installed on fixed hydraulic filter canisters with removable cartridges will capture millions of normal wear causing particles.
XT5	
XT6	
XT7	XTs apply to all forms of rotating equipment (pumps, compressors, turbines) where fixed canisters and removable cartridges are used. Each XT can expand to a diameter almost one inch beyond it stated size. The 5 XT parts can accommodate any filter size from 4 to 9 inches diameter.
XT8	



CTF2.5 for placement inside unfiltered compartments i.e. differentials & gear boxes

MULTI-USE	
CTF2.5	CTF2.5s are placed inside differentials, transmissions, gearboxes and hydraulic systems. They may be used in addition to CTRs for maximum protection. (Available in single or 10 packs.)
CTF2.5-10	
CTF5.0	For external application, the CTF5.0 is snapped onto reservoirs and pans.

CTF 5.0 for placement on external surfaces of hydraulic reservoirs and oil tanks

YOUR PARTS NOT MENTIONED HERE?
Custom parts are available at very affordable prices. Please call us to discuss your needs.

FILTERMAG[®]

Example FilterMag[®] Product applications for oil drilling rig capable of 12,000 feet

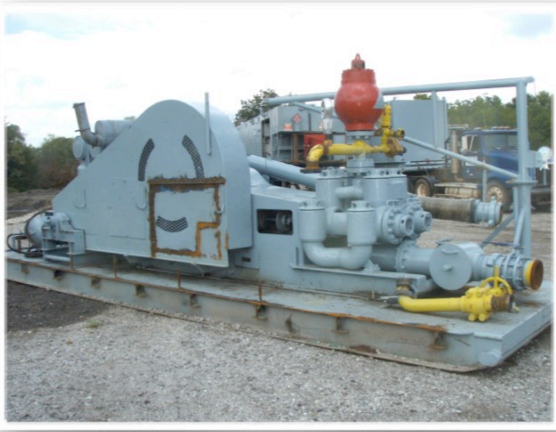
ROTARY TABLE



Oil Reservoir

- Replace drain plug with FilterMag with 2 inch diameter by 3 inch length FilterMag plug
- Normally, this is an unfiltered compartment. Picture shows underside drain plug location

MUD PUMP, PRIMARY & SECONDARY



Chain Gear Drive

- Replace drain plug with 2 inch diameter by 3 inch length FilterMag drain plug. Normally, this is an unfiltered compartment

Diesel engine

- CT4.9 on oil filter (4.5 inch diameter)
- Two CT3.8 on fuel filter (3.65 inch diameter)
- The secondary mud pump would have the same combination of FilterMags.

GENERATOR SET



CAT 3304 Engine

- CT4.9 on oil filter (4.5 inch diameter)
- 2 CT3.8 on fuel filter (3.9 inch diameter)

AUXILIARY HYDRAULIC POWER UNIT



Diesel Engine

- CT4.9 for oil (4.5 inch diameter)
- Two CT3.8s for fuel (3.5 inch diameter)



Hydraulic Fluid Tank

- CTR24 in tank attached to a fill cap. 24 inch length achieved by connecting three CTR8s
- Two CT4.9s on hydraulic oil spin-on filter (4.5 inch diameter)

FUEL & WATER TRAILER



3,300 Gallon Diesel Fuel Tank

- Two CT4.9s applied to each of four fuel filters (5 inch diameter) - total 16 CT4.9s

DRAW WORKS

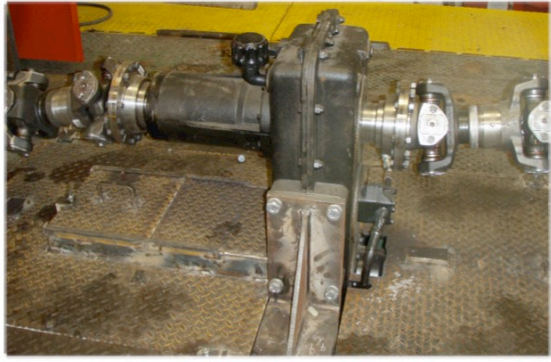


Pictures are of Draw Works trailer being reconditioned and not yet ready for field service.



