

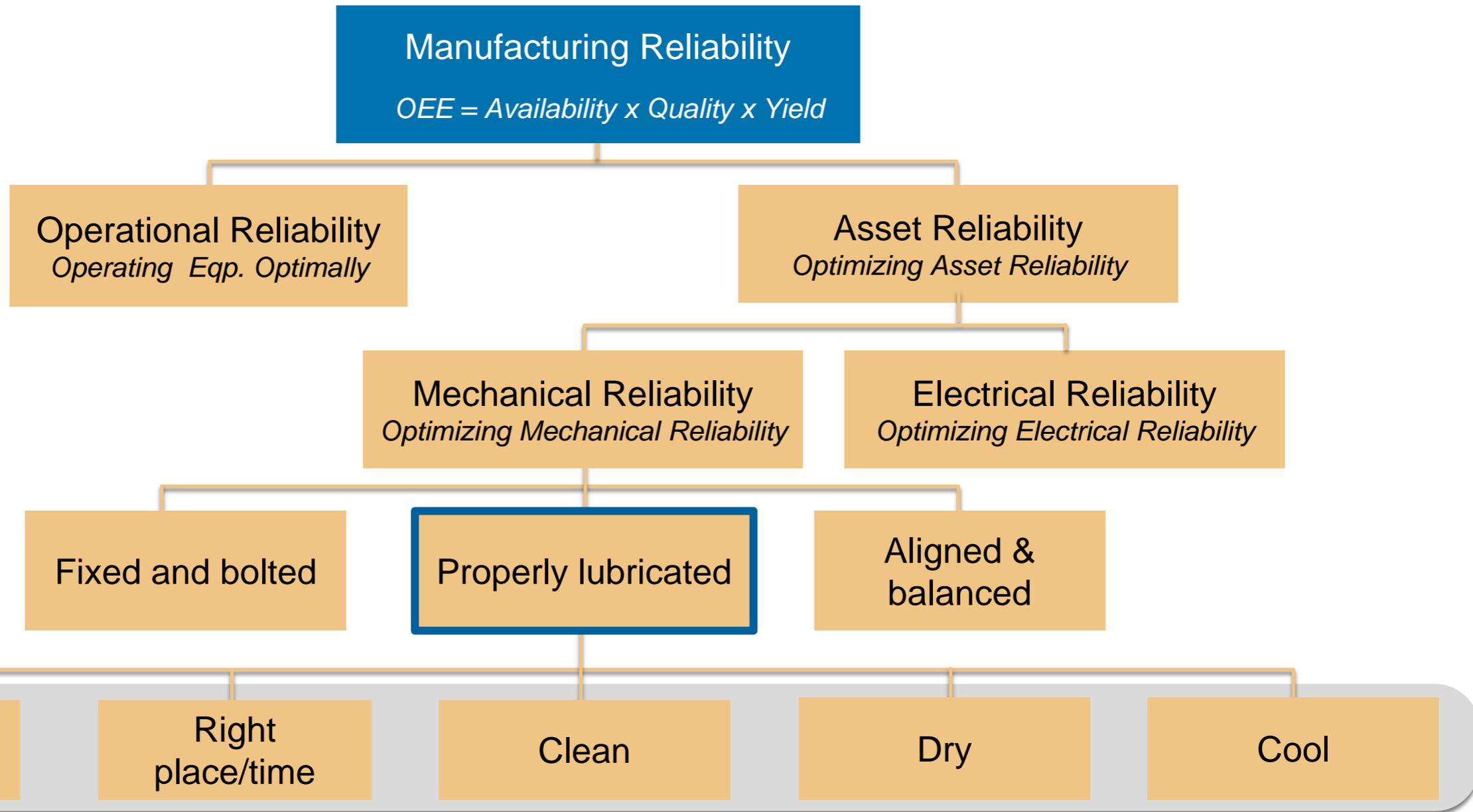
DES-CASE CORPORATION

A Specialty Filtration Company

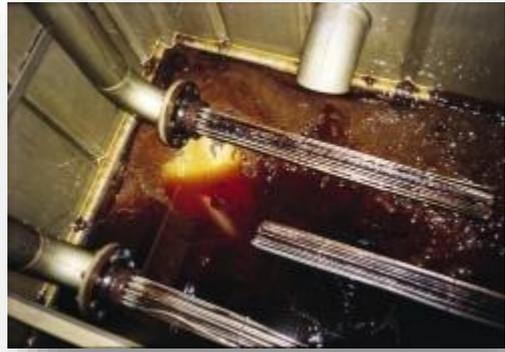


Who We Are

Reliability Market & The Space We Serve



The Problem We Solve— Lubricant Contamination



- Contamination is responsible for as much as 80% of the wear that leads to mechanical failure



- Contamination is a leading cause of machinery failure by directly impairing the lubricant's ability to control friction, wear and corrosion



- Cost of removal = 10X cost of prevention

Des-Case products extend the life of industrial lubricants by preventing contamination with desiccant breathers, removing contaminants with filtration systems, and detecting lubricant problems with visual oil analysis.

