

# WEARCHECK OPENS A NEW LAB IN KATHU

Kathu, the iron ore capital of the Northern Cape province, is where we just opened our newest laboratory.

While for many years there has been a WearCheck office in Kathu where used oil samples could be dropped off, the nearest laboratory was in Johannesburg, where the samples were processed.

However, now the samples will be processed in Kathu, meaning that the turnaround time for test results will be much improved.

The new Kathu laboratory brings to 14 the number of world class laboratories WearCheck operates - nine full-sized laboratories in buildings and five container labs - in nine countries around Africa and in India and Dubai.

We are delighted to invest further in Kathu, whose name means "town under the trees", where local industry has already given our company a warm welcome and support for more than a decade.

Our unique Kathu laboratory is created from three remodelled shipping containers.

WearCheck's head office in Westville is where the distinctive mobile laboratories are created in repurposed shipping containers. The world-class mobile laboratories are kitted out with the latest laboratory instruments and technology.

The design of the container labs is fluid, to accommodate new industry developments. To see inside the Kathu lab visit our video page: <https://www.wearcheck.co.za/info/videos.html>



*Now open and testing used oil samples, and much more - WearCheck's latest mobile condition monitoring laboratory opened in Kathu recently in the Northern Province. WearCheck converts shipping containers and fits them out with the latest laboratory instruments and technology to offer world class condition monitoring services in the region*

WearCheck managing director, Neil Robinson, is addressing the infrastructure deficit in locations in Africa by providing scientific analysis services in remote areas where mining and other industries operate.

Says Neil, 'Our mission is to enhance access to world class condition monitoring services in Africa. While establishing a brick and mortar laboratory in certain locations is often hindered by stumbling blocks such as basic infrastructure, the container laboratories do not rely on these and are therefore far easier to place in areas with limited accessibility.

'Ensuring consistently accurate test results is critical, therefore each mobile laboratory remains connected to the WearCheck South Africa LIMS (Laboratory Information Management System), which ensures quality control.'

WearCheck Kathu offers a wide range of condition monitoring services for the mining sector and other industries - including oil analysis, coolant testing, diesel testing and more.

WearCheck Kathu is situated at 4Arrows Premises, Bestwood Estate in Kathu, and can be contacted via email on [werner@wearcheck.co.za](mailto:werner@wearcheck.co.za), and telephone on +27 66 474 8628.



*Here, Werner Buys, area sales manager cape provinces, is seen with Letlhogonolo Thabeng from 4Arrows, one of our Top 5 clients and our biggest in the Northern Cape. They process over 1400 samples a month.*

# WEARCHECK HITS A MAJOR MAY MILESTONE

In May 2022, WearCheck processed a record 72,188 samples – the company’s best May ever! We also processed over 75,000 samples in October in 2018, 2019 and 2020.

To thank our Super Star team, WearCheck gave every staff member wherever they were in the world, a lunch voucher and an invitation to celebrate their success with their friends and colleagues. All we asked for in return was some pics of the happy occasions, which we feature below.

MD Neil Robinson is very proud of the amazing team-spiritedness in the company. ‘Thank you, every single one of you, for your hard work, dedication and commitment, your efforts are sincerely appreciated.’



# WEARCHECK SUPPORTS OUR COMMUNITY

Some of the worst floods in living memory wreaked havoc on KZN in April and May, leaving hundreds of people dead, many more still missing, thousands of people displaced and causing extensive damage to infrastructure, land, homes and possessions.

Thousands of people in the greater Durban area had no access to potable water for several weeks after the floods, exacerbating the tragedy and leading to circumstances which were ripe for serious illness.

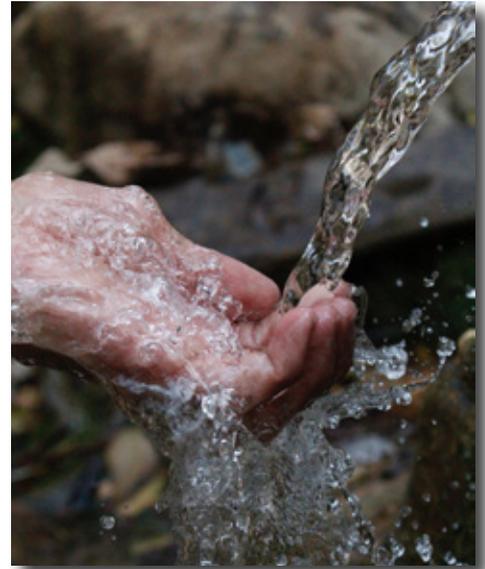
WearCheck, as a KZN-based company, was keen to offer a sincere helping hand to the affected communities. We conducted free borehole and other water testing from April until July, for any businesses and individuals who needed to check their water quality, to ascertain whether it was safe for human consumption and general household use.

