



SEASON'S GREETINGS

Looking back on 2023, there are many reasons to be impressed with the WearCheck team. We opened new laboratories in Kathu (South Africa) and a second lab in India (Durgapur), we moved our Johannesburg laboratories to new premises, and reopened our Tete lab in Mozambique.

We are proud of the achievement by our asset reliability care (ARC) division's technical and training manager, Louis Peacock, who officially became Africa's first CAT IV instructor in January. Additionally, our ARC team won awards for great service at a major customer. And our technical manager, Steven Lumley, won a prestigious award from the South African Institute of Tribology (SAIT).

Many new, talented staff members joined the WearCheck family this year, empowering us to extend the scope of the varied condition monitoring services we offer.

Our customer training courses continue to be ever popular, with positive reports from customers who note an improved ROI from their condition monitoring investment.

Without the commitment and dedication from each and every one of our staff members, none of these amazing achievements, and many other positives, would be possible – thank you for the great teamwork. And to our valued customers, we remain grateful for your ongoing support.

On behalf of the WearCheck team, I wish you all a safe, relaxing and happy Festive Season, and may you have a successful 2024.

FESTIVE SEASON OPERATING HOURS

WearCheck is committed to serving our customers all year round. We will remain open throughout the Festive Season to process samples. In South Africa, staff in WearCheck laboratories in Cape Town, Johannesburg, Durban, Kathu and Middleburg will be available to facilitate samples throughout the upcoming holiday period.

The usual operating hours apply, except for on 24th December, when we will close at lunch time.

Neil Robinson
managing director



Steven wins SAIT award



The Southern African Institute of Tribology (SAIT) held its annual awards evening in Johannesburg in November, where deserving recipients were recognised and rewarded for their achievements in the field of tribology.

We're proud to share that WearCheck's technical manager, Steven Lumley, received the Best Technical Presentation Award for her presentation on The Engine Killers.

Additionally, Dave Scott, award-winning transport journalist and WearCheck technical correspondent, was awarded the coveted Louw Alberts award for his outstanding contribution to Tribology over the years.

Henco Booysen, SAIT president, handing Steven her award.

TECHNICAL TIP: LUBE SERIES

Corrosion inhibitors – your oil’s armour against rust and more

BY STEVEN LUMLEY, TECHNICAL MANAGER

What are they?	Metal phenolates, basic metal sulfonates, fatty acids, amines, Zinc dithiophosphates.
What do they do?	Prevent corrosion and rusting of metal parts in contact with the lubricant.
How do they do it?	Preferential adsorption of polar constituent on metal surface to provide a protective film and / or neutralise corrosive acids.



Humankind has grappled with the issues of rust and corrosion for over 3,000 years – pretty much since the iron age in 1200BC when our forefathers started making tools and weapons from iron and iron alloys.

It wasn't until the 20th century, when corrosion was determined to be a chemical and electrochemical phenomenon, that real progress was made with the development of specialised lubricants with anti-rust properties.

As with many of the advancements in the lubricant industry, World War II accelerated the development of more effective oil additives, and researchers began to explore the use of corrosion inhibitors to protect metal surfaces in lubricated systems.

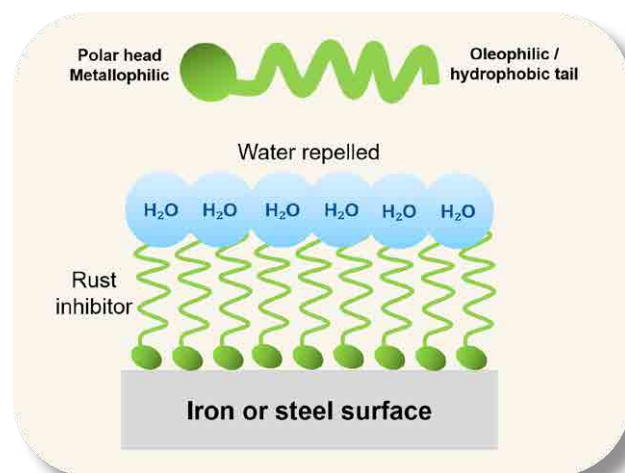
Corrosion is defined as the destructive alteration of metal by an electrochemical or chemical reaction between the metal and its environment, resulting in change and weakening of the metal's properties. All metals, with the exception of noble metals, are unstable under atmospheric conditions, which allows them to be converted into their oxidised form.