By extending lubricant life, Des-Case helps companies improve overall equipment reliability— increasing productivity and profitability.

What is Oil?

Oil in Your Car



What is Oil?

. . . a viscous liquid derived from petroleum, especially for use as a fuel or lubricant.



Functions of a Lubricant

- Reduce Friction
- Control Wear
- Control Corrosion
- Remove Contaminants
- Remove Heat
- Power Transmission



How and Why Does Equipment Breathe?

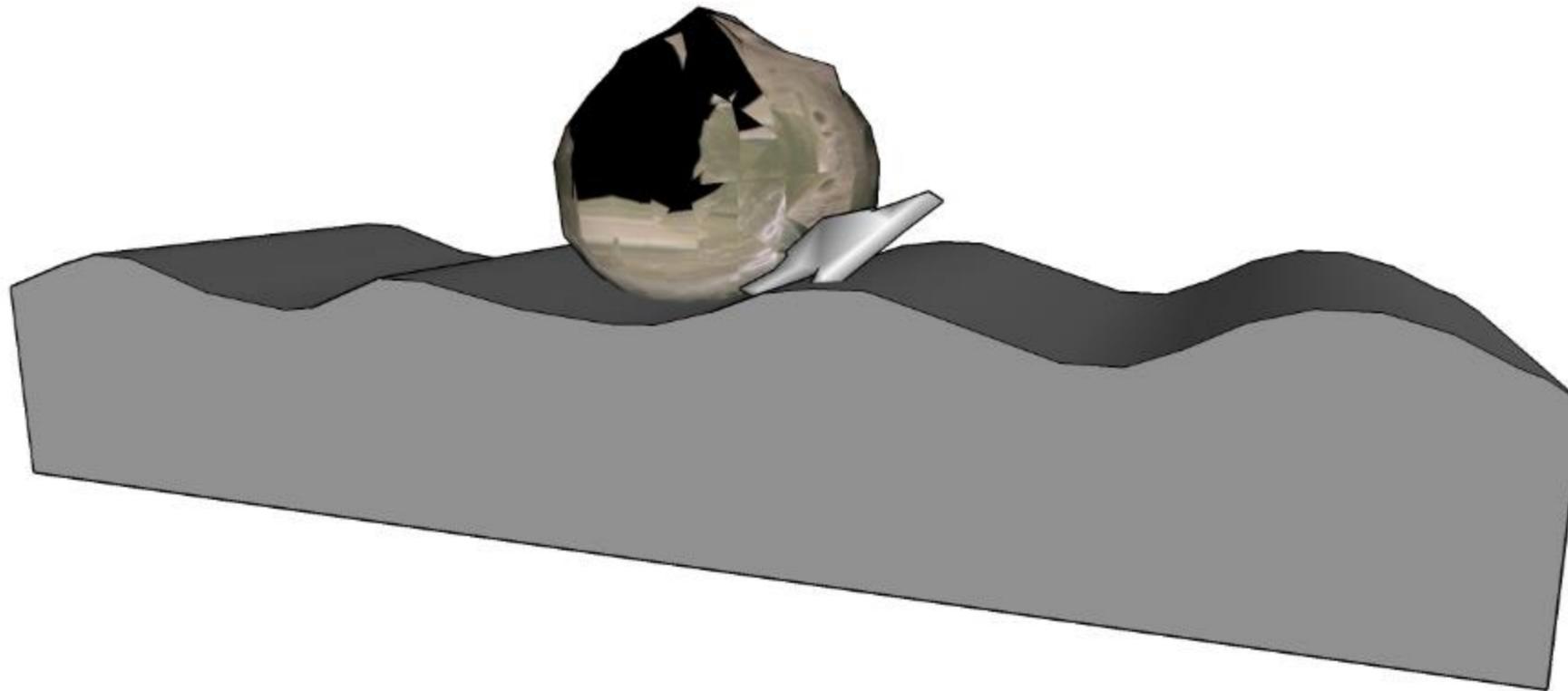
As industrial equipment heats up and cools down, it expands and contracts. And in order to keep machinery from building up too much pressure, equipment OEM's include vent caps on the fill port to allow expanded air to escape.

