



# OELCHECKER



#### TOP TOPIC

Mining machines -Lubricants on a large scale!

#### Q&A

From oil sample to analysis -How we ensure quality

#### OILDOC ACADEMY

OilDoc Conference 2025 ideas, impulses, perspectives!

## **CHECK-UP**



## **99** Better safe than sorry!

As an entrepreneur, you have to be particularly careful these days. On the one hand, however, you must not overdo it, otherwise you will quickly slow yourself and your company down. On the other hand, despite all caution, you are sometimes confronted with surprises.

It has now been almost a year since OELCHECK was threatened by heavy rainfall and flash floods. Had we ever imagined this before? No! We had already considered all possible scenarios and were prepared for a number of things, but we hadn't anticipated a threat like this. In summer 2024, nature taught us otherwise.

The protection of the large OELCHECK database with its more than four million lubricant and operating fluid samples as well as limit values for over 200.00 machines was and remains the focus of all our precautions.

In addition, we only use HTTPS-encrypted connections for the LAB.REPORT customer portal and the online shop. We were and also remain optimally protected against cyberattacks. Only authorised employees have access to the server rooms. Our productive data and the data backups are separated from each other so that not all data is lost in the event of an emergency. We were already prepared for a fire last year. But the masses of water that poured down from the clouds and from the mountains onto our company were a nasty surprise.

In the meantime, the enormous damage has been repaired and we have optimised many things and increased the safety of our buildings and facilities. Even though we got off lightly, so to speak, we learned one thing from the events of last summer:

Climate change has definitely arrived! Short-term heavy precipitation will increase more than longer periods of intense rainfall. This increases the risk of flooding and the danger of mudslides on the mountain slopes.

It's high time we joined forces to fight climate change and treat our natural environment with even more care. We only have one environment and we have to protect it. That's why we've been doing everything we can for a long time to reduce and, if possible, avoid any environmental impact of our company. With our all-inclusive lubricant and operating fluid analyses, we have also been supporting our customers for many years to operate more sustainably and reduce their CO<sub>2</sub> footprint. After all, we are all pulling together.

Better safe than sorry! But caution is also the mother of wisdom! We have learnt our lessons from the near-disaster in summer 2024. We may not necessarily have become wiser, but we have certainly become more cautious and even better equipped!

Paul Weismann Petra Bots

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# OELCHECK EXPRESSO





#### Think big and act sustainably - Lubricants for mining machines

Mining machines are in a league of their own! This applies not only to their gigantic dimensions, but also to their daily service life, the sometimes extreme working conditions, their maintenance and the lubricants. But despite the many challenges: Even when operating mining machines, economic efficiency and sustainability can be reconciled!

→ Top topic | Pages 4-5



#### When a minus is something to be happy about - OELCHECK reduces its own CO, footprint by 10%

How did we manage to do that? We have replaced an auxiliary material! Argon is indispensable for many analyses in the OELCHECK laboratory. So far, the inert gas has burdened our  ${\rm CO_2}$  balance with 60 tonnes per year. Thanks to the switch to "green argon", which is produced with the help of renewable energies, we have now been able to reduce our own  ${\rm CO_2}$  footprint by as much as 10%!

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#### Following the devastating floods of 2024 - OELCHECK takes stock

In June 2024, heavy rain and flash floods hit our company. Among other things, they destroyed our servers, the heart of our IT. The company came to a standstill and there was great concern. Back then, we narrowly escaped disaster. However, we have learnt our lessons and prepared ourselves as well as possible for such a possible recurrence.

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#### Lectures, workshops, laboratory tour - OELCHECK at the OilDoc Conference

Experience OELCHECK live at the large OilDoc Conference from 13-15 May 2025 in Rosenheim near Munich! Whether it's one of our exciting lectures, a workshop at OELCHECK in nearby Brannenburg or a tour of Europe's leading laboratory for lubricant analysis – a wide range of options awaits!

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### **LUBRICANTS FOR MINING MACHINES**

Whether it's a brick, the cement bag in the DIY store, a pair of steel pliers or the mobile phone in our hand: The materials needed to make them could tell stories. But who thinks of the mining excavator or the wheel loader that is in operation around the clock to extract the necessary raw materials when they think of the everyday use of these things.

Even the size of the construction machines we encounter on one or the other construction site when passing by, whether excavators, wheel loaders, crawlers or even tippers, may impress us. Compared to an excavator from the open pit mine or quarry, they look like dwarves. Mining machines are in a league of their own in terms of size.

#### Mining machines: Think big!

A mining excavator that makes even your own house look small and can transport many times more with a single shovel than a normal lorry is truly gigantic. The associated mining tipper, also known as a 'skip', can take on several of these excavator shovels at once – depending on the size, this amounts to around 250 – 350 tonnes per trip. Crawlers and wheel loaders are also available in "XXL" size.



LIEBHERR Mining Excavator R 9300 in Australia (© LIEBHERR)

Even at first glance, you can see that the mining equipment is not only larger, but also much more robust and rustic than an excavator we know from classic construction sites.

But is it their size alone that sets them apart from their earthmoving colleagues, also in terms of lubrication?

#### Durable, robust and yet smart

An excavator remains an excavator for the time being. The similarities between a classic earthmoving excavator and a mining excavator cannot be overlooked. In the classic case, both are driven by a diesel engine. The work hydraulics together with the slewing gear take care of the excavation and a hydrostatic traction drive ensures freedom of movement. Incidentally, the trend towards e-mobility and automation has now also arrived here. Today, fully electric excavators are also ready for the market and in use. Big and smart are therefore by no means mutually exclusive.

#### The lubricants

In principle, similar assemblies are to be lubricated in an excavator, whether in the earthmoving or mining sector. If we look at the classic oil-lubricated components of an excavator, these are mainly the diesel engine, transfer case, slewing gear, traction drives and the hydraulic system (work hydraulics and hydrostatic traction drive). For the sake of simplicity, the different systems, e.g. of wheel loaders or tippers, should not be dealt with in detail at this point.

Table 1 shows an overview of the lubricating oils used in an excavator in the earthmoving sector and, by way of comparison, in a mining excavator, followed by explanations of the principal and operational characteristics.