Electrochemical corrosion involves the reaction of ferrous (iron-based) metal or its alloys in a two-step process in the presence of an electrolyte, most typically water. This reaction results in the formation of iron oxide, commonly known as rust.

Chemical corrosion involves the interaction of metals with aggressive chemical species, like acids produced from the oxidation of lubricants or additive by-products, which can lead to the formation of oxidised metallic compounds and the deterioration of the metal. Unlike electrochemical corrosion, chemical corrosion does not require an electrolyte like water.

Corrosion and rust inhibitors are both used in a variety of lubricants to protect metal surfaces, but they serve slightly different purposes, in terms of the metals they protect, and may have different mechanisms of action.

Corrosion inhibitors help slow down the deterioration process in non-ferrous metals like copper and lead. These inhibitors form an inactive film on the metal surface by complexing with metallic ions at the surface. Some corrosion inhibitors also work by neutralising corrosive acids formed from oil and additive degradation byproducts.



Rust inhibitors are a specific subset of corrosion inhibitors that primarily focus on preventing rust of iron and steel surfaces.

Rust inhibitors are used in lubricant formulations to slow down corrosion of iron alloys. They function by physically adsorbing onto the metal surface. These rust busters have polar head (metallophilic) groups that attach to the metal surfaces and oleophilic hydrophobic tails that form a film to protect metal surfaces from the effects of water, acids, and air.

Be sure to catch the next instalment of the lube series in the *WearCheck Monitor*, where we will discuss the meaning of life...no just kidding, we will delve into the fascinating world of friction modifiers.



DIRTY DIESEL & IP DETECTION

There is increasingly strict legislation around the addition of IP (illuminating paraffin) to diesel, as it serves to defraud the revenue collection services of a country. It can also be harmful to an engine in the long term, so we highly recommend always using the correct diesel.

WearCheck offers various methods for testing diesel for the presence of illuminating paraffin and other contaminants,

Diesel can be subjected to a variety of chemical and physical tests in the fuels laboratory. One of the most common and important things to look for is contaminants, the most common of which are dirt and water.

Diesel can also be contaminated with other fuels and solvents, in particular illuminating paraffin, or IP, as it is known. IP is a readily available power source for domestic lighting, heating and cooking. Chemically it is very similar to diesel, but because it is used as a domestic power source, it is not subject to the taxes and levies that diesel is, in other words, it is cheaper than diesel.

The less-than-honest members of our society have taken to doping diesel with IP, and because it is so similar to (but not exactly the same as) diesel, a diesel engine will run quite happily on a relatively low concentration of IP mixture at less than the cost of diesel. Although the engine will run without problem in the short term, in the long term the IP will be quite damaging to the engine.

IP has a lower viscosity and less lubricity than diesel and will cause damage in terms of increased wear to the components of the fuel system.

Although the price difference may not be huge (about R25 for diesel and about R20 for paraffin) if you think of the thousands of litres of diesel used every day, doping diesel with ten or twenty percent paraffin represents a large cost saving for nefarious operators and significant loss of income for the revenue services (SARS).

The effects of IP contamination on diesel are that the viscosity, density and flashpoint will decrease, and the sulphur concentration will increase. IP also has a lower lubricity than diesel. Low viscosity and lubricity mean increased wear of fuel system components. Low density means you get less bang for your buck (more litres of fuel required for the same number of kilometres travelled). Low flashpoint could become a safety issue and elevated sulphur could impact the emission controls of modern engines, and increase combustion by-products being introduced into the lubricating oil, reducing its ability to lubricate the engine adequately.

