



▶ PROVIDING SOLUTIONS FOR VARNISH BUILD UP AND FLUID CONTAMINATION FOR INDUSTRIAL CIRCULATING SYSTEMS..... 1



▶ THE FIRST EVER LEAK DETECTION SYSTEM IN ANY ELECTROSTATIC OIL CLEANER SYSTEM HAS BEEN DEVELOPED. 1



▶ HUGE COST SAVING BY REMOVING VARNISH AND ELIMINATING COSTLY IGV SERVO TRIPS..... 2

○ FIRST | ○ QTR | ○ 2007

OILKLEEN focus

ADDRESSING THE NEED FOR TOTAL LUBRICATION CLEANLINESS AND INCREASED PRODUCTIVITY.

There is a hype these days promoting electrostatic oil cleaners. Some of the information is good, but some borders on deception and marketing tactics. Let's get to the bottom of what really works.

The solution for fluid contamination

Electrostatics is the branch of physics that deals with a phenomena arising due to the existence of electric charges. The key to an efficient and effective electrostatic oil filtration system is the product of several essentials; flow rate, electric field strength, the number of electrostatic fields, electrode surface area, and chargeable contamination collection media. Flow rate is a simple formula; if your electrostatic oil cleaner is removing insoluble contamination faster than your lubrication system is

making it, then you have a clean system. The more electrostatic fields you can pass the contaminated oil through the cleaner your oil will be. Also, field strength is a huge key as this is what puts the charge on contamination particles and cause them to bond out in the collection media. The media should have millions of sharp edges for the charged molecules to bond too. OILKLEEN patented technology has the ability to clean oil to 0.01 micron and will strip your system from varnish build up.



TECHNOLOGY WATCH

OILKLEEN is the world leader in research and development for the electrostatic oil cleaning technology. We are dedicated to providing our customers with the most technological oil filtration methods. OILKLEEN systems are designed to run 24/7 unattended, and to help protect our customers and the environment we have developed the first LEAK DETECTION system in the electrostatic market. If our system had a slow leak and 1/4 inch of fluid builds up in the drip pan, our computer will turn the system off and flash a LEAK DETECTION ALARM on the screen.



How do electrostatic filters work?

Electrostatic oil cleaners have the ability to clean oil to the molecule level which makes them ideal for today's Industrial business since productivity is king.

Electrostatic filters work on principles of physics and basically create static energy. This is called an electrostatic field. The contaminated oil is then forced through these fields at a controlled flow. The flow is known as dwell time and is very important, since the charged contamination has to be drawn to the collection media. Inside each electrostatic field there is a collection media with millions

of sharp edges. The charged particles molecularly bond in the collection media and thus are removed from the oil and making the oil

clean. This type of filtration should always be set up as a kidney loop

configuration. This means that the oil is drawn from the reservoir and run through the electrostatic filter and then put back into the opposite side of the reservoir.

The reason is because your

lubrication system is always creating oxidation by-products and contamination which can cause varnish and unscheduled

downtime. The electrostatic filter has the ability to remove sub-micron contamination. This allows

electrostatic oil cleaners to remove varnish molecules from systems and strip varnish build up from pipes, components, and from the reservoir. Electrostatic filters can remove contamination the size of a molecule, or .001 micron in size. **

“Electrostatic filters can remove contamination the size of a molecule or 0.01 micron in size.....”

PAUL JARVIS/ OILKLEEN



“Dr. Voltage, my question is about the number of electrostatic fields. Does having more electrostatic fields yield better results and why....?”

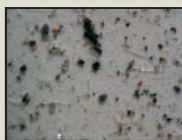
Most electrostatic oil cleaners have 1 or 2 electrostatic fields depending on if the electrostatic filter is a single or twin tank design. OILKLEEN has either 16 fields in the 250 model or 32 fields in the 500 model. The oil flow is forced at a controlled flow rate and pressure through 32 fields with a 15,000V field strength. If you have 16 electrostatic fields versus 1 electrostatic field, then the higher number will remove more sub-micron foreign contamination particles. This one is easy to explain; if I was a molecule and I had to run through one electrostatic field, without getting caught in the collection media, I might make it with enough force or velocity. However, even with increased force and velocity my chances are cut to 1/16th, if I had to run through 16 electrostatic fields without getting caught.

— Dr. Voltage

Proof of performance analysis report

This section will show you before and after pictures of projects where OILKLEEN electrostatic oil cleaners were used to solve the fluid contamination issues.

BEFORE



IGV Servo Pencil filter before OILKLEEN

AFTER



IGV Servo Pencil filter - After OILKLEEN



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