		_
Component	Excavator	Excavator
	"Earth movement"	"Mining"
Diesel engine	Engine oil SAE 10W-40, 5W-30 Low Ash (SAE 15W-40)	Engine oil SAE 10W-40, 5W-30 Low Ash, (SAE 15W-40)
	25 - 65 litres	150 - 350 litres
Transfer case/ slewing gear	Gear oil SAE 85W-90, API GL-5 (CLP, ISO VG 220)	Gear oil CLP/CLP HC, ISO VG 150 - 320 (SAE 80W-90/85W-140, API GL-5)
	2 - 10 litres	50 - 150 litres
Drive gear	Gear oil SAE 85W-140, API GL-5 (GL-4), CLP/CLP HC, ISO VG 220	Gear oil CLP/CLP HC, ISO VG 220 - 460 (SAE 85W-140, API GL-5)
	10 - 20 litres	50 - 400 litres
Hydraulics	Hydraulic oil HLP-D/HVLP-D ISO VG 46 (68) (HD SAE 10W-/15W-30/-40)	Hydraulic oil HLP/HLP-D, HVLP, ISO VG 100, (HD SAE 15W-40)
	50 - 1,000 litres	1000 – 10,000 litres

Low-emission and consumption-optimised engines are currently used in both sectors (emission limit values of stages IV and V). Modern engines place high demands on the quality of the engine oil. Engine oils of insufficient quality are not suitable for the operation of the exhaust gas aftertreatment systems such as particulate filters, AdBlue injection, SCR catalytic converters, nor do they achieve the expected oil change intervals. Yesterday's standard engine oils are clearly not up to the job and can lead to expensive damage.

The transmission oils used differ significantly depending on the type of transmission. In addition to the gear oils listed above, some manufacturers also use special gear oils of SAE classes 30 and 50 in their equipment, and special LS gear oils in the axles of wheel loaders.

Detergent oils are increasingly used as hydraulic fluids, which keep penetrating condensate in suspension in a finely distributed manner in order to prevent its contact with the metal surface and thus corrosion. However, this does not mean that increased water content in detergent oils cannot cause cavitation damage, for example, to axial piston pumps. Detergent hydraulic oils should therefore also not exceed a maximum water content of 0.1 percent during use.

In response to the fluctuating temperatures, multigrade oils are increasingly being used in the earthmoving sector in particular. Their optimised viscosity-temperature characteristics allow a wider temperature application range and at the same time offer energy-saving potential.

Environmentally friendly hydraulic fluids have been used in construction machines for several decades in addition to classic hydraulic oils. These hydraulic fluids, known simply as bio-oils, must fulfil special environmental requirements in addition to the technical ones, for example in terms of biodegradability, ecotoxicity and sustainability.

#### Earthmoving and mining: The difference

Whether construction site or quarry: Both places are dusty, depending on the weather conditions, wet, cold or hot. However, the extraction of raw materials often takes place in areas that are far from urban centres and at the same time have extreme climatic conditions.

One major difference between mining equipment and classic construction machinery (earthmoving), apart from the size and the loads to be moved, can be found in the operation: The daily duration of use.

While an earthmoving machine in Germany works around 1,000 hours per year, a mining machine can easily work eight times that! A typical mining excavator works 23 hours a day, followed by one hour of maintenance, seven days a week, all year round. This results in significantly different maintenance requirements, guaranteed machine availability and longer service life of the components and oils used.

Two examples illustrate this difference quickly and easily:

- If the hydraulic oil in an earthmoving machine is changed quite realistically after five years, this means 5,000 hours of oil usage. If the hydraulic oil in the mining excavator had been changed after the same number of operating hours, it would be less than a year and absolutely insufficient.
- The same applies to the service life of the components to be lubricated. In addition, both the costs for the components to be replaced and the downtime costs of the mining equipment are many times higher than those of the earthmoving equipment.

#### Act sustainably!

Sustainability is rightly on everyone's lips today. It's about conserving our natural resources, which are ultimately finite. Both the resources that we take from the earth for construction etc. and the resources that we need to operate the plants.

In addition to the use of sustainable lubricants, professional condition monitoring of the lubricating oils and hydraulic fluids used is a proven way of reconciling sustainability and economic requirements when operating machines and systems. A method that is increasingly used in both the mining and earthmoving sector. The main focus is on three things:

- The oil condition,
- abnormal wear trends,
- the monitoring of impurities.

This means that oils are only changed when necessary. At the same time, professional oil monitoring provides early information on irregularities, such as dirt or water ingress or other malfunctions, which in turn can significantly shorten the service life of components or even lead to unplanned machine failures.

"Think big!" also means thinking outside the box. Acting truly sustainably works best when environmental protection and economic efficiency are equally in focus. In this way, sustainable action can practically pay for itself.





#### **QUALITY MEETS PERFORMANCE**

AVIA, there is no multi behind this brand! AVIA sees itself as the independent brand in the medium-sized mineral oil and energy trade in Germany. The 31 shareholders of AVIA Deutschland GmbH are strong together. They stand for innovation and ambition when it comes to developing new products and services. In addition to a comprehensive product range, its strengths also include its SME culture: Proximity to the customer and reliability. Lubricants play an important role in AVIA's offers for its customers. "Quality meets performance" is AVIA's motto for its lubricants. With their expertise and all-inclusive analyses, OELCHECK tribologists help to ensure that this promise is more than fulfilled.



#### High-quality lubricant solutions

AVIA is a top supplier for medium-sized companies. The AVIA Lubricants division sells high-quality lubricants tailored to their applications and needs. Among other things, AVIA Automotive Lubes offers a comprehensive portfolio of engine and transmission oils for all types of passenger cars and commercial vehicles.

AVIA Industrial Lubes solve virtually any lubrication problem in a wide range of areas. The focus is not only on classic industrial lubricants, but also on products that have to withstand very specific challenges in use. Whether gas engine oils, biodegradable hydraulic fluids, lubricating greases, metalworking fluids, lubricants for the construction industry or agriculture and forestry as well as physiologically harmless H1 lubricants for the food industry – they all meet the highest demands.

#### Expertise and customer proximity

Sales and advice to customers on site are provided by the AVIA shareholders and their employees. They have extensive know-how when it comes to answering questions about the use of lubricants and lubrication challenges. Their local employees see themselves as partners to their customers and know their needs. This knowledge, in turn, is incorporated into the development of AVIA lubricants, the composition of the product portfolio and the optimisation of services related to oil.

They are regularly trained by the Application Technology department based at the headquarters of AVIA Deutschland GmbH and AVIA AG in Munich. AVIA shareholders can call on the support of Application Technology department at any time.

Everything comes together at the headquarters in Munich. From here, AVIA AG organises the supply of lubricants, the procurement of fuels and heating materials of fossil and renewable origin, and services. It also advises its medium-sized shareholders on all aspects of strategic corporate management.