Interestingly enough, small amounts of IP may not affect the properties of diesel enough for it to fail the Bureau of Standards specification SANS 342 so, IP can be present, yet the fuel will



still pass the specifications of SANS 342. In fact, IP is often legally added to diesel in small amounts by the refineries as it helps prevent the diesel from waxing (freezing) during the cold winter months in-land. Doping diesel with IP, in the long term, is not a good idea and it is also illegal.

IP Marker & Authentix

Because this type of doping represents a loss of income for SARS, they have introduced a chemical marker into illuminating paraffin sold in South Africa. The marker comes from a company in the United States called Authentix, a company that specialises in brand protection and anti-counterfeiting. This marker is added to IP at a precise concentration once the product leaves the refinery.

It is possible to test for this marker - the test kit is a lateral flow test kit, similar to those used for testing for Covid or even pregnancy. The answer is just a simple yes or no, the marker either was or was not detected. The test kit is very easy to use and takes hardly any time at all. What it cannot tell you is how much IP is present. What is important to mention, is that if the IP came from a source that was not marked, for example, from across our borders, where markers are not used, then no marker will be detected, yet the sample could still be contaminated, but not by enough to fail the other physical tests that are carried out, for example, viscosity, density and flashpoint.

Further testing is possible, however. The diesel sample can be sent to a SARS-approved laboratory, where they use an instrument called a GC-MS (gas chromatography – mass spectroscopy) that can measure the actual amount of the marker that is in the fuel and, from that, it is possible to calculate the actual amount of IP in the fuel. The reason for having two levels of testing is because (at the time of publishing), the lateral flow test kits cost about R500, whilst the actual percentage test costs around R5,500 (more than ten times the lateral flow test) and has to be outsourced.

Although it is possible for gas chromatography to be carried out on the suspect diesel sample to look for IP itself, because of the very similar physical and chemical characteristics of the two liquids and the large number of compounds in each, the process is slow, expensive and not particularly accurate.

Do you think your diesel is dirty or has been doctored? Contact us to learn more about our comprehensive fuel-testing solutions.

Groundwater contamination in South Africa can vary by region due to different geological, hydrological, and anthropogenic factors. It's important to note that specific contaminant levels and their effects can change over time. Monitoring is crucial to assess the current situation. Here are some common groundwater contaminants in South Africa and their potential health and environmental effects:

1. Nitrate (NO_3^-)

Source: agricultural activities, sewage disposal, and industrial discharges.

Prevalent provinces: found in various provinces, more common in agricultural areas. Western Cape (wine regions), Eastern Cape (livestock), Northern Cape (wine and livestock regions), Gauteng (intensive agriculture), KwaZulu-Natal (sugar cane, citrus, and fruits), Limpopo (fruit and livestock), Mpumalanga (maize, soya and citrus)

Health effects: high levels of nitrate in drinking water can pose a risk to human health, especially for infants. It can lead to methemoglobinemia, also known as "blue baby syndrome," a condition where oxygen transport in the blood is impaired.

Environmental effects: nitrate contamination can lead to nutrient enrichment in surface waters, causing eutrophication and impacting aquatic ecosystems.

2. Fluoride (F^-)

Source: natural occurrence in rocks and soils, as well as industrial discharges.

Prevalent provinces: often found in the Eastern Cape, Free State, and parts of the Northern Cape.

Health effects: excessive fluoride in drinking water can lead to dental and skeletal fluorosis, affecting teeth and bones.

Environmental effects: excessive fluoride levels can harm aquatic ecosystems and affect wildlife.

3. Iron (Fe) and Manganese (Mn)

Source: natural occurrence in soils and rocks, as well as from industrial discharges.

Prevalent provinces: widespread in various provinces, particularly in groundwater associated with specific geological formations. Western Cape (Western Bushveld Igneous Complex), Northern Cape, Northwest, Mpumalanga (Eastern Limb of Bushveld Complex), and KwaZulu Natal.

Health effects: high levels of iron and manganese in drinking water can affect the taste and colour of water. While they are not typically considered harmful at low concentrations, elevated levels may have adverse health effects.

Environmental effects: iron and manganese can contribute to the formation of precipitates in water bodies, affecting water quality and aquatic habitats.

