

WEARCHECK INDIA CELEBRATES A MAJOR MILESTONE



Thank you for helping us reach our 10 year milestone! From left are WearCheck India staffers Sajida (senior chemist), Tastageer (lab assistant), Hussain (key accounts manager), Muji (accounts), Reshma (customer support), country manager Nissar Ahamed (white shirt), Jameel (sample collection), Faith Queen (accounts), Selvi (office assistant) and Sai Ganesh (lab chemist)

Under the expert guidance of country manager Nissar Ahamed, WearCheck India has flourished in the ten years since opening its doors in Chennai in 2010.

The state-of-the-art laboratory and the team of highly-qualified technicians and scientists provide customers with a 24-hour turnaround time for oil analysis samples. The lab is now also able to process fuel samples, with the acquisition of new lab equipment.

WearCheck India serves customers from a range of industries, including wind power generation, automobile, aviation, earth moving, electrical, shipping and others.

Managing director Neil Robinson expressed his pride in the WearCheck India team. 'Congratulations on your ten year anniversary. Goodness how time flies,

it certainly doesn't feel like 10 years ago when we celebrated the launch of the laboratory.

Thank you all for your support and commitment and for being the Leaders in oil analysis in India and taking our name and reputation with you and building on it.'

Country manager for WearCheck India, Nissar Ahamed, was thrilled to reach the milestone. 'A million thanks to all our amazing customers - your continued support and trust in our firm has played an integral role in our first decade, and we look forward to working with you in the coming years. Thank you to my wonderful team for your hard work and dedication to providing excellent service.'

Well done, WearCheck India! We look forward to the next ten years.

We've moved to Westville!

WearCheck Pinetown (8 & 9 Le Mans Place) and WearCheck Transformer Chemistry Services (University Road) have relocated, all under one spectacular roof at No. 4 The Terrace, Westway Office Park, Westville. Our contact details remain the same: telephone +21 31 700-5460, email: support@wearcheck.co.za



TECHNICAL TIP: LIVE SAMPLING WITH FILTRATION

CASE STUDY: OIL ANALYSIS ON BELAZ TRUCKS FITTED WITH MTU ENGINES.

When conducting live sampling for an oil analysis monitoring programme, the first two mini mess points are fitted on the primary oil filter housing. This housing is also a water trap with a cartridge filter (size 10x1 pitch).

The cartridge must be threaded with a 10x1 straight flute no.1 tap and kept properly clean.

When there is an indicator shuttle valve mounted on top of the housing, the main function of this valve is that, if the filter gets contaminated or blocked, it indicates from green to red. This is set in motion via the build-up of pressure in the relief valve.

Therefore, there is a port before the filter and a port after the filter. The main objective of performing live sampling before a filter is to draw the sample before the wear particles have passed through the filter, to boost accuracy of the test results and give a good indication of contamination levels.

With the sampling port that is positioned after the filter you are able to gauge the filter's efficiency by comparing the results of the sample



An efficient filtration system helps to enhance the useful life of oil, which should be regularly sampled and monitored

taken before the filter to the results of the sample taken after the filter.

For a filtration system to function at its maximum efficiency it is essential that the filter elements are changed regularly in accordance with the manufacturer's specifications and that any trapped water is drained. If this is not done, many problems can result, such as the system going into by-pass and the oil going through the relief valve, rendering the system useless.

MAKING HEADWAY

Transforming the transformer labs

Transformer laboratories manager Pierre le Roux joins the team to head up WearCheck's transformer laboratories in Cape Town, Johannesburg and Durban.

Pierre's passion for all things laboratory spans more than 25 years of his career. Prior to joining WearCheck, he managed the Powertech Transformer Laboratory for 13 years, expanding it to cater for testing and calibration processes in the transformer industry and boosting the lab's international participation in training, audits and conferences.

Pierre's many qualifications include N6 (aircraft instruments, mathematics), N5 (electronics, digital electronics), a range of transformer oil- and material testing categories as well as several metrology certificates.



Pierre le Roux has been appointed transformer laboratories manager at WearCheck

Marketing magic

Marketing manager Vanessa Evans recently joined the WearCheck family, bringing with her a wealth of marketing experience. Armed with a BA Honours Degree, Vanessa's career has spanned marketing in several industries, including security, hospitality, auditing and tax, but predominantly in the engineering sector.



Vanessa Evans has joined WearCheck as marketing manager

Lube Master

Corné Holtzhausen is the newest member of the Lubrigard team, where he serves as a senior technician. Corné conducts on-site visits to advise customers how best to manage their lubricants and extend their life through optimal solutions around selection, storage, transportation, filtration, and replacement. Bringing with him a wealth of experience in the lubricant arena, Corné worked on R&D and implementation of on-board kidney systems in earth-moving equipment, and other filtration projects prior to joining WearCheck. Corné is a qualified electrician with experience at fitting and turning, and mechanical (motor trade), and is currently studying for his millwright certification.