Thelma Horsfield, general manager of WearCheck's water testing division – Set Point Water – reports that the company processed over 140 water samples valued at R300k+ as part of the free testing offer.

In addition to the free water testing, WearCheck donated R46,000 to the Gift of the Givers Foundation, to assist the flood victims.

Says Neil Robinson, MD of WearCheck, 'We wanted to extend a sincere helping hand to flood relief efforts, and we are well aware of the amazing work done by the Gift of the Givers. We opted to donate a thousand rand for every year that WearCheck has been in operation, (46 years in May 2022), which is how we arrived at the amount of R46,000 for our donation.

'We know that the money has been well spent repairing damaged infrastructure in the some of the affected areas, helping to search for missing family members, and providing temporary shelter, clothes and food to those who were displaced. Thank you to the amazing staff and volunteers at Gift of the Givers, who help to ease the burden on communities in crisis.'



**Gift of the Givers**  
FOUNDATION



## CASE STUDY: FILTER FITTING DELIVERS COST SAVINGS

One of our chrome-mining customers recently embarked on a reliability improvement programme which focused on the handling and management of commodities used in their production equipment, namely fuel, lube, air and coolant.

The audit revealed that the machines were operating 80 hours a week. Due to the high levels of wear, increased viscosities, and a significant spike in soot, service intervals had to be reduced from the recommended 250 hours to 160 hours to avoid negatively affecting the machines' life cycle. The decision to comprehensively service these machines every two weeks, coupled with engine failures, became a big cost pressure for the mine.

To read more about our recommendations and improvements for this particular situation, read here:

<https://www.wearcheck.co.za/blog/item/340-case-study-filter-fitting-delivers-cost-savings.html>



# TECHNICAL TIP: DISPERSANT ADDITIVES - the crowd controller in your engine oil

BY STEVEN LUMLEY, TECHNICAL MANAGER

What are they?	Polymeric alkylthiophosphonates and alkylsuccinimides, organic complexes containing nitrogen compounds.
What do they do?	Keep insoluble soot dispersed in the oil.
How do they do it?	Insolubles are bonded by polar attraction to dispersant molecules, which prevents them from agglomerating.

In this instalment of the WearCheck lube series we will take a look at how dispersant additives function and why they make great crowd-controllers at social events.

Whenever I think of dispersant additives, an image of a night-club bouncer comes to mind. I know this might seem like a stretch of the imagination but humour me. Among their many duties, night-club bouncers are also responsible for crowd control in their place of entertainment. Crowd control involves defusing potentially volatile situations by dispersing (keeping apart) club-going patrons who might otherwise want to “agglomerate” into a brawl.

Similarly, the function of a dispersant additive is to disperse undesirable elements like soot particles, that might otherwise want to agglomerate into larger particles.

In this respect, dispersant additives and night-club bouncers display a high degree of commonality – they discourage agglomeration through the process of dispersion.

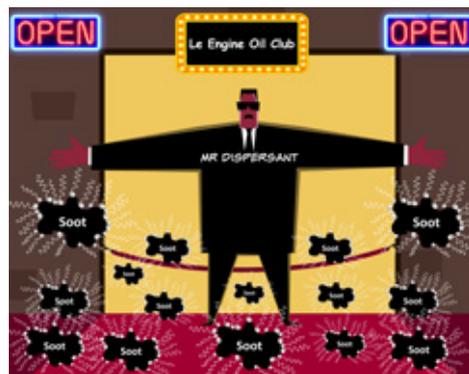
Unlike night-club bouncers, however, our dispersant additive utilises some pretty nifty chemistry - so let’s take a look at how this additive controls crowds of soot particles in your oil.

Dispersants are non-metallic, ashless cleaning agents that inhibit sludge-formation by keeping insoluble contaminants, like soot, dispersed in the oil and preventing them from coating metal surfaces. They are also mainly found in engine oils.