#### AVIA and OELCHECK – independent and successful

Stephan Weny is Head of the Lubricants Department at AVIA Germany and appreciates the cooperation with OELCHECK:

"AVIA is successful and different! Each of our 31 partners uses AVIA's brand expertise to operate with a strong individual focus on the respective customer requirements. Corporate independence is the principle of AVIA. This is one of the reasons for the excellent fit of OELCHECK and AVIA. OELCHECK is an independent family business. At AVIA, we have been using OELCHECK's all-inclusive lubricant analyses for over 30 years and can rely on their evaluation being absolutely neutral."

#### Oil analyses - for more than satisfied customers

Change intervals depending on oil condition, condition monitoring of systems and machines, cost reduction and more sustainable management – all companies that regularly use OELCHECK lubricant analyses benefit from these classic benefits.

For AVIA, however, the market leader's analyses are not just one of its oil-related services. For the quality provider in the lubricants segment, they also play a strategically important role in terms of customer satisfaction and thus customer loyalty.



Michael Lindner, Application Technology & Product Management Industry:

"We offer our customers much more than just first-class lubricants, accompanied by all-inclusive analyses from OELCHECK. We get the maximum benefit from the analyses. This is directly beneficial to our customers, who appreciate it!"

AVIA works closely with OELCHECK's tribologists to achieve this additional performance. This involves a lot of detailed work, but the effort pays off.

#### Product development and benchmarking

That's where it all starts. Does a new product fit? How does it perform compared to the already established own varieties and products of the competition? The support of OELCHECK tribologists is often required to answer these questions.

#### Current reference values

Whenever a lubricant is added to the AVIA portfolio or the formulation of an existing grade is changed, a reference analysis is commissioned from OELCHECK. This ensures high accuracy in the evaluation of future used oil analyses.

#### **AVIA uses LAB.REPORT**

If AVIA product samples are analysed in the OELCHECK laboratory, the laboratory report is stored in the LAB.REPORT customer portal. The service allows AVIA shareholders and AVIA Munich to access the results data at any time and anywhere.

The laboratory reports from OELCHECK tribologists enable:

#### Assessment of condition and performance

What is the condition of a lubricant or operating fluid? Can it still he used?

Can the use of a hydraulic fluid be extended by maintenance measures, such as additional filtration? Are there any signs of contamination, mixing or even wear of components? Expertise is required to answer these questions. Compliance

Expertise is required to answer these questions. Compliance with the company's own OELCHECK limit values and those of the OEMs must be observed.

#### Sustainability and economic efficiency

If the analyses of a lubricant are carried out regularly, trend analyses can be created on the basis of the collected data. With regular lubricant analyses, relubrication and oil change intervals can be optimised and machine downtime minimised. As a result, the costs for system maintenance and lubricant replacement are reduced. Reduced consumption of fresh oils and greases also improves the operator's CO<sub>2</sub> footprint.

#### In the event of an incident

AVIA samples are usually analysed routinely. However, OELCHECK also provides support in special cases, such as:

- the condition assessment of gas engines that are to be converted to another gas engine oil,
- the investigation of causes, such as technical failures, when the possible involvement of the lubricant or operating fluid must also be considered,
- the clarification of handling errors, such as mix-ups or mixtures of products or incorrect storage.
- → However, whether routine analysis or clarification of complex cases the OELCHECK tribologists take a neutral view of each individual case and support the shareholders of AVIA and their customers with their all-inclusive analyses and expertise.

AVIA AG and AVIA Deutschland GmbH promote the sale of AVIA brand products on the German market. At the same time, they offer services in the field of energy production and services. AVIA Deutschland GmbH comprises 31 shareholders. The head office is located in Munich.

www.avia.de

## **EGYM WELLPASS FOR OELCHECK EMPLOYEES**

#### **SPORT AND WELLNESS FOR EVERY TASTE**

OELCHECK employees benefit from many smart benefits! The EGYM Wellpass is a new addition. This means that employees now have access to a large number of high-quality gyms, special sports courses, wellness programmes and individual training plans. They can even visit the nearby thermal baths in Bad Aibling at a significantly reduced price with the Wellpass.

OELCHECK provides a large financial contribution for all employees participating in the EGYM Wellpass. EGYM Wellpass partners cover all sporting needs and preferences. With the Wellpass app, more than 6,500 live and online courses can also be accessed anytime and anywhere.

Sport, relaxation and a healthy diet contribute significantly to the physical fitness and mental strength of OELCHECK employees.



In addition to the new EGYM Wellpass, they benefit from the company's own modern fitness room with various sports courses (yoga, back training and HIIT), a massage programme and special health days. In addition, they can enjoy a freshly cooked lunch based on regional products every day in the cafeteria.



## OELCHECK REDUCES ITS OWN CO, FOOTPRINT BY 10%

The all-inclusive analysis kits from OELCHECK help companies determine the optimal time for their oil change. Thanks to extended oil usage times, they can significantly reduce their  ${\rm CO}_2$  footprint! But we not only support our customers in operating as sustainably as possible, we also set strict standards for ourselves.

Since 1999, we have been monitoring any environmental impacts of our activities with our environmental management system in accordance with DIN EN ISO 14001. Although OELCHECK is not a manufacturing industrial company with high  ${\rm CO_2}$  emissions, we have had our  ${\rm CO_2}$  footprint regularly calculated annually by an in-

dependent institute since 2019. All CO<sub>2</sub> emissions are included, regardless of whether they were caused by us or indirectly through purchased products and services. Everything is scrutinised and we try to improve year on year, which is not always easy, as we are already at a very high level.

Now we have managed to reduce our  $\mathrm{CO}_2$  emissions by as much as 10% with a single measure! Once again, we have taken a critical look at all indirect emissions arising from our company's upstream and downstream value chain. And we have hit the bull's eye! We need about 50 tonnes of argon per year. The non-flammable, non-toxic noble gas is an indispensable aid, especially when analysing elements using ICP and for many other tests in the OELCHECK laboratory. Argon, like oxygen and nitrogen, is extracted from the atmosphere by means of large air separation plants and high energy requirements.

So far, our CO<sub>2</sub> balance has been burdened by around 60 tonnes per year by argon alone. There were no alternatives to consider. But then we found an unbeatable alternative with "Green Gas". Only renewable energies are used to extract the "green air gases", argon, oxygen and nitrogen.