Corné Holtzhausen is WearCheck's senior technician in the Lubrigard team

PRODUCT PICK: ROPE TESTING

WearCheck's Advanced Field Services Division (AFS) has expanded the company's offering of highly specialised condition monitoring services. We will feature different AFS services in future issues of Monitor. Here, we discuss Rope Condition Assessment (RCA), where the integrity of steel wire ropes is tested to OEM or international standards.

GETTING TO KNOW THE ROPES

By Paul Musgrove, Rope condition assessment (RCA) manager, WearCheck

WHY TEST ROPES?

To ensure the required safety standards are met, the RCA division's testing complies meticulously with the strict regulations set out in various SANS codes, including SANS 10293:1996 Code of Practice for Steel Wire Ropes, which states that, "Conservatism must prevail where the safety of people or the continuity of production is involved and great accuracy is not achievable. For the condition assessment operator, the most important issue is reliability of defect detection in terms of the prescribed standard. Sound knowledge and understanding of component behaviour under the given service conditions is indispensable to all parties concerned."

THE ROPE TESTING PROCESS

Paul Musgrove, WearCheck's RCA manager, outlines the testing process. 'We use a standard set of instruments to test a variety of different steel wire ropes. This includes a magnetic rope test instrument, which is affixed to the rope.

'It magnetises the steel wire rope, feeds back information to an on-site computer, and detects anomalies such as corrosion, broken wires, wear, plastic deformation and many other anomalies that can occur in steel wire ropes.

'We assess how much of the original breaking strength has been lost in a steel wire rope which has been compromised. The anomalies are calculated and test results analysed, and we advise the rope maintenance team immediately where corrective action is needed.'

Non-destructive test methods are conducted on-site, so that perfectly healthy ropes continue in their normal operation until an anomaly is detected.

HOW OFTEN SHOULD ROPES BE CHECKED?

The Department of Mineral Resources (DMR) has legislated the frequency for the legally-appointed engineer to conduct an examination of a steel wire rope every 30 days, and not exceeding every 40 days to test steel wire ropes. WearCheck's RCA inspectors stick to a regular testing schedule of all the steel wire ropes in their care.

WHO USES RCA?

RCA is conducted largely in the mining industry, where double drum winders, chair lifts, elevators and other roped components are regularly checked. The Table Mountain Aerial Ropeway is also monitored by WearCheck.

Also, rope manufacturers rely on RCA as a means of ensuring compliance with quality specs during the quality assessment (QA) process in the production of new ropes.

WHO CAN CONDUCT RCA TESTS?

The process of qualifying as an RCA inspector is particularly rigorous to ensure that extreme safety measures are in place. There are currently only 12 people in South Africa who are qualified to conduct these tests, and six of these inspectors work at WearCheck.

The highly specialised certification process calls for an artisanal qualification, an N5 certificate, at least 18 months' supervised work experience in the industry, and two written and practical exams which must be passed with a minimum of 75%.



Paul Musgrove, RCA manager:
WearCheck's Advanced Field Services



WearCheck technician Roger Henwood (a SAQCC RCA level 2 senior rope inspector) uses a magnetic rope test instrument to test the integrity of steel wire rope. Looking on is rigger assistant from the mine

OUT & ABOUT



WearCheck training consultant Jan Backer recently conducted an on-site oil analysis training course for delegates from Moolmans at the Tshipi Borwa Mine in Kathu

LONG SERVICE

DEDICATED TEAM MEMBERS CELEBRATED

Long-serving team members are major assets for WearCheck, and the company really appreciates the many faithful years of service.

expertise, WearCheck is able to provide our customers with top class service.

Applauding the loyalty of committed team members, HR manager Michelle Padayachee expressed gratitude on behalf of the company. 'Your dedication is highly appreciated. With your knowledge and

'Some very important work anniversaries were recently attained. Laboratory supervisor Vigie Manikum is our longest-serving employee – she has worked for us for 45 years! Congratulations Vigie!'

VIGIE MANIKUM VIGIE CELEBRATES 45 YEAR INNINGS

It was in 1975, 45 years ago, that laboratory supervisor Vigie Manikum first stepped through WearCheck's doors.

Now that may seem a long time to some – more than a lifetime, in fact! – however, Vigie has enjoyed her years in the WearCheck family, and, as she quips, 'Time flies when you're having fun!'

Vigie's major milestone has gained recognition and congratulations from colleagues, peers, friends and associates with whom she connected during her career over the past four and a half decades. Messages of support have poured in from far and wide.

What kicked off the career of the company's longest-serving employee?

Vigie takes up the story, 'At 16, I matriculated. At 17, I began helping my dad, where he worked in the laboratory at Natal Canvas. In 1975, we saw a job ad in The Mercury, and my mom encouraged me to call. I was interviewed by Gary Brown on the Thursday, and by Friday, I was employed at WearCheck!'

The company grew, and so did Vigie's responsibilities. She worked her way up from office worker through various positions in the lab to laboratory supervisor in 2000 – a post she has skilfully held for twenty years.

As former UK Prime Minister Winston Churchill observed, 'Listing your personal milestones is like storing a pocketful of sunshine for a rainy day.'



Laboratory supervisor Vigie Manikum has worked at WearCheck for 45 years

Vigie, you certainly are a pocketful of sunshine for WearCheck! Thank you and keep shining brightly.