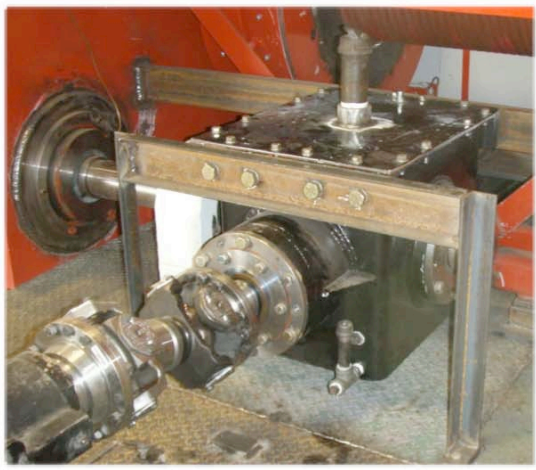
Diesel Engine and Transmission

- Two CT4.9s for oil (4.5 inch diameter)
- Two CT 3.8s for fuel (3.5 inch diameter)
- One CT4.9 for trans (4.3 inch diameter)



Drop Box

- Final Drive 0.75 inch diameter by 6 inch length
- 6 inch length is achieved by connecting two Final Drive .75 inch diameter by 3 inch length segments. The assembled plug is inserted into drain plug hole



90 Degree Gearbox

- Final Drive 0.75 inch diameter by 12 inch long
- 12 inch length is achieved by connecting 4 Final Drive .75 inch by 3 inch segments. The assembled plug is inserted into drain plug hole



PTO Chain Case

- CTR8.0 inserted two inches above oil reservoir near drain plug

Hydraulic Tank (Main)



- One CTR12 in tank mounted to filler cap in picture
- Two CT4.9 on in-line filters (4.7 inch diameter out of picture)

Items below not pictured

Remote Fan Drive

- CT4.9 on spin-on filter (4.7 inch diameter)

Reversing Gearbox

- Final Drive 0.75" x 3" The assembled plug is inserted into drain plug hole

8G825 WHITE SUPERIOR

Oil Engine Filters (4) in Parallel



- Four CT4.9 (4.5 inch diameter) placed on the White Superior Separable Industrial Engine.



Open filters shown above.

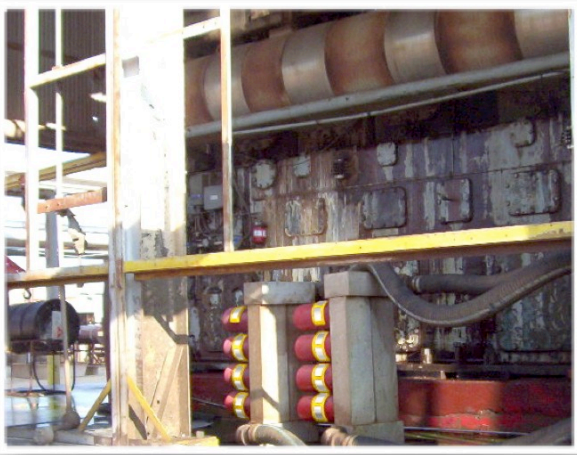
NATURAL GAS COMPRESSOR



Filters (2) for Crankcase Filtration

- Superior Compressor Frame MW64 four dual filters (5.5 inch diameter) with a total of two CT4.9s

HBA-CLARK INTEGRAL INDUSTRIAL ENGINE



Two, 8-filter Manifolds Flowing 345 GPM.

- 16 CT4.9 are applied to manifold



- Manifold close up above (4.8 inch diameter filters). FilterMag works with any flow rate such as this typical manifold set-up

WHITE ENGINE & COMPRESSOR



8G825 White Superior Separable Industrial Engine with MW62 White Superior Compressor Frame

- Compressor crankcase (Two large 5.5 inch filters at left) utilizes 2 CT4.9s; Engine crankcase (four filters); Lubricator (small at right) uses four CT4.9s

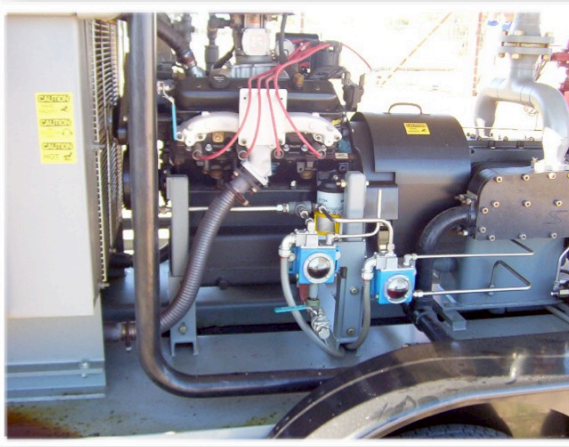
WAUKESHA ENGINE & INGERSOLL-RAND COMPRESSOR