4. Heavy Metals (e.g., Arsenic (As), Lead (Pb), Cadmium (Cd), Chromium (Cr))

Source: varies based on local industrial, and mining activities and geological conditions.

Prevalent provinces: Gauteng, Rustenburg, Polokwane, Northern Cape, Limpopo, Mpumalanga, Free State and KwaZulu-Natal

Health effects: heavy metals pose serious health risks, including neurological and developmental issues, organ damage, and cancer.

Environmental effects: accumulation of heavy metals in the environment can lead to soil and water degradation, negatively impacting plant and animal life.

5. Pesticides and Herbicides

Source: agricultural activities

Prevalent provinces: Western Cape (wine regions), Eastern Cape (livestock), Northern Cape (wine and livestock regions), Gauteng (intensive agriculture), KwaZulu-Natal (sugar cane, citrus and fruits), Limpopo (fruit and livestock), Mpumalanga (maize, soya and citrus)

Health effects: pesticide exposure may lead to various health issues, including neurological and reproductive effects.

Environmental effects: impact on non-target organisms, including aquatic life, and can contribute to the development of pesticide-resistant species.

6. Salinity

Source: geological and hydrological factors, industry and agriculture.

Prevalent provinces: common in arid and semi-arid regions. Western Cape, Northern Cape (arid and semi-arid areas), Eastern Cape, Free State, Karoo, North West Province, and Gauteng.

Health effects: high salinity can affect the taste of water. Long-term consumption of saline water may have health implications.

Environmental effects: salinity can adversely impact soil quality and vegetation, leading to desertification and reduced agricultural productivity.

Monitoring and regular testing of groundwater quality are crucial for identifying contaminants and mitigating their impact on both human health and the environment. Local authorities and environmental agencies often conduct such assessments to ensure the safety of drinking water sources.

7. Sulphate (SO_4^{2-})

Source: Natural occurrence, mining activities, and industrial discharges.

Health effects: high sulfate levels in drinking water can have laxative effects and may cause gastrointestinal discomfort.

Environmental effects: sulfate can contribute to the acidification of water bodies, impacting aquatic ecosystems.

It's important for local authorities and communities to monitor and manage groundwater quality to ensure safe drinking water and protect the environment. Regulations and standards may vary by province, and adherence to guidelines set by the Department of Water and Sanitation (DWS) is crucial in mitigating groundwater contamination in South Africa.

MARKING THE MILESTONES

LONG SERVICE VALUED

Marking the milestones – many members of the WearCheck family recently celebrated long service milestones with the company. HR manager, Michelle Padayachee congratulated these people on their loyalty and dedication.



Sheila Moodley
DP admin clerk



Prinda Narasi
quality control administrator



Antonio Ehrke
snr machinery inspector



Sarah Mothibedi
sample room assistant



Chris Hattingh
Lubrigard HOD



Gert Nel
transformer division manager



Pretty Lepheane
customer support (JHB)



Roger Henwood
snr machinery inspector

FAREWELL, VIGIE!



WearCheck's longest-serving team member recently retired after 48 years of loyal service to the company. Managing director Neil Robinson had this to say: 'We have bid farewell to someone extraordinary, someone who has been a guiding force behind our laboratory for an astounding 48 years. Vigie arrived in 1976 as a fresh-faced 18-year old, as one of the very first employees of a new company called WearCheck, so it is with both heavy heart and immense gratitude that we say goodbye to Vigie.'

I also want to take a moment to express my appreciation for her early mentorship, which has helped the careers of so many of us here today, including me, and all the help and support she gave, when I joined the laboratory 26 years ago. Her supervision style has been unique, blending wisdom, patience, a firm hand and a genuine passion for WearCheck. Her ability to maintain such a tight ship, ensured that every sample, retest, result and every member of lab staff was on course to deliver the exceptional turnaround time for which WearCheck is renowned, has been nothing short of remarkable.