So, why all the fuss about soot particles agglomerating? Well, soot particles are sub-micron in size when formed, but with progressive fuel usage, large quantities of these particles are continually deposited in the oil and will eventually agglomerate into larger particles which can cause all manner of evils.

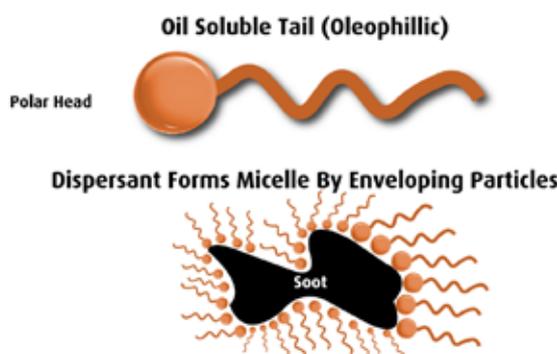
Increasing concentration of soot contamination can cause sludge formation, higher operating temperatures, loss of anti-wear performance and increased viscosity. Added to this, the additional soot loading increases the strain on the dispersant’s ability to function optimally.

With many engine manufacturers looking to extend oil drain intervals, controlling soot agglomeration has become even more of an arduous task for this additive, as longer oil drain intervals means more soot loading of the oil. If soot is not adequately dispersed by the engine oil, it can cause sludge to form on rocker and front engine covers, bearings to fail, valve bridges and fuel injection links to wear, and filters to plug.



The durability of the oil and additive system in relation to the ability to disperse soot and maintain a regime of reduced wear, has led to significant changes in additive formulation in recent years and, as such, lubricant blenders have had to increase the treat rate of this additive. These days, dispersants are typically one of the major components of fully formulated engine oils making up between 30 to 60 percent of the total additive package.

Now for the nifty chemistry part of how this additive works its magic - dispersant additives work by enveloping the soot particle in a single layer. The polar head of the dispersant molecule clings to the particle, directing the additive’s “oleophilic” tail outward to dissolve into the oil. This causes the soot particles to be suspended in the oil, prohibiting them from agglomerating with other soot particles or depositing onto component surfaces.



Be sure to look out for the next instalment of the lube series in the WearCheck *Monitor* newsletter, where we will introduce you to a whole new class of fascinating lubricant additives – bulk property chemical additives, starting with detergents.



*The WearCheck family has grown with the recent acquisition of Set Point Water Laboratories. Incorporating these specialised water analysis skills into our business, means we can offer our clients diverse testing and analysis options. Visit our website for more info.*

## ARTICLE OF INTEREST: How to reduce hormone contamination in drinking water

*By Moses Lelaka, Water Laboratory Manager*

The water from your tap is not as pure as you might think - not only can it contain heavy metal contaminants such as lead, microplastics or dangerous bacteria, but it may also contain hormones or endocrine disruptors.

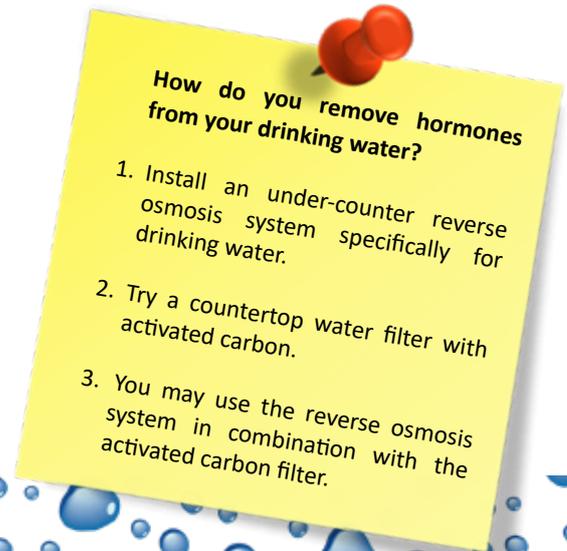
The problem with hormones and endocrine disruptors is that, even in very small quantities, they can have a serious impact on an individual's natural hormone balance.

What are the hormones and how do they get into water?

Hormones are chemical messengers that are secreted directly into blood, which carries them to organs and tissues of the body to exert their functions. There are many types of hormones that act on different aspects of bodily functions and process.

Female hormones (estrogens, in particular) may be present in drinking water. These hormones are found in birth control pills and other medication. The estrogens that are specifically detected in wastewater influent and effluents are Estrone, 17-beta-estradiol, estriol and ethinyl estradiol.