Waukesha 7042 12-cylinder Industrial Engine powering an Ingersoll-Rand Compressor

- Four CT4.9s applied to engine oil filter (5.5 inch diameter) manifold

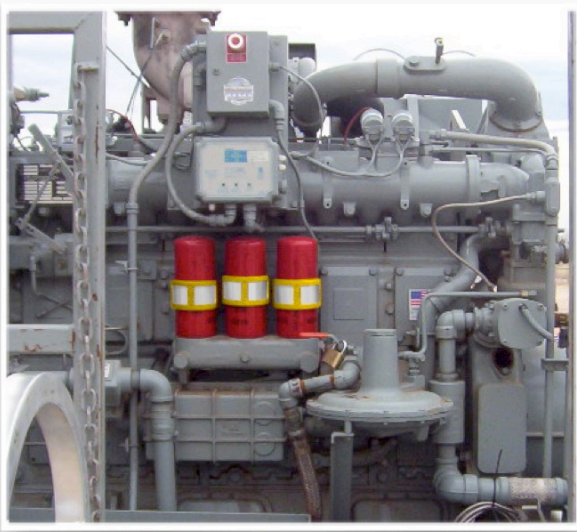
GM VORTEC V8 GAS ENGINE DRIVING CERTCO AIR COMPRESSOR



GM engine filter uses single CT4.9 (4.5 inch diameter). **Certco compressor** using two CT4.9s with filter cut--aways shown below



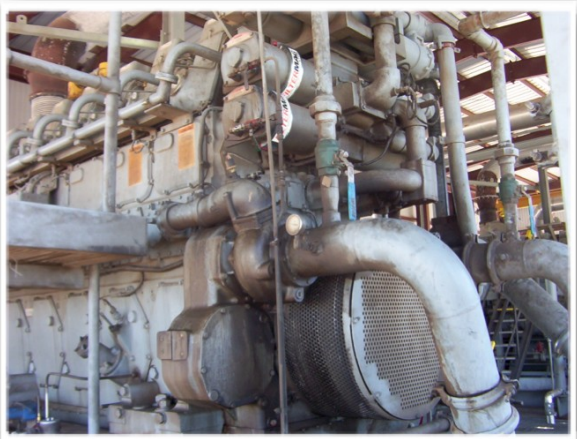
WAUKESHA ENGINE DRIVING A FISK SCREW COMPRESSOR



Waukesha 7042 12-cylinder Industrial Engine powering an Ingersoll-Rand compressor. Four CT4.9s applied to engine oil filter (5.5 inch diameter) manifold



CAT 3606 INDUSTRIAL ENGINE



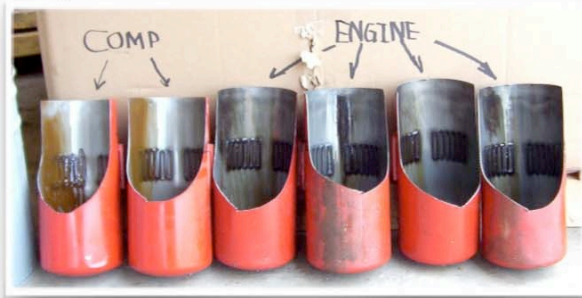
Two CT9.0s installed on fixed 8 inch diameter filter canisters on Caterpillar 3606 Industrial Engine in photo below



CHICAGO PNEUMATIC PUMP FRAME



Two CT4.9s installed on compressor oil filters (5.5 inch diameter). Four CT4.9s installed on engine oil filters. Filter cut-aways below.



TRUCK BED SUPPORT EQUIPMENT



One CT4.9s installed on engine oil filters (shown in picture). After 500 hours use - filter cut-away shown below.



Four CT4.9s installed on dual hydraulic oil filters (not in picture).



Two CT4.9s installed on turbo oil filters (5.5 inch diameter).