Oil Analysis & Cleanliness

Monitoring the lifeblood of your system

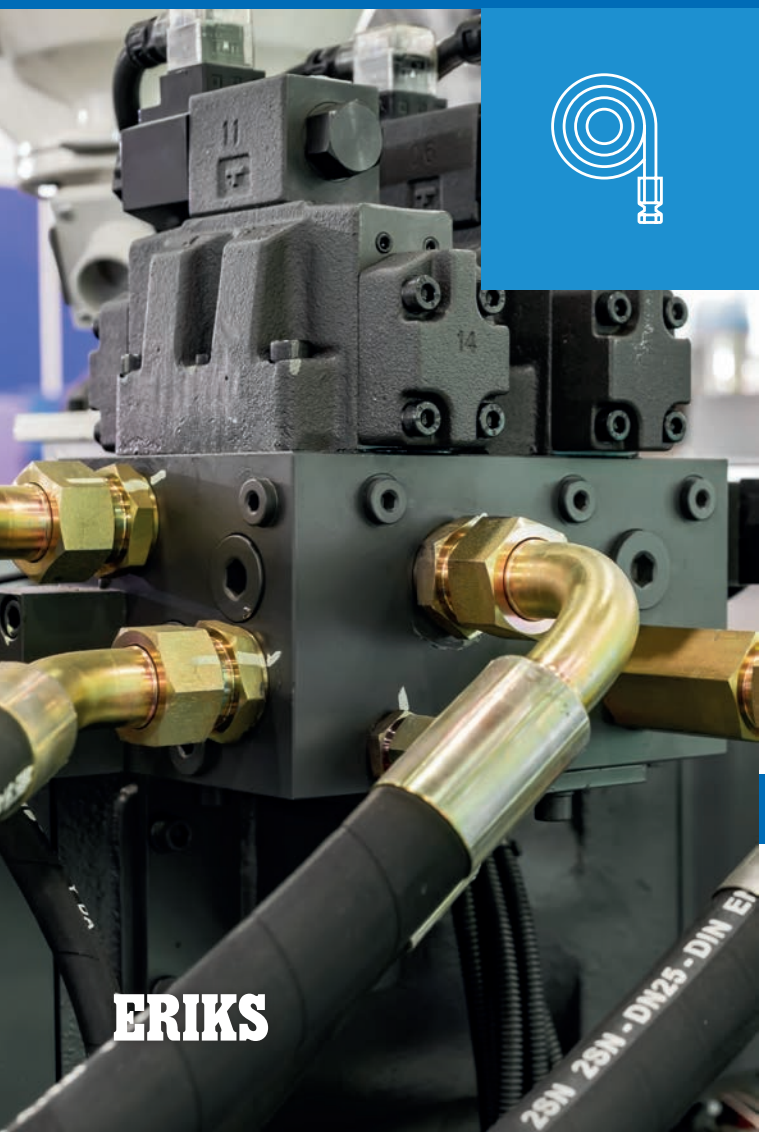
Let's make industry work better

ERIKS

HOW CLEAN IS YOUR OIL?

IT HAS BEEN ESTIMATED THAT 70% OF COMPONENT REPLACEMENT IS DUE TO SURFACE DEGRADATION, OR WEAR.

In hydraulic and lubrication systems, 50% of these replacements result from mechanical wear, and another 20% from corrosion.



ERIKS OIL SAMPLING AND ANALYSIS

Poor maintenance, failing components and contaminated hose assemblies can all lead to oil contamination.

SAMPLING AND ANALYSING YOUR HYDRAULIC SYSTEM OIL:

- highlights developing problems
- prevents premature failure
- ensures optimum operational efficiency

EXPERT ANALYSIS AND INTERPRETATION

Provide ERIKS with a sample of oil from any hydraulic system, and we will submit it for independent laboratory analysis. Our experienced Application Engineers will then produce a detailed evaluation of the results including:

- **confirmation** of ISO cleanliness code and filtration micron rating and what this means for your hydraulic system
- **interpretation** of contaminants e.g. a high level of brass indicates a failing bearing
- **solutions** to problems indicated e.g. dust / sand particles: install desiccant breathers, water: check for leakage from cooling system, condensation from power pack, ingress from washdowns

TAKE ACTION TODAY:

With a critical machine failure potentially costing thousands of pounds in downtime, can you really afford to wait? Give us a call today.

WHAT YOUR OIL CAN TELL YOU

AND SAVE YOU

OIL CONTAMINANTS CAN BE BROKEN DOWN INTO 4 TYPES

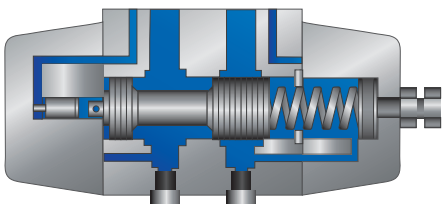
All with different consequences for your hydraulic system:

- **solids** – abrasive wear, leakage, component failure etc.
- **liquids** – corrosion, wear, sludge formation, cavitation etc.
- **gel-like residues** – bearing wear, valve malfunction, dynamic seal damage etc.
- **gases** – cavitation, oxidation, premature oil ageing etc.

THE IMPACT OF VALVE WEAR (EROSIVE WEAR, SILTING/STICTION)

Valves are one of the most dirt-sensitive components in a fluid system. Particulate contamination can cause slow, inaccurate response, leakage, and jamming.

Typical dynamic clearances	
Servo valve	1-4µm
Proportional valve	1-6µm
Directional / control valve	2-8µm

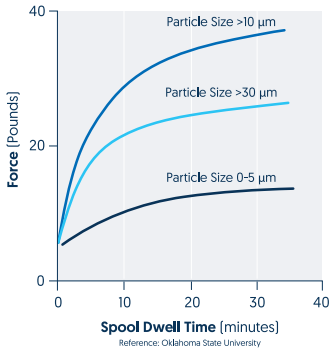


Relative particulate sensitivity: HIGH

IMPACT OF FLUID CONTAMINATION ON VALVE SHIFTING FORCE

CONDITIONS OF DIRECTIONAL VALVE

- Flow: ~ 15 US gpm (56.8 Lpm)
- Pressure: 3,000 psi (207 bar)
- Valve Radial Clearance: 8 µm
- Valve held stationary and under pressure before shifting force was measured



Valve silting / stiction from particle build-up between moving surfaces increases valve shifting force. The highest force is required when the valve is challenged by particles in the dynamic clearance size range (~10 µm)

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For your local Service Centre UK or Ireland Call: 0121 508 6000

ERIKS UK & Ireland Head Office:
Amber Way, Halesowen, West Midlands, B62 8WG

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