We switched to  $CO_2$ -neutral argon immediately. Our tank is now regularly filled with "green argon" and our  $CO_2$  footprint is reduced by a remarkable 10% annually!





#### **SENIOR MEETING AT OELCHECK**

Everything is even more fun together! In line with this motto, OELCHECK invited senior citizens from Brannenburg, Degerndorf and Flintsbach to a social afternoon. On Thursday, 13 February, our guests arrived in the OELCHECK cafeteria on time and were in a good mood. Managing Director Paul Weismann greeted everyone personally and spent the entire afternoon with the guests together with Barbara and Peter Weismann, the founders of OELCHECK.

We were already chatting and laughing over lunch together. The 4 Hinterberg musicians from the Inntal valley created a magnificent atmosphere. With their lively and familiar melodies, they invited the audience to sing along and sway. The fabulous afternoon ended with coffee and cake. Time passed far too quickly, but the heartwarming hours at OELCHECK will remain in everyone's memory for a long time to come.



It was touching for us to see how happy the senior citizens were about our campaign. During our discussions together, many of them even had tears in their eyes. People who can no longer or only very rarely leave their home are quickly overwhelmed by so much attention. Due to the consistently positive afternoon, we have decided to invite the senior citizens of the surrounding communities to a regular senior citizens' meeting at OELCHECK.











## AFTER THE DEVASTATING FLOOD OF 2024

**AN UPDATE** 

After heavy rain and flash floods, nothing worked at OELCHECK for a short time in June 2024: Masses of water had entered the basement rooms, flooded our servers, among other things, and brought the entire operation to a standstill. Fortunately, land was in sight after a few days, not least thanks to the energetic help of our employees. We were able to work normally again. It seemed almost like a miracle to us!

The rooms affected by the flood were guickly cleared out. But only then did the enormous extent of the damage became apparent. We soon realised: Simply replacing servers and equipment and repairing the damage to the building that wasn't enough. We also had to take measures to protect our company from such a potentially recurring event. The individual points were implemented as quickly as possible:

#### + Building: Basement, windows and workshop

If water had penetrated through some basement windows in June 2024, these were now fitted with fixed glazing or replaced with floodproof basement windows at critical points. And for emergencies, submersible pumps are now always ready for use in the basements of all buildings. Plus long hoses, sandbags and boards.

Among other things, the test equipment for carrying out long-term examinations, such as two TOST, five RPVOT and one corrosion protection test, was housed in the basement rooms. After the complete destruction of this basement laboratory, replacement equipment had to be procured, the rooms renovated and their media supply and exhaust systems reinstalled. All the work has now been completed.

Our caretaker's workshop had also become unusable due to the flood. The renovation work has also been completed here. The new workshop shines in fresh splendour.

#### + IT: New servers and enhanced protection

Some of our servers had been completely destroyed by the flood. In a first step, these were replaced at short notice. We also installed the critical servers in locations other than the basement rooms. The server cabinets are positioned up to 150 cm above the floor. The temperature and humidity of the systems are now permanently monitored digitally.

Now our servers and the associated installations are as well protected as possible against the effects of a new flood. All our IT equipment is technically state of the art. Through fundamental changes to the IT structure, we have significantly increased failure and backup security. OELCHECK is now even better protected against operational failures and/or data loss due to cyberattacks.

#### Blackout: We take precautions!

We already cover a large part of our electricity requirements ourselves with our photovoltaic systems. We are currently looking into increasing the capacity and also installing an emergency power

#### + The duct system: Municipal support

The duct system is theoretically designed for heavy rain. In the summer of 2024, however, water masses from the surrounding area were also added, causing the system to overflow. The municipality has already responded to this. The protective trenches near our buildings were dredged and better reinforced.

→ In short, Should our company once again be threatened by heavy rain and flash floods, the impact will not be as devastating as in summer 2024. We have done our best!

#### This was what it looked like in our basement in June 2024...













#### the renovation work is now complete











## FROM OIL SAMPLE TO ANALYSIS – HOW WE ENSURE THE HIGHEST QUALITY

In the last OELCHECKER, you reported on the importance of taking an oil sample from the machine or system correctly. What happens when our oil samples reach the OELCHECK laboratory?



An ideal oil sample is representative of the "living" system. Only then can it reliably provide information about the oil condition, the content of wear particles and any contamination.

The same applies to the way in which the sample is received and prepared before it is released for the upcoming laboratory tests.

Particularly important:

- The sample must not be contaminated and components must not be "lost".
- The subsamples to be taken for the individual tests must be representative of the total volume submitted.

These requirements apply throughout the sample's entire path through our laboratory – from receipt to the final measurement.

## Structured process in the laboratory - from incoming inspection to analysis

The first step in the incoming inspection is to check that the sample container is undamaged. Customers' own containers are documented photographically. If there are any uncertainties about the desired scope of testing or if there are special questions, our OELCHECK tribologists are consulted – if necessary also in direct dialogue with the customer.

In the laboratory, the actual sample processing begins with homogenisation. Particles or water may have settled on the floor during transport. A specially designed automatic overhead shaker takes care of this task, processing up to 80 samples per cycle. With up to 2,000 samples per day, this would hardly be possible manually!

However, the main advantage of the machine process lies in standardisation: The samples are always homogenised according to defined parameters – an essential step for the reproducibility of the analysis results.



#### Quality assurance at the highest level

But homogenisation at the beginning is only the start. Before each individual test, our procedural instructions specify exactly how to re-homogenise and what sample quantity is to be taken. In automated processing, these processes are firmly integrated into the routines of our automatic filling machines or sample changers.

This precise process is complemented by our tightly meshed QA system: This includes internal test standards, regular monitoring of test equipment, regular calibration procedures and participation in interlaboratory tests.

#### Visit us - virtually or live!

Would you like to see our high quality standards for yourself? No problem! You can find a virtual laboratory tour on our website (www.oelcheck.de/labour).

Even better: Visit us in person – for example as part of a seminar at the **OilDoc Academy** or at the very special highlight, which only takes place every two years: The **OilDoc Conference** from 13 to 15 May 2025. You can look forward to over 400 participants, 70 excellent specialist presentations, workshops and discussions with recognised experts – and unique opportunities to expand your specialist knowledge and network.

OELCHECK also answers your questions on the topics of lubricant and fuel analyses as well as tribology.

Contact us by e-mail at info@oelcheck.de or by fax on +49 8034 9047 47.

















## **COME AND MEET US!**

In 2025, as every year, we will also be actively involved at many international trade fairs and conferences! We look forward to a lively exchange with you on site. You are welcome to arrange a meeting with us in advance (sales@oelcheck.com). Or just drop by our stand at the trade fairs!