There's only one problem.

While they let air out, those simple caps don't prevent small dirt particles and moisture from making their way *into* the tank, which can damage bearings, gears, and valves by slowly wearing away the critical surfaces. Even worse, moisture—over time—will condensate inside the oil reservoir, introducing water to lubricants and keeping repairmen busy.



Erosion Wear



Where it occurs:

Erosive wear can occur whenever hard particles strike machine surfaces.

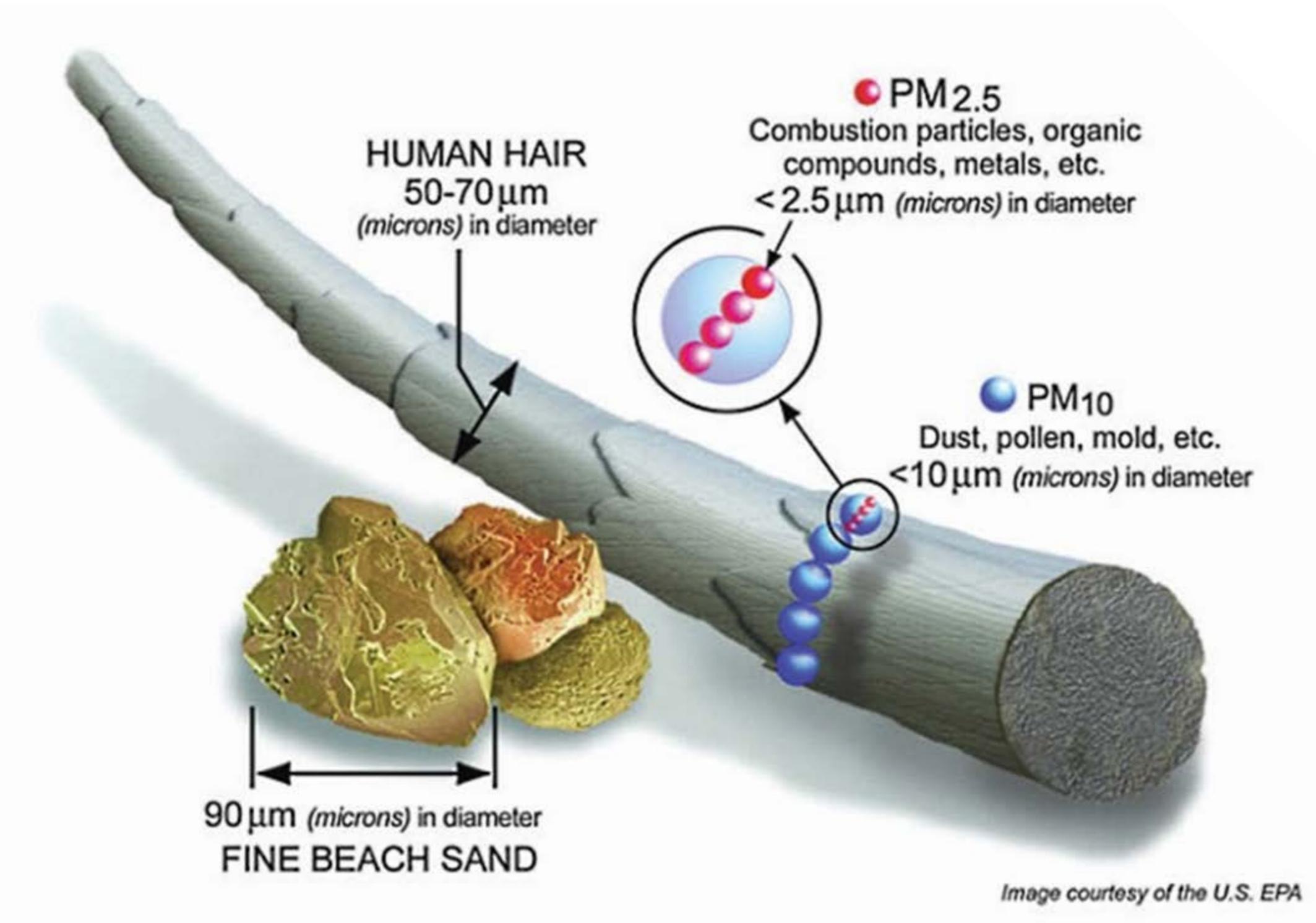
How Much Does it Take to Contaminate?