Beyond her supervisory role, Vigie brought warmth and kindness to the laboratory. Her willingness to listen, support, and provide guidance extended far beyond the confines of her official duties - she became not just a supervisor but a mentor, a confidant, and a friend, to many of us.

Vigie, your presence in this laboratory has been a source of inspiration and strength for us all, so, on behalf of all the staff and colleagues whose lives you've touched, I want to say thank you, for your unwavering dedication and for being the exceptional supervisor that you are. We wish you a retirement filled with happiness, relaxation, and new adventures, but know that you will always have a special place in our hearts and in the history of this laboratory, and WearCheck as a whole.'

MAKING HEADWAY

We extend a warm WearCheck welcome to our new team member, and hearty congratulations to our promoted team member.

Merilen Govender, oil laboratory manager

Merilen joins the Durban laboratory team, where she is responsible for the management of all laboratory functions. This includes organising and controlling the laboratory and sample room staff to facilitate the efficient processing of samples through the laboratory according to the ISO quality and environmental management systems.



Armed with her background in chemical engineering and operations management, and extensive experience in the chemical manufacturing industry in multiple roles (R&D, oversight of production lines, quality control and process efficiency), Merilen is already a valuable asset in our team.

A self-professed “good coffee” fanatic, Merilen loves travelling and adventure in her downtime.

Devashnee Chetty - branch administrator



Since Devashnee’s move from KZN customer support to Cape Town, she has assisted in making significant improvements towards the local office operations which have had such a positive effect on our team and, of course, our customers.

As branch administrator, Devashnee handles all admin-related tasks as well as all customer support-related duties.



CONGRATULATIONS, PHILLIMON!

Super well done to Phillimon Nyirenda, laboratory technician at WearCheck Kitwe in Zambia, who graduated with a Bachelor of Science degree in laboratory technology (with chemistry) in November, from Mulungushi University.

Says Phillimon, ‘I would like to thank the WearCheck management and WearCheck Zambia for the support during my three years of study.’

We are very proud of you, Phillimon - studying while holding down a full-time job is not an easy achievement!

Sales team assembles

WearCheck’s sales team hosts an annual national sales conference. Here, our dedicated sales technicians share ideas on how best to advise new and existing customers on the most beneficial condition monitoring programme, which analysis techniques are the most relevant and appropriate for keeping their assets in peak condition, and attend other important knowledge-sharing sessions. This year, the conference took place in Johannesburg.

As a sign of respect for the late national sales manager, Phillip Croucamp, WearCheck sales team members dressed up in one of his signature outfits – a bandanna tied onto the head – in loving memory of their colleague, who sadly passed away earlier this year.



WearCheck's dedicated asset reliability care (ARC) team, which enhances machine reliability and profitability for customers, has been recognised by a major customer, for providing outstanding reliability service by detecting potential faults and preventing equipment failure in record time.

ARC technicians Thomas Mdhala and Johandre Oosthuizen were recently singled out by the customer for achieving coveted awards - Top Defect Detector, and Top Scheduled Corrective Work Completed for September, respectively.



The customer's monthly awards project is based on work completed by all contracting companies and all mine employees. WearCheck's team took first place during September and second place in August.

The customer, one of SA's largest producers of nickel cathode, processes slow-cooled matte to recover valuable metals and produce various chemical products.

WearCheck ARC team members, Renier Kalp, precision maintenance technologist and Riaan de Beer, site supervisor for the award-winning team, explain, 'We maintain a continuous on-site presence at the mine. This prestigious recognition signifies that our team demonstrated unparalleled prowess in identifying and flagging the most critical defects warranting immediate corrective action.'

How the on-site ARC system works

Each month WearCheck's on-site team receives job cards, facilitating a comprehensive overview of the month's scheduled tasks and allowing meticulous planning for the upcoming operational challenges. The team is engaged in a spectrum of diverse condition monitoring tasks, such as vibration data capturing and analysis, industrial oil sampling, thermography assessments, and laser alignment, along with in-situ balancing activities. For September, WearCheck received a total of 1,520 job cards.