07-09/05/2025 | Innsbruck, AT



13-15/05/2025 | Rosenheim



18-22/05/2025 | Atlanta, USA



16-19/09/2025 | Husum



16-18/09/2025 | Düsseldorf



29-30/10/2025 | Munich



From 12 to 14 February 2025, an elite circle from the world of base oils and lubricants met in London. The presentations primarily focussed on how their market will develop in the coming years. What strategies can be used to turn the challenges of the market into opportunities for growth?

The latest technologies, the possibilities of digitalisation, the innovations in industrial lubricants and their sustainable use as well as their marketing were discussed.

Petra Bots, Managing Director of OELCHECK GmbH, actively contributed to the conference. She gave a practical presentation on the topic of "Practical marketing strategies for success in the lubricant industry". She provided insights into the effective marketing of OELCHECK, focusing on the special challenges in the lubricant and condition monitoring industry for a medium-sized family business.

The topic of ensuring the quality of lubricants was then discussed in an interview conducted by Petra Bots with Paul Norris, Senior Scientist R&D at Afton Chemical. Paul Norris commented in detail on Petra Bots' questions and clearly explained "The relevance of test standards in the development of lubricants".



For over two decades, Gertraud Rederer has accompanied the development of our company in many positive but also challenging moments. Even when things get really turbulent - Gerti is there. Calm, focused and always solution-oriented, she has contributed and continues to contribute to the success of OELCHECK. She is loyal to the management, a popular colleague in the team.

It is a great pleasure for everyone to work with Mrs Rederer. We would like to thank her for her great commitment over all the years, her great dedication and her absolute reliability!

Gertraud Rederer started her career at OELCHECK in 2005! Initially, she worked as a clerk. Today, she is the indispensable assistant to the management. She is always at the centre of the action and manages a wide variety of tasks.

20 YEARS AT OELCHECK - A BIG THANK YOU TO GERTRAUD REDERER



Hoyer has it in black and white: With the company's own Finke Mineralölwerk GmbH, the production, storage and logistics of AdBlue® is officially certified by the VDA (Verband der Automobilindustrie e.V. (German Association of the Automotive Industry)). In 2011, Hoyer was one of the first companies to pass this audit. The requirements are reviewed every three years, with the company headquartered in Visselhövede, Lower Saxony, regularly achieving top marks. The requirements of ISO 22241 have been reliably met at all times since 2011. OELCHECK all-inclusive analyses make a decisive contribution to this.

#### Quality is what counts

Certification by the VDA not only relates to the production of Ad-Blue® in accordance with the quality defined in ISO 22241-1. Hoyer is also obliged to monitor the entire distribution chain and ensure that AdBlue® is not contaminated with other substances during transport or packaging.

AdBlue® is manufactured in the company's own plant in Bremen, among other places. At the nearby company headquarters, Hoyer has a high tank farm for the urea solution with a volume of several hundred thousand litres and fully automatic filling lines. There are also other storage units throughout Germany.

Hoyer is now one of the largest distributors of AdBlue® in Germany. With its own fleet of calibrated stainless steel tankers, which are specifically approved for transporting the urea solution, the company ensures a comprehensive supply of bulk goods in Germany and abroad. AdBlue® can be refuelled from the pump at many of the company's more than 275 filling stations and truck stops. Hoyer delivers AdBlue® directly to customers with higher requirements in tankers, containers, drums or pallets with small containers. Alternatively, these can also be purchased at filling stations or in the online shop.

#### Seemless monitoring and traceability

Before AdBlue® from Hoyer reaches customers, every litre is checked several times. This applies to the seamless inspection of incoming goods as well as the consistent inspection of the numerous warehouses in Germany and the tankers. The company's own laboratory checks whether the components of a batch definitely comply with the specifications of ISO 22241-1. But it doesn't end there. For batch traceability, ISO 22241 also requires regular quality checks by accredited laboratories.

OELCHECK provides valuable assistance in this, as well as in sampling campaigns for warehouses and tankers.



Incoming goods inspection in Hoyer's laboratory

OELCHECK all-inclusive analysis kits for AdBlue® are the ideal tool for this. They are used to determine all key data of ISO 22241-1. These include:

- Values such as urea concentration, pH value, density, amount of insoluble foreign substances and alkalinity.
- Precise information about the elements contained in AdBlue® and thus also about potential catalyst poisons, such as biurets and aldehydes as well as non-ferrous and/or alkaline/earth alkali metals.

All values of all AdBlue® analyses carried out by OELCHECK are carefully documented and can be accessed at any time. Even if a customer has a query about one of the batches, proof of the quality of the delivered goods can be provided immediately at any time.

#### Hoyer - independent player in the energy industry

With around 2,500 employees, Hoyer is one of the largest medium-sized and independent family businesses in the energy industry in Germany.



The traditional trade and distribution of heating oil, liquid gas, diesel and other products from the heating and mobility sectors has been expanded continuously over the years. LNG, bio-LNG, HV0100 and future fuels have long been part of the large portfolio, as have wood pellets and briquettes based on renewable raw materials. The provision of PV systems, electricity storage systems and charging infrastructure for the electrification of vehicle fleets also support customers on the road to a more sustainable economy.

The company's own Finke Mineral Oil Plant develops, produces and distributes high-quality lubricants for the national and international market. As Chevron's exclusive sales partner, Hoyer also has access to Texaco's full product range. And as European Master Distributor of the American Lubriplate Lubricants Company, Finke and Hoyer are also a competent partner in the field of food lubricants.

OELCHECK has been a companion of the company for many years and, in addition to AdBlue®, also analyses gas engine oils, hydraulic fluids, turbine and compressor oils, coolants and fuels as required.

#### Comprehensive and reliable supply

Guaranteed security of supply is a decisive factor in all areas. Hoyer has access to a comprehensive network of tank farms and a company-owned fleet of 1,300 vehicles to deliver heating, fuel, lubricants and operating fluids to customers at any time. Eight tankers belong to the company and are used for ship refuelling and supplying the tank farms. More than 275 of our own filling stations and truck stops are distributed throughout Germany. With the Hoyer Card, this network is complemented by a large network of partner filling stations of more than 5,000 stations in Germany and abroad. The company's own fuel card has been expanded to a full-service card and offers, for example, a toll service for Germany and other European countries as well as, in combination with the Hoyer app, mobile payment at the fuel pump.