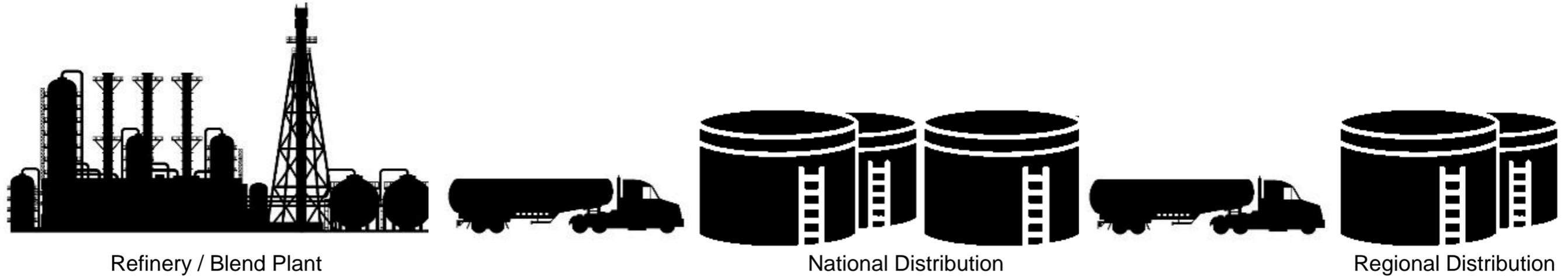
One teaspoon of dirt in a 55 gallon drum yields a particle count of 19/17/14.

That means there are about one billion particles in the drum which are greater than 4 microns in diameter.

How Big is a Micron?