After a visit to the toilet, the hormones are flushed down and end up in sewage systems. Unfortunately, sewage treatment plants are not able to filter all medical residues - such as hormones - out of the wastewater. This means that the hormone-contaminated water ends up in surface water that leads to the rivers, dams and lakes and eventually flows out of your tap.



**How do you remove hormones from your drinking water?**

1. Install an under-counter reverse osmosis system specifically for drinking water.
2. Try a countertop water filter with activated carbon.
3. You may use the reverse osmosis system in combination with the activated carbon filter.

**Water wisdom** – while WearCheck does not check for hormone contamination in drinking water, we felt our readers would benefit from awareness and advice on how to minimise the levels.

## Women's Day 2022 - celebrating WearCheck women past, present and future.



Front row third from the left: Lesley Stewart (Crawford) with some of our long-standing ladies, most of whom have been with the company for over 10 years

WearCheck has a long history of embracing and celebrating our women.

Over 45 years' ago the company was founded by 3 partners, Gary Brown, Wally and Lesley Crawford.

Lesley played a pivotal role in the formation and growth of WearCheck. Her love for the industry was borne out of a fascination in unlocking the secrets of oil. She spent more than 30 years working at WearCheck before she retired in 2005.

Lesley reflects that over the many years of expansion and growth that followed, new equipment, new laboratories and the ISO 9000 accreditations, that the company never lost sight of the original goals of the founders: WearCheck must always be a world-class organisation with which everyone is proud to be associated.

*"From a distance it gives me great pleasure to see WearCheck going from strength to strength. I hope that all its employees will always enjoy the magic of discovering the secrets in oil."*

*Lesley Stewart*

# MAKING HEADWAY

The WearCheck family continues to grow, to meet the ever-increasing needs of an expanding customer base, as the company continues to open new laboratories and offices, and to add new technologies and services to its extensive repertoire of condition monitoring techniques.

We extend a hearty welcome to the newest joiners and congratulate those who have been promoted:

## MIDDELBURG - South Africa



*We send a warm welcome to Adel Rampersadh of WearCheck's Middelburg team, where she is the new admin. assistant*



*Congratulations to Sipho Magcaba who has been appointed as WearCheck's Middelburg laboratory supervisor*

## JOHANNESBURG - South Africa



*Tumelo Seobi has been promoted to WSL Supervisor effective 1 June 2022. Congratulations on this well-deserved achievement Tumelo*



*Congratulations to Melissa van Aardt, who has been promoted to Joburg customer services supervisor. Melissa is responsible for customer services, as well as the receptionists, drivers and cleaners*

## MOZAMBIQUE



*Riaan Du Plooy, is the new country manager for WearCheck Mozambique. Welcome to the WearCheck Family Riaan*

## GRADUATING GREATLY!



A hearty congratulations goes to Juliane Strydom for achieving her Bachelor of Commerce degree in Marketing and Management Science from the IMM Graduate school, recently. She achieved this whilst continuing her full-time position without neglecting any duties - well done! Juliane, we wish you well as you embark on your Honours degree next!



Trust Madanhi, a diagnostician at our Zimbabwe office, has successfully completed his Master of Science In Strategic Management degree.

WearCheck is very proud of you Trust, and your exceptional achievement.

## Terrific Trust!

# LONG SERVICE LAUDED

## LONG SERVICE

'We salute those long-serving members of the WearCheck family who have been loyal to the company for many years – thank you for your dedication', says HR manager Michelle Padayachee.

'There are seven staff members who have reached their 25-year milestone recently. At WearCheck, we pride ourselves on having an extremely low staff turnover, which enables us to provide excellent customer service.'

Reaching their quarter of a century milestone this year are:



Neil Robinson  
managing director



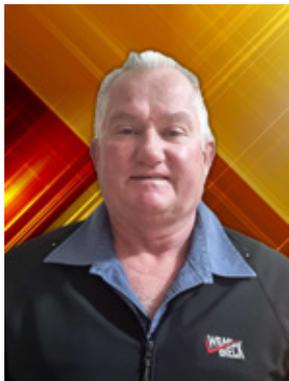
Collin Naicker  
software support assistant



Issac Mabaso  
field customer support



Shireen Brijlall  
lab technician



Eddie Pieterse Snr  
reliability specialist



Jaco Pretorius  
level 2 inspector



Rynhardt Smit  
level 2 inspector



## SAD FAREWELLS



We are devastated to report the passing of two of our dear WearCheck family members, and that one is still missing after the KZN floods.