Wilhelm Hoyer B.V. & Co. KG was founded in 1924 and has been consistently on a successful course ever since. The in-

dependent, family-owned company has an impressively broad product portfolio and is perfectly positioned for the challenges of the future.

www.hoyer.de

### **OELCHECK AT THE OILDOC CONFERENCE 2025**

#### LECTURES - WORKSHOPS - LABORATORY VISITS

Experience OELCHECK at the large OilDoc Conference & Exhibition from 13-15 May 2025 in Rosenheim near Munich!



#### Presentations: Current trends and new impulses

As part of the conference, OELCHECK will not only provide information on the latest developments in analytics, but also provide valuable impulses for operational practice. Our presentations that you shouldn't miss:

Element analysis for fats brought up to date: XRF, RDE-0ES or ICP-0ES Dr. Raphael Grötsch, Scientific Assistant



- Biohydraulic oils in the stress test Can the "wet" TOST test provide additional insights? Carsten Heine, Head of Tribology
- Contribution of lubricant analysis to cost-efficient and sustainable machine management
   Stefan Mitterer, Head of Technology, Service & Sales
- Extended oil change intervals Rainer Schöpf, tribologist
- Switching from conventional to low-conductivity coolants in the electric battery
   Matthias Aßmann, tribologist



Workshops: Know-how for your daily practice

Our workshop starts at 9:30 a.m. in German.

in 20 minutes.

Fully utilise the potential of lubricant and operating fluid analyses – this is how you define sensible test scopes.

Dr Andrea Schreiner, tribologist & Matthias Aßmann, tribologist

At 11:30 the workshop will be repeated in English.



#### Laboratory tours: Lubricant analysis live

In parallel to the workshops, guided tours of the OELCHECK laboratory will take place on Thursday 15 May. There is no other laboratory like OELCHECK in Europe. Experience how we analyse lubricating oils and greases, coolants, AdBlue and other operating fluids and evaluate the results.

The laboratory tours and workshops are included in the fees for the OilDoc conference. However, your participation and, if applicable, a seat in the shuttle bus must be registered in the OilDoc conference app!

On all days of the OilDoc conference, we will also be there for you at our trade fair stand in the foyer of the KU'KO.

The detailed conference programme can be found on the following pages.

# www.oildoc-conference.com

#### OilDoc Conference - Event Program 2025 State: April 2025. Subject to change.

	nce – Event Program 202	State: April 2025. Subject to change.		
<b>DAY 1 – TUESDAY, MA</b> 09.00 am – 10.00 am		(OilDoo)		
09.00 am - 10.00 am	Opening: Petra Bots & Rüdiger Krethe (OilDoc) Plenary lecture: The business case Sustainability – Between challenges and opportunities			
	Senator Apurva Gosalia   Fokus Zukunft Gn		opportunities	
10:00 am - 10:30 am	Coffee & Snacks			
	Hall 1	Hall 2	Hall 3	
10:30 am – 12:30 am	GREASES & GREASE ANALYSIS  Modelling of oil separation from lu-	LUBRICANTS – HEALTH & ENVIRONMENT Lubricants: Update on legal & health	VARNISH MITIGATION  Correlation between lube oil	
	bricating greases with the equation	aspects	condition & bearing temperatures	
	of Carman and Kozeny	Dr. Stefan Baumgärtel	Greg Livingstone	
	Gizem Balkiz Ibishükcü	VSI Verband Schmierstoff-Industrie e.V.	Fluitec US	
	Carl Bechem GmbH <b>Elemental analysis in greases upda-</b>	High-alloyed screws – Chromium-VI	High thermal stress turbine oil speci-	
	ted: XRF, RDE-OES or ICP-OES?	formation	fications for modern gas turbine	
	Raphael Grötsch	Rüdiger Schiffer	engines	
	OELCHECK GmbH	OKS Spezialschmierstoffe GmbH	Dr. Ludger Quick   FLUITEC	
	Criteria based grease analysis screening and advanced sampling	PFAS-free lubricants – new opportunities considering regulation	Special features of high tempera- ture oxidation – consequences for	
	techniques	Dr. Eugenia Elzer	varnish detection and mitigation	
	Richard N. Wurzbach   MRG Labs	Setral Chemie GmbH	Rüdiger Krethe	
	Madawa Cuasaa anahusia in industrus	A look at the weepen sheir what	OilDoc GmbH	
	<b>Modern Grease analysis in industry</b> Wojciech Jewula	A look at the process chain – what comes after metalworking and	Improving production of heat transfer fluid systems with solvency	
	ECOL Sp. z.o.o.	forming? Focus on cleaning and	enhancers	
	·	corrosion protection	Jo Ameye	
40.00		Kerstin Zübert I Hermann Bantleon GmbH	Fluitec NV	
12:30 am - 02:00 pm 02:00 pm - 03:30 pm	Lunch OIL ANALYSIS METHODS	LUBRICANTS & ENVIRONMENTAL ASPECTS	OA MANAGEMENT & DIGITALISATION	
02.00 μπ – 03.30 μπ	Oxidation revealed: A deep dive into	Biohydraulic oils in stress test – Can	Digitalization in lubrication –	
	TOST testing	the "Wet" TOST test provide additio-	Future proof standards and concept	
	Vincent Bouillon	nal insights?	implementation using state of the	
	Eurofins BfB Oil Research S.A.	Carsten Heine   OELCHECK GmbH	art technology and Al support Wojciech Majka   ECOL Sp. z.o.o.	
	Laboratory methods for evaluating	On razor's edge: Balancing perfor-	Smart and reliable gearbox monito-	
	the performance and optimization of	mance and sustainability for next-	ring: Driving digitalization to prevent	
	<b>hydraulic oils in industrial equipment</b> Christoph Schneidhofer	<b>generation hydraulic fluids</b> Dr. Leon Maser	major downtime Andreas Busch   Alexander Landes	
	AC <sup>2</sup> T research GmbH	Addinol Lube Oil GmbH	Hvdac	
	The effect of temperature variation	High Performance Biodegradable	Digital transformation in lubricant	
	on NIR prediction results	Lubricants	monitoring: Data mining and Al rea-	
	Dr. Nicolas Rühl Metrohm AG	Giuseppe Forastiero Shell Italy Oil Products S.r.l.	diness for modern organizations Ferenc Pall I MOL-LUB Ltd.	
03:30 pm - 04:00 pm	Coffee & Snacks	Sileli Italy Oil Floudets 3.1.1.	referic Fall I MOL-LOB Ltd.	
04.00 pm – 06:00 pm	OIL SENSORS	LUBRICANTS & LUBRICATION	SUSTAINABILITY & ECONOMICS	
	Online monitoring of total water	Fluid solutions – Innovative and su-	Cost reduction with high perfor-	
	contamination in lubricants com- bining NIR moisture sensors and	stainable industrial oil concepts Wolfgang Bock	mance lubricants Dr. Frank-Olaf Mähling	
	optical imaging particle detection	Fuchs Lubricants Germany GmbH	Evonik Operations	
	Eneko Gorritxategi IAtten2	·	·	
	Oil condition monitoring using multi-	Development of vacuum lubricants	The contribution of lubricant analy-	
	functional compact near-infrared spectroscopic sensor	for contamination sensitive environ- ments	sis to cost efficient and sustainable machine management	
	Dr. Kyoko Kojima	Fabian Schüler	Stefan Mitterer	
	Hitachi Ltd	Materiales GmbH	OELCHECK GmbH	
	The impact of oil additives on oil	Lubrication challenges and bearing	Concept and process for cleaning	
	<b>electrical conductivity</b> Dr. John K. Duchowski,	failures in screw compressors for hydrogen and methane gas trans-	oil-contaminated machine con- densate in power plants – a best	
	Hydac FluidCareCenter GmbH	port	practice report	
		Dr. Maria Valentne Sutyinszki I MOL-LUB	Anna Krein I Optioil GmbH	
		Impact of the lubricating oil che- mistry on the knock sensitivity of a	Heat transfer fluid recycling – practical experience	
		gas engine running on hydrogen	Vit Henych	
		Luis Rodriguez	CLASSIC Oil s.r.o.	
		Petro-Canada Lubricants Inc.		
6:00 pm – 8:00 pm	COME TOGETHER - ZWICKL RECEPTION			