How New Oil Becomes Contaminated

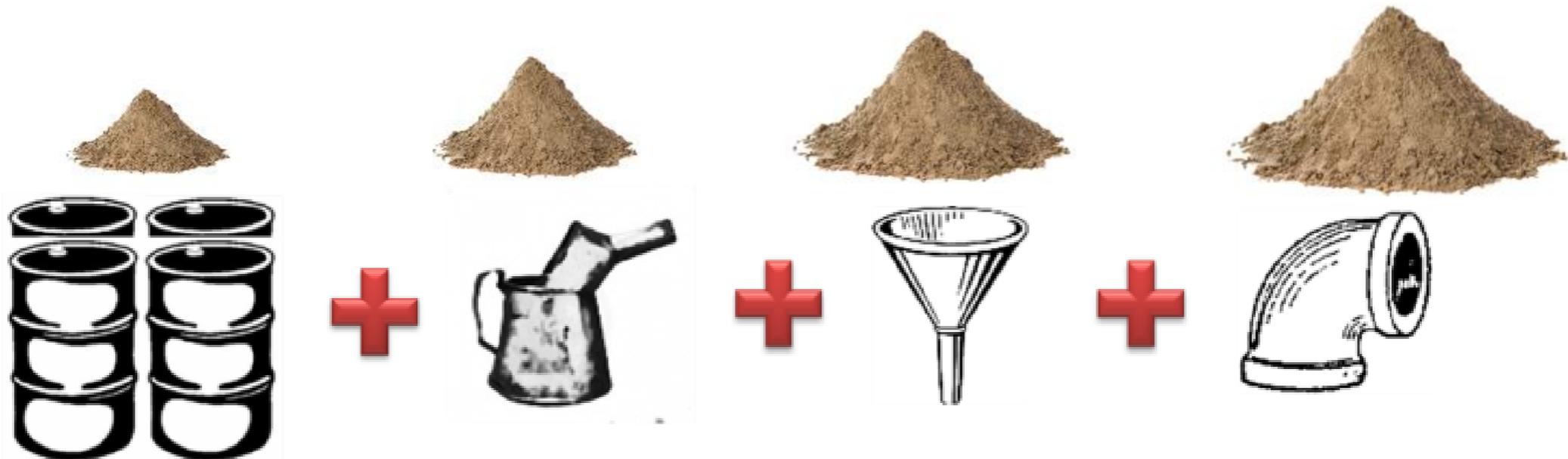


Oil Arrives at Plant

2X dirtier

4X dirtier

8X dirtier



By the time oil arrives at your site, it is already too dirty for most equipment.

Poor storage and transfer methods add to the contamination.

Dirty accessories compound the problem.

Not using the proper breathers allow more contaminants to enter the oil.

What We Do

An Introduction to Des-Case



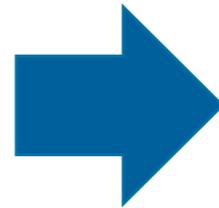
[Play Video by Clicking Here](#)

Protecting Critical Points in Lubricant's Lifecycle

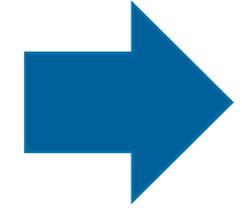
Des-Case offers solutions to maintain fluid cleanliness at EVERY critical point in the lubricant's life.



