

# Oil Analysis Sampling Kit

**Extend asset life through  
managed lubrication**

Oil analysis is an excellent indicator of issues developing within a mechanical system. The RS PRO Oil Sampling Analysis Kits allow you to take samples and return at your own convenience.

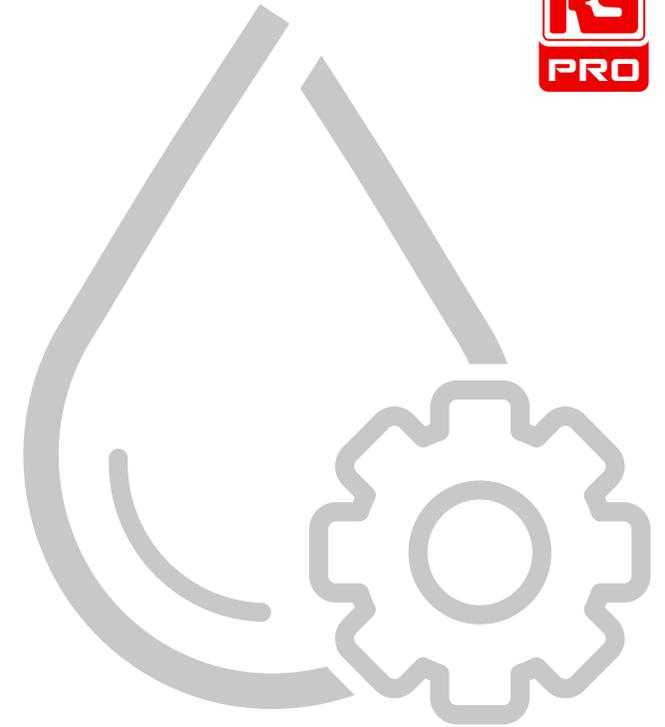




# The challenge

Lubrication is one of the most fundamentally important factors in the upkeep of your critical assets; whether it's ensuring your gears aren't grinding, or making sure your hydraulic systems are spotless, its importance cannot be overstated. Every time the cleanliness of an oil improves, the expected lifespan of the equipment effectively improves with it.

Whether recurrent machinery faults, excessive lubricant usage or excessive downtime are the issue, trending oil condition can be a powerful tool.



# 10:1

Expected ROI for a best-in-class oil analysis programme<sup>1</sup>

# 63%

of bearings fail because of lubrication-related issues<sup>2</sup>

# 70%

of industrial equipment failures are caused by poor or inadequate lubrication<sup>3</sup>



# The solution

A single, detailed analysis of an oil sample can be a valuable preventative maintenance tool, but it comes into its own as part of an ongoing program. Trending wear, contamination and lubricant chemistry provide insight into potential problems before they escalate to a more serious issue.

The self-serve RS PRO Oil Analysis Sampling Kit (article 221-4799) provides everything you need to collect in service oil samples and return to our laboratory, including full analysis by our team of ICML certified chemists and full reporting returned to you via email.



#### Standard Tests include:

<b>Visual Inspection</b>	Visually review colour, haziness, suspended solids and layering.
<b>Elemental Analysis by ICP-OES</b>	Spectral analysis to determine wear metals, additives and more.
<b>Kinematic Viscosity at 40°C</b>	Identify grade mismatches and lubrication degradation.
<b>AN (Acid Number)</b>	Determines acidity and oxidation.
<b>Water Content</b>	Assess degree of moisture ingress.
<b>Ferrous Debris (PQ)</b>	Gives an overview of iron-based content.
<b>Particle Count (ISO4406)</b>	Cleanliness of the oil (hydraulic systems only).



# How it works

- Oil samples are collected using one of our sampling kits, before labelling with component information and returning to our Nottingham laboratory. Our sampling kits contain everything you need to collect up to 10 in-service oil samples.
- The samples are analysed against a pre-agreed test slate to determine lubricant condition and the presence of anomalies.
- A full report is then generated and emailed to you, with detail of the **wear, chemistry** and **contamination** status of your sample, with advised actions.



### Wear

Clean, healthy, wear-free lubrication can lead to an exponential reduction in machine wear. Wear particles are a sure sign of an unhealthy machine. Correct detection and diagnosis assists in our customers taking the correct action regarding critical maintenance decisions.



### Chemistry

An assessment of the health of the lubricant itself; telling you whether lubricant is fit for service or ready for replacement based on its current chemical makeup.



### Contamination

Typically, ingress from the environment local to the component in question. For example, moisture, general dirt and product-related contaminants can all be a factor in necessary components wear and reduced lifespan.