Says Renier, 'WearCheck ARC excels in identifying conditions that present the most significant risks to machinery, meticulously detailing the exact corrective actions required. This approach highlights the accuracy and precision of our analysis. We focus sharply on identifying the primary failure mechanism, avoiding the confusion of reports cluttered with various potential machine conditions and assorted corrective actions. By understanding the condition monitoring data, we isolate the specific issue requiring a single, targeted maintenance task. This focused approach

effectively manages the risk to the machine and is key to restoring it to a reliable state. Our strategy ensures that our interventions are both effective and efficient, directly aligning with the client's need for operational reliability without the excess of unnecessary procedures.

The diligent efforts of the WearCheck team led to the identification and logging of 97 critical defects. Of these, 76 follow-on tasks were successfully executed, while the remaining 21 tasks are in progress.

Renier is happy with the team's performance. 'WearCheck's exceptional performance extended to the domain of scheduled corrective work completion, with two of our adept technicians, namely Thomas Mdhala and Johandre Oosthuizen, clinching the first and second positions, respectively. This commendable achievement emphasises the individual commitment and dedication exhibited by each technician in elevating the efficacy of the condition monitoring initiatives for the client's benefit.'

Conclusion

The successful completion of 76 jobs, as per the recommendations provided by WearCheck, significantly contributes to the prolonged operational efficacy of the equipment fleet. By establishing and adhering to a robust condition monitoring framework, coupled with the efforts of a dedicated team, any industrial facility can achieve and maintain its competitive edge.

Renier concludes, 'Thus, as we celebrate the outstanding achievements of Thomas and Johandre, it is imperative to acknowledge the collective contributions of the entire team, as each individual's commitment was instrumental in securing WearCheck's resounding success at the site.'

High praise for the ARC team

A principal in asset tactics & work management at the customer's site, is pleased with the service from WearCheck's ARC team. 'Thank you and please keep going on finding those defects proactively, you are doing brilliantly!'

Annemie Willer, ARC operations manager, is delighted at the achievements of her team, 'The continued accolades our team has garnered from our esteemed client make everyone at WearCheck immensely proud. What you've achieved and the standards you uphold are outstanding.'



Dream Team: members from WearCheck's on-site ARC team, front (L-R): Alex Outram, Johandre Oosthuizen, Renier Kalp; back (L-R): Thomas Mdhala, Micheal Pretorius, Riaan de Beer

OUT AND ABOUT

Companies that invest in maintenance staff training report an improved ROI on their investment into condition monitoring. With this in mind, WearCheck's training courses remain ever popular, and our trainers have been very busy running various courses around Africa. During 2023, we trained 226 delegates in SA and Namibia alone, and in the last five years, over 1,000 delegates.

In addition, representatives from WearCheck have travelled to other regions of South Africa and internationally to attend seminars, present papers, and participate in condition monitoring dialogue.

OIL ANALYSIS TRAINING WITH JAN

WearCheck training consultant Jan Backer (in front on stairs, blue shirt) conducted oil analysis training courses in Rustenburg and Johannesburg recently.



OIL ANALYSIS TRAINING WITH DAN

Training courses have been in demand with Ghanaian companies lately – six teams from Underground Mining Alliance (UMA) at Newmont Subika Mine, and three teams from AMAX (a JV between African Mining Services and Maxmass Ghana LTD @ AngloGold Ashanti Tarkwa Mine) recently joined WearCheck for Oil Analysis training with Daniel Boakye, WearCheck Ghana's technical & sales manager (West Africa).



ACCREDITATIONS AND AWARDS

WearCheck Water Labs awarded new accreditation

The WearCheck Water Laboratories team is delighted to announce that the Cape Town laboratory was recently awarded SANAS (South African National Accreditation System) accreditation for conducting Total Coliforms and E.coli tests on Sea, Potable, Natural and Effluent waters. The laboratory's ISO/IEC 17025:2017 now includes both Chemical and Microbiological accreditation.

The latest accreditation is in addition to physico-chemical and metals water analysis accreditation that the WearCheck Water Laboratories already has.