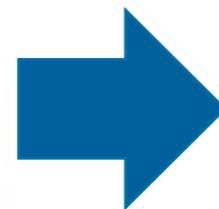
Arrival at customer's facility



Lubricant storage



Transfer to equipment



Prevention



Removal



Detection

In-use on application

Three Core Product Lines

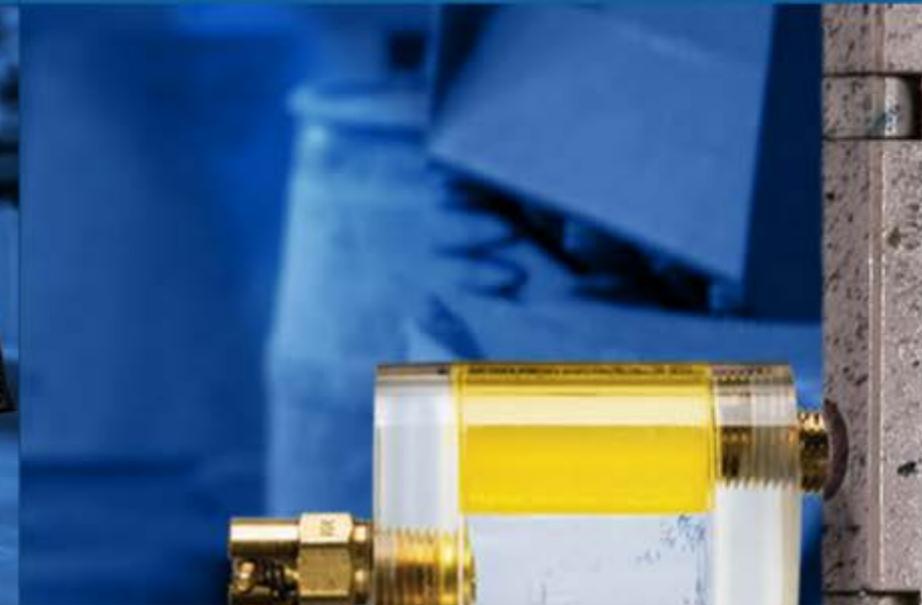
DESICCANT BREATHERS



FLUID HANDLING



VISUAL OIL ANALYSIS



The original desiccant breather was invented by Des-Case founder Jim Waller in 1983. We've been innovating new breather technologies ever since!

Desiccant Breathers— Keeping Lubricants Clean & Dry



Standards



VentGuards



HydroGuards



Extreme
Duty



Non-Desiccant



Extended
Series



Rebuildable
Steel



Desiccant Breathers— How They Work

Desiccant breathers replace standard dust caps or OEM breather caps on equipment. As air is drawn into equipment through the breather, the layered filter elements remove particulates while the desiccant beads strip harmful moisture.

While in service or during shut-down, the desiccant beads attract moisture from inside the headspace of the reservoir, actively drying the equipment.



Desiccant Breathers— How They Work

- Removes moisture in the headspace of equipment
- Eliminates rust-forming condensation
- Prevents sludge deposits and water-contaminated oil
- Prevents contamination ingress
- Provides longer lubricant life
- Reduces wear and tear on equipment, prolongs life



SEEING PINK?

A pink breather means it has done its job keeping moisture out of your lubricants. Time to replace the breather with a new one.

Breathers



Fluid Handling & Filtration

Fluid handling & filtration products:

- Filter and pre-filter oil
- Transfer oil
- Store oil
- Top-off oil
- Take oil samples
- Drain/fill equipment



Fluid Handling



PAPER MACHINE 220-St GEAR OIL

Fluid Handling



Visual Oil Analysis

Des-Case industry-leading Visual Oil Analysis tools allow users to monitor the level and condition of oil, as well as collect and drain any collected water or other contaminants.



The Clear Difference

Des-Case 3-D BullsEye™



vs.

Traditional Sight Glasses



Visual Oil Analysis



Visual Oil Analysis



Can this gearbox be inspected?



What about this one?

Services

Des-Case's services team is dedicated to helping people develop more practical solutions for their unique situations. With more than 75 years of combined experience in the field, our experts provide real-world advice that can be implemented quickly and realistically for any plant.

Lubrication Training

- Des-Case offers public and private training to help customers understand the fundamentals of lubrication and lubrication management, as well as evaluate the current status of their lubrication programs and create a customized action item list to help them transform to best-in-class.

Lubrication Consulting

- Des-Case also provides consulting services, giving a clear roadmap of how to execute best-in-class lubrication management.