# The outcome

Analytical testing typically takes 2-3 working days from receipt of your samples in our Nottingham laboratory, with reports returned by email.

## Clear Reporting

We provide a comprehensive, yet easy to read oil condition report with clear fault identification, graphical trending and clear diagnosis and actions.

## Extended Scope

The lab can also test greases, coolants, fuels, transformer oils, metalworking fluids and more. We also have extended and investigative testing suites available.

### 1. Trended Analysis

Standard tests for metal and chemical contamination, oil viscosity and water content.

### 2. Alarm Radar and Commentary

Graphic representation allows visual review of status and commentary from lab will advise on best course of action.

### 3. Condition Based Oil Changes

Having laboratory confirmation of oil condition allows you to change your oil 'on condition', as opposed to changing on a 'time based' basis. This gets you value for money from your oil as you only need to change it when necessary.

**Example Report**

**OIL ANALYSIS TEST CERTIFICATE**

TEL: +44 (0) 1909 722000 • E-mail: oil.lab@monition.com • WEB: www.monition.com

Plant Name: <b>Example</b>	Area:	Oil Samples (Test):
Component Name: <b>Gearbox</b>	Machine Name:	<b>Gearbox (1234-9)</b>

**Lab Comment:**

Note level of Iron, Silicon and Ferrous/Wear. Large chunks of fresh ferrous material was observed.

There is evidence of debris consistent with steel material from bearings or gears.

Check the drains and plugs for accumulated ferrous material and investigate source.

**Alarm Radar:**

**Overall Status** Critical

Sample Ref Oil	Current	Historical			
Sample Date	02/12/2018	11/03/2019	07/01/2019	17/04/2018	17/04/2017
Unit Hours					
Sample #	12327	11237	10883	9060	7831
Lab #	9	9	9	9	9
Analyst		01	01	01	01

	02/12/2018	11/03/2019	07/01/2019	17/04/2018	17/04/2017
Aluminium - ppm	3	3	3	2	4
Antimony - ppm	<1	<1	<1	<1	<1
Cadmium - ppm	<1	<1	<1	<1	<1
Chromium - ppm	1	1	1	1	1
Copper - ppm	2	1	1	1	1
Iron - ppm	241	175	161	138	131
Lead - ppm	2	2	1	1	1
Nickel - ppm	<1	<1	<1	<1	<1
Tin - ppm	<1	<1	<1	1	<1
Titanium - ppm	<1	<1	<1	<1	1
Vanadium - ppm	<1	<1	<1	<1	<1
Tungsten - ppm	<1	<1	<1	<1	<1
Manganese - ppm	2	1	1	1	1
FWI - idx	328	307	301	272	265

	02/12/2018	11/03/2019	07/01/2019	17/04/2018	17/04/2017
Barium - ppm	<1	<1	<1	<1	<1
Boron - ppm	12	47	46	25	22
Calcium - ppm	45	33	28	28	32
Magnesium - ppm	2	1	1	1	1
Nickelobdenum - ppm	1	1	1	1	1
Phosphorus - ppm	358	280	262	247	257
Potassium - ppm	4	1	2	<1	2
Zinc - ppm	14	13	12	12	12
Viscosity 40 - cSt	206.1	202.3	213.1	213	203.4
Acid No. - mg KOH/g	0.88	0.42	0.82	0.6	0.55
Sulfur - ppm	20080	14330	14160	12160	

	02/12/2018	11/03/2019	07/01/2019	17/04/2018	17/04/2017
Aluminium - ppm	3	3	3	2	4
Silicon - ppm	43	28	26	29	24
Sodium - ppm	1	1	1	<1	2
Water Content - %	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

**Chemistry**

Oil Hours - hrs

Unit Hours - hrs

Annual - hrs

**Viscosity 40 - cSt**

Water Content - %

**Key** Satisfactory Early Caution Caution Warning Action



# Discover the benefits of our pre-paid Oil Analysis Sampling Kits

- Understand oil condition
- ID problems before they occur
- Fewer repairs, less downtime
- Bolster precision maintenance
- Clear, concise reporting
- Lubricant cost savings

# £300

**Standard Box Price:**  
Includes equipment for  
up to 10 oil analysis.\*

## Order today

### 1. Place your order

Using product code 221-4799 through [uk.rs-online.com](http://uk.rs-online.com)

### 2. Receive Kit

Oil Analysis Sampling Kit will be delivered to your premises

### 3. Extract your sample(s)

Each box contains equipment for up to 10 sample analysis

### 4. Return your sample(s)

In the envelope provided

### 5. Results to your inbox

Results delivered electronically to you email within 3 working days\*

\*3 working days after receipt of your sample submission to our lab