WearCheck Water Laboratories general manager, Thelma Horsfield, is proud of her team. 'It took many months of hard work to ensure that all our testing processes and laboratory instruments were set up in line with ISO requirements. We are pleased that the auditors agreed, and we can continue to give our customers peace of mind with regards to the high degree of accuracy of our water analysis results.'

SANAS, the official accreditation body for South Africa, awards accreditation certificates as a formal recognition by the Government of South Africa that an organisation is competent to perform specific tasks, such as accreditation for laboratories (testing and calibration) to ISO/IEC 17025.

'The next step is to complete the SANAS Total Coliforms and E.Coli accreditation process for our Johannesburg-based water laboratory, which should be finalised in the near future,' she said.

WearCheck Water Laboratories' parent company, WearCheck, takes quality seriously - it is the only condition monitoring company on the African continent with ISO 9001 quality certification and ISO 14001 certification for its environmental management programme, as well as ISO 17025 accreditation for its laboratory-centric quality management programme.



Eureka Gold Mine signs up with WearCheck

WearCheck Zimbabwe successfully launched an oil analysis and condition monitoring programme at Eureka Gold Mine recently. Eureka is one of the largest and most technologically advanced gold mines in Zimbabwe.

Shesby Chabaya, OPS HoD at WearCheck Zimbabwe, is advising the mine's engineering team. He takes up the story, 'The mine has demonstrated full commitment to covering its mobile plant, fixed plant and electrical systems by investing in a range of condition monitoring services, including oil analysis, coolant analysis, grease analysis, transformer oil analysis and fuel analysis.'

'The Eureka engineering team gathered for initial startup training, which covered: awareness on the objectives of the oil analysis programme, set-up of systems for successful implementation of the programme, oil/fuel/coolant sampling procedures and practical training for the shop-floor teams in the various sections.'

'We are confident that, with the commitment demonstrated by the engineering team, WearCheck will be in a position to assist the mine to attain high fleet, plant and equipment availability, reliability and ultimately save costs,' says Shesby.



Shesby Chabaya, WearCheck Zimbabwe's OPS HoD, (far right, orange helmet), introduces Eureka Gold Mine's engineering team to the company's condition monitoring programme recently. With him is WearCheck's onsite oil-sampling technician, George Munyanyi (7th from left, yellow helmet)

DELIGHTFUL INDIA

Lab instruments loved and respected in ceremony

The festival of Ayudha Pooja was celebrated in the WearCheck India offices recently. This is a significant celebration in India that involves the prayer of respect and reverence to our tools and equipment.

The principal goddesses worshipped during the Ayudha Puja are Saraswati, the goddess of learning, Lakshmi, the goddess of prosperity, and Parvati, the goddess of power. On this occasion, the implements employed by people of various professions and walks of life are customarily venerated, such as the weapons of a soldier, tools of an artisan, and the books of a student.



FESTIVAL OF LIGHTS

Many WearCheck staffers in various laboratories within the company celebrated Diwali, or the Festival of Lights, in November. Diwali symbolises the spiritual “victory of light over darkness, good over evil, and knowledge over ignorance”.



Durban, SA



India

WearCheck @ WINDERGY EXPO, INDIA



The 5th International Windergy Trade Fair & Conference took place in India in October 2023 at the Chennai Trade Centre. The WearCheck stand was hosted by representatives from WearCheck's offices in India and South Africa.

IWCG meets in Belgium



International WearCheck Group (IWCG) – an international network of WearCheck companies from around the globe – is an invaluable source of shared knowledge about the latest technological advancements in condition monitoring. Not only that, but it is also an awesome community of scientists who willingly share their expertise, insights and camaraderie.

IWCG members attend an annual reunion in a different member country. This year, Belgium was the destination for the 2023 IWCG conference.



The value of training

“Education is the kindling of a flame, not the filling of a vessel.”
Socrates

WearCheck’s training courses are built with the wise words of the Greek philosopher in mind - to kindle the flames of constantly improving maintenance operations and enhancing a customer’s return on investment into condition monitoring.