Who We Serve

Our Customers

Des-Case sells through a global network of:

- Distributors
 - National Distributors
 - Strategic Geographic Partners
 - Dual & Private Label Partners
- OEM's
- Government Bids

End Users:

- Corporate Maintenance & Reliability Director
- Plant Manager
- Maintenance Manager
- Reliability Manager
- Reliability Engineer
- Maintenance Superintendent / Supervisor

- Planner
- Mechanic
- Millwright
- Lube Tech
- Pdm Tech



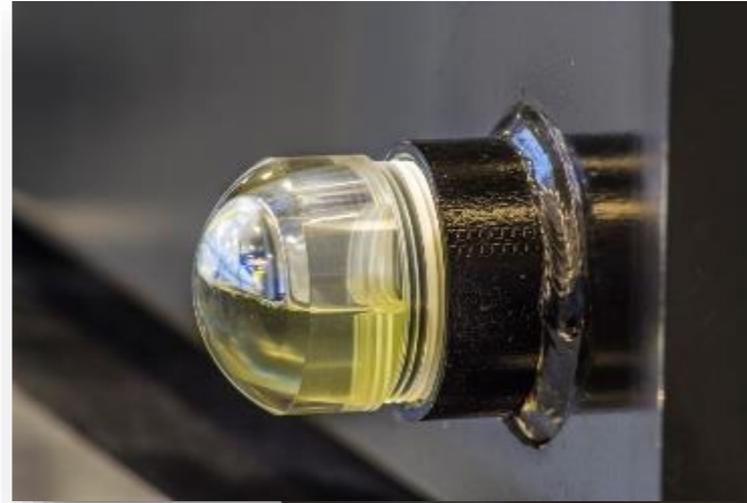
Industries We Serve

- Wind Energy
- Power Generation & Distribution
- Pulp & Paper
- Food & Beverage
- Mining
- Steel
- Oil & Gas Production
- Oil & Gas Exploration
- Off-Road & Mobile Equipment
- Automotive
- Aviation
- General Manufacturing



Typical Applications for Des-Case Products

- Gearboxes
- Hydraulic Reservoirs
- Storage Drums
- Totes & Bulk Storage
- Transformers
- Wind Turbines
- Mobile Equipment
- Pumps



The Opportunities Ahead— Survey Said . . .

How important is precision lubrication to overall equipment reliability?

Critically important

Important, but not critical

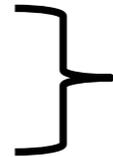
Slightly important

Neither important or unimportant

Slightly unimportant

Moderately unimportant

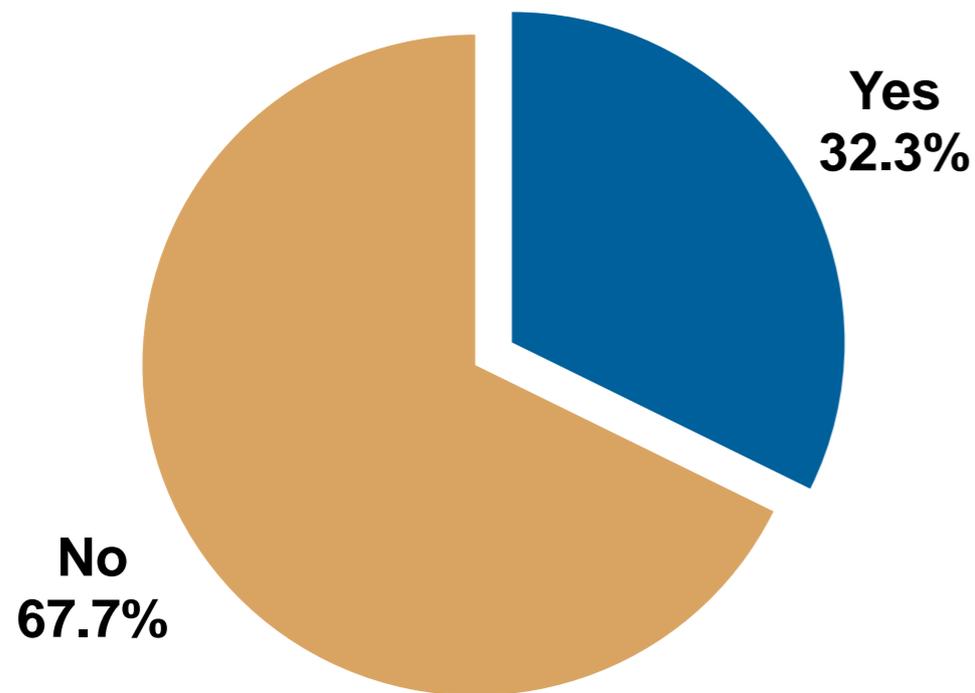
Not at all important



99.1%

The Opportunities Ahead— Survey Said . . .