Linda Scott, from WearCheck Johannesburg passed away peacefully at home in April. Linda, who joined WearCheck in 2001 as a receptionist, was a bubbly, friendly person, who will be remembered by all with much fondness. She was planning to retire soon. Farewell, Linda.

Magda Lewis, customer services officer at WearCheck Middelburg since 2015, was tragically killed in a car crash. Magda is survived by her two children Lindi and Pieter, and her five grandchildren; and will be sadly missed by her colleagues. Farewell, Magda.

Unfortunately, the sad news does not stop there. Wellington Ndlovu of our Westway offices has been missing since the night of the floods on the 11th of April and is presumed deceased. Wellington had been with WearCheck since 22 August 1983, next year would've marked his 40th year with us as our stores assistant. Our team has been so saddened by his sudden loss.

We extend our heartfelt condolences to all three families.

Death leaves a  
**HEARTACHE**  
noone can heal  
Love leaves a  
**MEMORY**  
noone can steal  
-Taken from an Irish headstone-



# OUT AND ABOUT

## KATHU GOLF DAY



WearCheck recently supported a Golf for Cancer event in Kathu. Here we have from left to right: Jean Arlow (TAKRAF Northern Cape), Werner Buys (WearCheck Kathu), Mike Fourie (RMS Kathu) and Kobus Kalp (Nashua Khatu)

## WEARCHECK @ MINING INDABA



WearCheck finds it very beneficial to connect with Industry professionals, which is why we attend all major shows. Here we are at Mining Indaba in Cape Town. From left to right: Troy Wyngaard (Clean Air Solutions/AdBlue 4U) and WearCheck technical sales, Hugo Lochner

## WEARCHECK INDIA @ EXCON 2022

EXCON is the largest construction equipment event in South Asia. The event was held by The Confederation of Indian Industry from the 17th - 21st May 2022 in Bengaluru, India. Our country manager in India, Nissar Ahamed, attended and met with professionals from the industry.



Left: Nissar Ahamed (WearCheck) is with Mr. B.N. Raju - Regional Service Manager, JCB India



Centre: Nissar Ahamed is with (left) Mr. Ajay Naidu - National Manager CSA and (right) Mr. Satish Kumar - Service Support Manager



Left: Mr. Somendra Misra Uptime Centre Volvo with Nissar Ahamed (right)



Left: Nissar Ahamed is with (right) Mr. Arup Kumar Sahoo Volvo Penta

## HOOK, LINE & SINKER - WearCheck sponsors sport fishing events.

### Myn Manne



The Myn Manne Marine Association had its humble beginnings back in 1977 with its first gathering at Sodwana Bay. It was organised by a few avid anglers from Matla Mine and the total number of boats competing was a mere three.

The competition has grown in leaps and bounds since then, with entries exceeding 80 boats and 600 anglers. This event caters to those in the mining industry and takes place yearly in March. Visit: <https://www.mynmanne.co.za/>

### Walvisbaai Club Championship



The team we sponsored was hugely successful at the Nationals, with many receiving their Namibian colours. An U16 member received a gold in his category, they also boasted the 'biggest inedible fish (103kg)' and another won the Top Master for the tournament

# EMPOWERING OUR CLIENTS

It is a fact that companies that invest in upskilling their maintenance staff generally gain a far higher return on their investment in a good condition monitoring programme.

To this end, WearCheck's trainers are always in demand by operations wishing to boost their bottom line with reduced downtime and repair costs, while productivity soars.

Some of the training courses that took place recently are featured here:



Staff from the Eurasian Resources Group (DRC), recently underwent training that covered the fundamentals of lubrication, oil analysis and result interpretation with Daan Burger



Jan Backer (fourth from right) conducted training at WearCheck's newest laboratory in Kathu



WearCheck training consultant, Jan Backer (on the left), conducted two-day customised on-site training for 2 groups from Moolmans



Jan Backer (on the left), with group 2 from Moolmans



A group of WearCheck customers attended training in Bloemfontein recently

## Customer Survey - You speak, we listen!

At WearCheck, we continuously strive to provide our customers with better service.

Our annual customer survey aims to get your feedback on what we are doing right or where we could do better. In addition, your answers help us satisfy our ISO compliance requirements.