WearCheck’s customer training courses include oil analysis courses and condition monitoring training for maintenance practitioners operating at various levels within an organisation. WearCheck has been an accredited training partner for the internationally acclaimed Mobius Institute since 2015, and all the Mobius courses can be run online. These are some of the customer training courses run by WearCheck, and the duration:

Customer training courses run by WearCheck, and the duration:

Course	Days
Precision Shaft Alignment	2, incl. practical
Precision Balancing	2
Vibration Analysis ISO CAT I	5, incl. exam
Vibration Analysis ISO CAT II	5, incl. exam
Vibration Analysis ISO CAT III	6, incl. exam
Infrared CAT I	5, incl. exam
Oil Analysis 1	2
Oil Analysis 2	1
WearCheck Customised	2

Oil Analysis courses

	Oil Analysis 1: Understanding oil and its analysis (2 CPD points)	Oil Analysis 2: Report interpretation (1 CPD point)
Location	Two day workshop	One day workshop
Bloemfontein	July 09, 10	July 11
Cape Town	August 20, 21	August 22
Durban	August 13, 14	August 15
Johannesburg 1	February 13, 14	February 15
Johannesburg 2	May 07, 08	May 09
Johannesburg 3	September 10, 11	September 12
Kathu	June 11, 13	June 14
Kimberley	April 09, 10	April 11
Middelburg	May 14, 15	May 16
Nelspruit	November 12, 13	November 14
Oranjemund	June 04, 05	June 06
Richards Bay	March 12, 13	March 14
Rustenburg	October 08, 09	October 10
Windhoek	February 20, 21	February 22

All the public courses listed in the WearCheck training schedule can be presented at the customer’s site of preference in South Africa or abroad. Courses are also offered online.

We have the pleasure of offering customised training content to suit your requirements, your dates and your location. Customised training on offer includes sampling of lubricating and transformer oils, lubricant storage and handling, introduction to oils and concise oil analysis for workshop technicians.

For more details on course content and prices, click here: <https://www.wearcheck.co.za/training.html>.

To book the above courses, please contact Michelle van Dyk on training@wearcheck.co.za or call +27 31 700 5460 or +27 82 381 3321



MOBIUS TRAINING



Course	CPD points	Date 1	Date 2	Date 3
Vibration Analysis – CAT I	5	Jan 22-26	May 13-17	Sep 09-13
Vibration Analysis – CAT II	5	Feb 19-23	Jun 10-14	Oct 14-18
Vibration Analysis – CAT III	5	Mar 11-18	Jul 08-15	Nov 11-18
Infrared CAT I		Feb 05-09	May 24-28	Oct 07-11
Precision Balancing		Apr 15-16	Aug 12-13	Dec 02-03
Precision Alignment		Apr 17-18	Aug 14-15	Dec 04-05

WearCheck has been an accredited training partner for the internationally acclaimed Mobius Institute since 2015, and all the Mobius courses can be attended online or in person. All Mobius courses are presented at various venues throughout Africa, and many of them have an online option.

For more information or to book a Mobius training course, please contact Louis Peacock on +27 71 680 2967 or louis@wearcheck.co.za.

Please note that Precision Balancing and Shaft Alignment courses can not be conducted online.

LUBE TIP

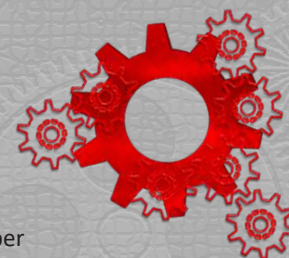
Glycol contamination is common in engine oils and can greatly alter the properties of the lubricant. Antifreeze causes a thickening of the oil, increasing the viscosity and not allowing it to flow as readily as before. This can lead to boundary conditions in parts of the engine that require a less viscous fluid to lubricate and protect them properly. It also creates an acidic environment within the oil, resulting in corrosion within the system, especially on copper surfaces.

UPCOMING EXPOS 2024

Mining Indaba: 05 -08 February

Enlit Africa: 28 - 30 May

Electra Mining: 02 - 06 September



HIGHLIGHT YOUR SUCCESS

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