DAY 2 – WEDNESDAY, N	Hall 1	Hall 2	Hall 3
09:00 – 10:30 am	OIL ANALYSIS METHODS	WIND POWER LUBRICATION	TURBO EQUIPMENT MANAGEMENT
5.00 TO.00 am	Oil Condition Monitoring (OCM) with	Assessment of blade bearing	Turbine oil management & handling i
	FTIR spectroscopy – Comparison,	greases performance with water	refineries
	challenges and solutions	contamination and grease mixtures	Michael Grill
	Christoph Schneidhofer	Ulf Rieper	OMV Refining & Marketing GmbH
	AC <sup>2</sup> T research GmbH	Shell Deutschland GmbH	OWN Hellilling & Marketing dribin
	Comparing new ASTM methods for	Case analysis of wind turbine gear-	Lessons learned for lubricant system
	FTIR analysis of fluid condition	box lubrication failure	in gas turbines
	David Swanson	Yesid Antonio Gomez	Dr. Bernhard Persigehl
	POLARIS Laboratories	Bureau Veritas Spain, OCM	Experten-Zentrum für Technik
	New infrared absorption method for	Damage prevention in main bearings	Synergistic approaches: Integrating
	field instruments	and gearboxes – Don't give WECs	vibration, oil analysis, and varnish
	Matthias Winkler	(white etching cracks) a chance	analysis for enhanced gas turbine
	CM Technologies GmbH	Stefan Bill	performance and maintenance
	OW Teelinologies ambit	Rewitec GmbH	Jorge Alarcon
		Tiewitee diffibit	Bureau Veritas Spain, OCM
0:30 am - 11:00 am - <b>Co</b>	ffee & Snacks		Dureau Veritas Spairi, OOW
1:00 am – 12:30 pm	COOLANTS & ANALYSIS	LUBRICANTS & LUBRICATION	CONTAMINATION CONTROL
1.00 am 12.00 pm	The shift from conventional to low-	Influence of operating parameters	Defining the right contamination
	conductivity coolants in battery	on the oxidation rate of gear oils in	control strategy
	electric	real operation	Guido Bertels
	Matthias Aßmann	Dr. Lukas Hafner	DES-CASE
	OELCHECK GmbH	Evamo Pump Technology Solutions PS GmbH	DL3-OAGL
	Wire corrosion and conductive layer	Evalue Fullip recritiology Solutions F3 Giribit	Race for clean oil –
	deposits: The development of bench		oil filter efficiency tests
	test technology for electric vehicle		Steffen D. Nyman
	drivetrains		C.C. Jensen A.S
	Greg Miiller I SAVANT Inc.		C.C. Jeliseli A.S
	Coolant analysis: A key to complete	Optimal lubrication of roller chains	Oil cleanliness: Key element to asse
	asset management	& conveyor chains	reliability
	Emily Featherston	Alexander Frankenstein	Saeed Asiri
	PULARIX LANORAINHAGER	I FR Ketten Handelsgesellschatt mhH	Sahic
12·30 nm = 02·00 nm = <b>1 1</b>	POLARIS Laboratories®	FB Ketten Handelsgesellschaft mbH	Sabic
12:30 pm – 02:00 pm – <b>Lu</b> 02:00 pm – 03:30 pm	ınch	, and the second se	
2:30 pm – 02:00 pm – <b>Lu</b> 2:00 pm – 03:30 pm	OIL SENSORS II	MWF & CLEANING	OIL ANALYSIS & MANAGEMENT
	OIL SENSORS II Inline viscosity sensors - Guidelines	MWF & CLEANING Process element cooling lubricant –	OIL ANALYSIS & MANAGEMENT Extended oil change intervals
	OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation	MWF & CLEANING Process element cooling lubricant – a comparison in performance	OIL ANALYSIS & MANAGEMENT  Extended oil change intervals  Rainer Schöpf
	OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer	MWF & CLEANING Process element cooling lubricant – a comparison in performance Anna Hillmann	OIL ANALYSIS & MANAGEMENT Extended oil change intervals
	Inch OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH	MWF & CLEANING Process element cooling lubricant – a comparison in performance Anna Hillmann Hermann Bantleon GmbH	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH
	Inch OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field	MWF & CLEANING Process element cooling lubricant – a comparison in performance Anna Hillmann	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH Condition-based oil sampling – Usin
	Inch OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH	MWF & CLEANING  Process element cooling lubricant — a comparison in performance Anna Hillmann Hermann Bantleon GmbH Ranking of tribological performances of water-based coolants	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling – Using data to determine oil analysis testing
	Inch  Oll SENSORS II  Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field applications of a multiparameter oil condition sensor	MWF & CLEANING Process element cooling lubricant – a comparison in performance Anna Hillmann Hermann Bantleon GmbH Ranking of tribological perfor-	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH Condition-based oil sampling – Usin
	Inch OIL SENSORS II Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field applications of a multiparameter oil condition sensor Jeffery Lubkowski	MWF & CLEANING  Process element cooling lubricant — a comparison in performance Anna Hillmann Hermann Bantleon GmbH Ranking of tribological performances of water-based coolants and metalworking fluids Dr. Ameneh Schneider	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling – Usindata to determine oil analysis testir frequency Lisa Williams
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	Inch  Oll SENSORS II  Inline viscosity sensors - Guidelines for successful implementation  Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH  Asset health insights from In field applications of a multiparameter oil condition sensor  Jeffery Lubkowski Poseidon Systems LLC, U.S.  Value proposition & interplay of inline	MWF & CLEANING  Process element cooling lubricant — a comparison in performance Anna Hillmann Hermann Bantleon GmbH Ranking of tribological performances of water-based coolants and metalworking fluids Dr. Ameneh Schneider Optimol Instruments Prüftechnik GmbH Monitoring and maintenance of	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling – Usindata to determine oil analysis testir frequency Lisa Williams Spectro Scientific Ametek Case study of oil condition monitori