The questionnaire takes around two minutes to complete and can be filled in online via your mobile.

Thank you, in advance, for sending us your insights and suggestions – we take this very seriously.

Here is a link to the online survey:  
<https://forms.gle/G2QeDTPDTmiaAx8J9>.



# UPSKILL YOUR WORKFORCE

## The value of training

*“Learning is a treasure that will follow its owner everywhere....”*

*Chinese Proverbs*

The return on investment for training maintenance staff is extremely favourable – staff who know how to take samples correctly, interpret reports from diagnosticians and take swift maintenance action where necessary are key to boosting the efficiency of a condition monitoring programme.

WearCheck’s professional trainers run a selection of training courses across a range of condition monitoring and reliability solutions sectors. Many of these courses attract sought-after CPD (continuing professional development) points for delegates.

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	4, incl. exam
Vibration Analysis ISO CAT II	5, incl. exam
Vibration Analysis ISO CAT III	5, incl. exam
Asset Reliability Practitioner- advocate (ARP-A)	3, incl. exam
Asset Reliability Practitioner- engineer (ARP-E)	5, incl. exam
Asset Reliability Practitioner- leader (ARP-L)	5, incl. exam
Oil Analysis 1	2
Oil Analysis 2	1
WearCheck Practical (English / Zulu)	½
WearCheck Customised	2

## Oil Analysis & Wind Turbine courses

*Courses offered onsite and online.*

	<b>Oil Analysis 1: Understanding oil and its analysis (2 CPD points)</b>	<b>Oil Analysis 2: Report interpretation (1 CPD point)</b>
<b>Location</b>	<b>Two day workshop</b>	<b>One day workshop</b>
Johannesburg	September 13-14	September 15
Kathu	October 18-19	October 20
Namibia	November 8-9	November 10

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.

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.

WearCheck offers other on-site courses on request:

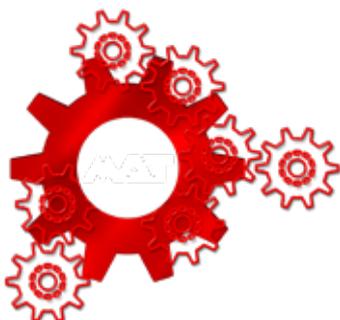
- WearCheck Practical (in English or Zulu) (half day)
- WearCheck Customised – oil analysis for workshop technicians

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](mailto:training@wearcheck.co.za) or call +27 31 700 5460 or +27 82 381 3321

	<b>Wind Turbine Oil Analysis : 2 day workshop</b>
<b>Location:</b>	<b>Two day workshop</b>
Cape Town	November 15-16
East London	October 25-26



## Public / Online Mobius courses\*

Course	CPD points	Date 1	Date 2
Vibration Analysis – CAT 1	4	12-16 Sep	
Vibration Analysis – CAT 2	5	10-14 Oct	
Vibration Analysis – CAT 3	5	21-25 Nov	
Precision Maintenance - Balancing		15-16 Aug	12-13 Dec
Precision Maintenance - Alignment		17-19 Aug	14-16 Dec

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 [louispeacock@wearcheck.co.za](mailto:louispeacock@wearcheck.co.za).

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

### LUBE TIP

Overfilling a gearbox sump can be just as damaging as underfilling it. Overfilling may cause air entrainment and foam, overheated oil and leakage due to overflow. Over time, oxidation may occur due to increased temperatures and exposure to air.

### UPCOMING EXPOS

#### Chamber of Mines Namibia:

31 August- 1 September 2022

**Electra Mining Africa:** 5 – 9 September 2022

**Windaba:** 12- 13 October 2022

**Enlit:** 16- 18 May 2023

## HIGHLIGHT YOUR SUCCESS

If oil analysis has helped prevent a major failure or saved your company money, we would like to feature this in *Monitor*. Our writer will contact you for the details and will write the article for your approval. Simply email [marketing@wearcheck.co.za](mailto:marketing@wearcheck.co.za) and we will contact you.

## TECHNICAL BULLETIN TOPICS?

Is there a particular subject you would like to see featured in a *Technical Bulletin*? Simply email your suggestion to [marketing@wearcheck.co.za](mailto:marketing@wearcheck.co.za). Before you do this, why not check out the more than 60 titles already available on the web site: [www.wearcheck.co.za](http://www.wearcheck.co.za)

## Planet-friendly option

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