At your plant, have you achieved a level of lubrication that you would consider close to best practice?



Des-Case products have a **global** need— anywhere industrial fluid life and performance are essential to daily operations.

Source: Machinery Lubrication Reader Survey – March, 2011 (n: 347)

Helping Companies Build the Business Case

Financial Evaluation Case	likely case					
Estimated Annual Lubrication Losses	\$2,520,000					
Addressable Annual Lubrication Losses	\$504,000					
Year	0	1	2	3	4	5
Program Benefits	\$0	\$252,000	\$378,000	\$504,000	\$504,000	\$504,000
Program Costs						
Upfront	\$94,900	\$0	\$0	\$0	\$0	\$0
Ongoing		\$36,850	\$36,850	\$36,850	\$36,850	\$36,850
Total Costs	\$94,900	\$36,850	\$36,850	\$36,850	\$36,850	\$36,850
Net Cash Flow	-\$94,900	\$215,150	\$341,150	\$467,150	\$467,150	\$467,150
Select Discount Rate	10%					
Discount Factor	100%	91%	83%	75%	68%	62%
Discounted Net Cash Flow	-\$94,900	\$178,545	\$266,446	\$336,890	\$306,263	\$278,421
Investment Analysis						
Five Year Net Present Value (NPV)	\$1,274,165					
Internal Rate of Return (IRR)	260%					

Why Des-Case?



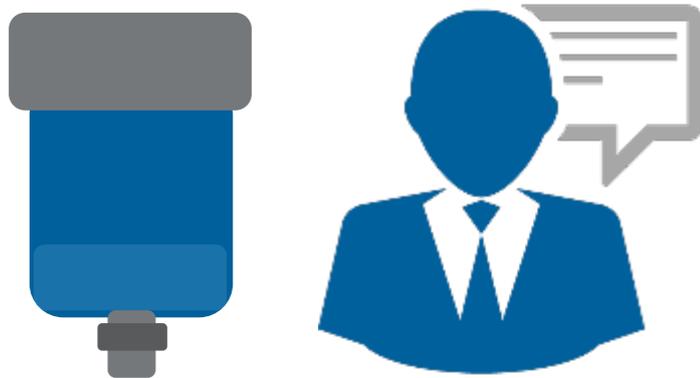
Market leader with desiccant breathers and visual oil analysis



Broad product portfolio, offering solutions at every critical point in the lubricant's life



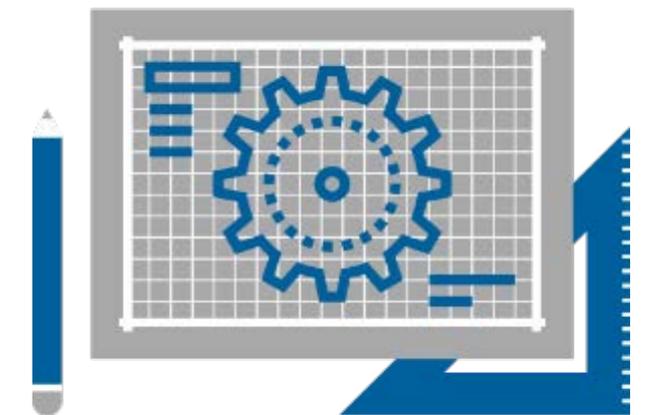
Recognized as industry 'Thought Leader' in Equipment Reliability & Lubrication



Unique competitive advantage by offering a holistic approach with both products and services



Long-term relationships with some of the world's most prominent blue-chip manufacturers



Quality, durability and performance of products



Breathers | Fluid Handling | Visual Oil Analysis
Lubrication Training & Consulting