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2:00 pm – 03:30 pm 3:30 pm – 04:00 pm – <b>C</b> o	Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field applications of a multiparameter oil condition sensor Jeffery Lubkowski Poseidon Systems LLC, U.S. Value proposition & interplay of inline versus lab analysis Dr. Carsten Giebeler Spectrolytic GmbH	MWF & CLEANING  Process element cooling lubricant – a comparison in performance  Anna Hillmann  Hermann Bantleon GmbH  Ranking of tribological performances of water-based coolants and metalworking fluids  Dr. Ameneh Schneider  Optimol Instruments Prüftechnik GmbH  Monitoring and maintenance of working fluids using specialized devices: Practical experiences Peter Sebok Tribology Ltd.	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling — Usindata to determine oil analysis testir frequency Lisa Williams Spectro Scientific Ametek Case study of oil condition monitori — A practical and effective software solution for everything from planning sampling to managing corrective actions Thomas Feischl   eralytics GmbH
2:00 pm - 03:30 pm 3:30 pm - 04:00 pm - <b>C</b>	Inch  Oll SENSORS II  Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field applications of a multiparameter oil condition sensor Jeffery Lubkowski Poseidon Systems LLC, U.S. Value proposition & interplay of inline versus lab analysis Dr. Carsten Giebeler Spectrolytic GmbH  Offee & Snacks  OIL SENSORS III	MWF & CLEANING  Process element cooling lubricant — a comparison in performance  Anna Hillmann  Hermann Bantleon GmbH  Ranking of tribological performances of water-based coolants and metalworking fluids  Dr. Ameneh Schneider  Optimol Instruments Prüftechnik GmbH  Monitoring and maintenance of working fluids using specialized devices: Practical experiences Peter Sebok Tribology Ltd.	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling — Usindata to determine oil analysis testir frequency Lisa Williams Spectro Scientific Ametek Case study of oil condition monitori — A practical and effective software solution for everything from planning sampling to managing corrective actions Thomas Feischl   eralytics GmbH
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2:00 pm – 03:30 pm 3:30 pm – 04:00 pm – <b>C</b> o	Inline viscosity sensors - Guidelines for successful implementation Dr. Alexander O. Niedermayer Micro Resonant Technologies GmbH Asset health insights from In field applications of a multiparameter oil condition sensor Jeffery Lubkowski Poseidon Systems LLC, U.S. Value proposition & interplay of inline versus lab analysis Dr. Carsten Giebeler Spectrolytic GmbH  Offee & Snacks  OIL SENSORS III The bearing as measurement device for lubricant testing and condition	MWF & CLEANING  Process element cooling lubricant — a comparison in performance  Anna Hillmann  Hermann Bantleon GmbH  Ranking of tribological performances of water-based coolants and metalworking fluids  Dr. Ameneh Schneider  Optimol Instruments Prüftechnik GmbH  Monitoring and maintenance of working fluids using specialized devices: Practical experiences  Peter Sebok  Tribology Ltd.  LAB AUTOMATION  Fast screening of wear regimes using an automated Four-Ball setup	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling — Usindata to determine oil analysis testir frequency Lisa Williams Spectro Scientific Ametek Case study of oil condition monitori — A practical and effective software solution for everything from plannin sampling to managing corrective actions Thomas Feischl   eralytics GmbH  LUBRICATION MANAGEMENT Enhancing lubricant performance with Alkylated Naphthalene
2:00 pm – 03:30 pm 3:30 pm – 04:00 pm – <b>C</b> o	Inline viscosity sensors - Guidelines for successful implementation  Dr. Alexander O. Niedermayer  Micro Resonant Technologies GmbH  Asset health insights from In field applications of a multiparameter oil condition sensor  Jeffery Lubkowski Poseidon Systems LLC, U.S.  Value proposition & interplay of inline versus lab analysis  Dr. Carsten Giebeler Spectrolytic GmbH  Offee & Snacks  OIL SENSORS III  The bearing as measurement device for lubricant testing and condition monitoring	MWF & CLEANING  Process element cooling lubricant — a comparison in performance  Anna Hillmann  Hermann Bantleon GmbH  Ranking of tribological performances of water-based coolants  and metalworking fluids  Dr. Ameneh Schneider  Optimol Instruments Prüftechnik GmbH  Monitoring and maintenance of working fluids using specialized devices: Practical experiences  Peter Sebok  Tribology Ltd.  LAB AUTOMATION  Fast screening of wear regimes using an automated Four-Ball setup  Dr. Richard Baker	OIL ANALYSIS & MANAGEMENT Extended oil change intervals Rainer Schöpf OELCHECK GmbH  Condition-based oil sampling — Usindata to determine oil analysis testinfrequency Lisa Williams Spectro Scientific Ametek Case study of oil condition monitori — A practical and effective software solution for everything from plannin sampling to managing corrective actions Thomas Feischl I eralytics GmbH  LUBRICATION MANAGEMENT Enhancing lubricant performance with Alkylated Naphthalene Luka Jazbec
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#### Contact

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10/02/26

26-26/02/26

03-05/03/26

17-18/03/26

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21-22/05/25	Lubrication and oil monitoring for combustion engines
03-04/06/25	Fundamentals of lubricant application II  Module II in the "Certified Lubricant Expert" series. Can be booked individually.
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