RICHARD VAN VUUREN, 40 YEARS

It was four decades ago, in 1980, that Richard van Vuuren began his career with Anglo Field Services (now WearCheck), growing from apprenticeship to electrician, and working his way up to his current position as senior machinery inspector.

As part of WearCheck's Advanced Field Services (AFS) division based in Klerksdorp, Richard is responsible for conducting daily assessments on a variety of machines to ensure that they consistently comply with safety requirements.

Conveyer belts, compressors, main fans, chair lifts, incline winders – these are just some of the systems that Richard and his team assess to ensure that they comply with the operational stipulations of the Department of Minerals and Resources.



Richard van Vuuren has worked at WearCheck for 40 years

PATRICIA NCIBILIKA, 35 YEARS

After a five-year stint on kitchen duties, Patricia Ncibilika was promoted to her current role of sample room assistant. She opens all the courier bags containing the oil samples, marks and batches them and submits them to the lab for testing.

Her memories of being part of the WearCheck family are happy ones and include a rather startling moment when she once opened a courier bag containing samples, and a live frog leapt out!



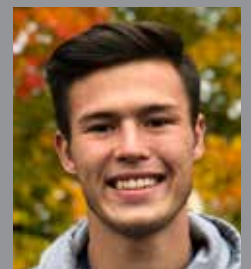
Sample room assistant Patricia Ncibilika has worked at WearCheck in Durban for 35 years

WEARCHECK TECHNICIANS EXCEL

We are proud to announce that two of our Reliability Solutions technicians have successfully passed their Vibration Analysis CAT II training. Hearty congratulations to Dontaé Badenhorst and Hannest Koegelenberg.



Hannest Koegelenberg is a Level 2 vibration analyst with WearCheck, currently stationed at Lethabo Power Station



Dontaé Badenhorst is a level 2 vibration analyst with WearCheck, currently based at Neopak Rosslyn in Pretoria

The advantages offered by synthetic oils are most notable at either very low or very high temperatures. Good oxidation stability, higher viscosity index and a lower coefficient of friction (some synthetics) permits operation at higher temperatures. The higher viscosity index and lower pour points permit operation at lower temperatures.

From the book “*Oil Analysis Basics*”

* For further information on synthetic oils, please see WearCheck Technical Bulletin no. 12 titled *An introduction to synthetic oils*.

It is available for download here: <https://www.wearcheck.co.za/useful-info/publications/technical-bulletin.html>

WEARCHECK LAUNCHES HEALTHCHECK DISINFECTANT TUNNEL IN FIGHT AGAINST COVID-19

The global Covid-19 pandemic currently wreaking havoc on every continent’s health system and economy has elicited many coping mechanisms, mainly to delay the onslaught of the virus on populations through lockdown and social distancing.

How can South African companies begin operating again and ensure the health of their employees?

In answer to this fundamental question, condition monitoring specialists, WearCheck, have created a unique HealthCheck disinfectant “d” tunnel which can be situated at the entrance to work-sites or public spaces, and which sprays every person who enters with human-friendly disinfectant.

HealthCheck d-tunnel designer Chris Hattingh, technical consultant at WearCheck, believes the tunnel will assist mines, transport and construction companies, airports, stations, hospitals, schools and other industries to re-open safely by ensuring employees do not bring the virus into the workplace.

Says Hattingh, ‘The HealthCheck d-tunnel sprays people with a “non-harmful” sanitiser known as B-safe HOCl – it is the only known sanitiser which kills all pathogens, including COVID-19. It is 100% safe for use on humans, including the hands and face, and even on food. It can be safely sprayed right into the nasal passage and into one’s mouth without side-effects.



WearCheck’s HealthCheck disinfectant tunnel offers a practical solution to removing harmful viruses, including COVID-19, from people entering public spaces

‘When workers, miners, pupils or any groups of people pass through the HealthCheck d-tunnel, it protects the whole group from infection by the corona virus – once they pass through the spray system, any viruses are eliminated, and that person does not pose a contamination threat to those around them.

‘This is a practical solution for companies to re-open safely as lockdown restrictions begin to ease. It is a sure way to eliminate risk and limit viral infections, thereby keeping our workforce healthier and helping South Africa’s hard-hit economy to make a come-back.’

The HealthCheck d-tunnel is available in two versions – a heavily-engineered model designed to accommodate large volumes of foot traffic, as well as a “light” option for smaller organisations.

Companies have the option to personalise the light version with their own logo and slogan.

The HealthCheck d-tunnel does not need an operator. A simple 230 volt pressure pump dispenses the spray, while the tunnel is corrosion-resistant and has variable settings for the misting intervals and spray times.

The sanitisation system has many benefits, including these: it is non-flammable, non-toxic, it is ecologically friendly, and can be disposed of in municipal drains without adverse effects as it degrades to the quality of source water. There are no known health hazards, and no dermal irritation factors and no eye-irritants.

The disinfectant can be dispensed to other locations using WearCheck’s range of portable systems and pumps, ensuring that on-site spaces such as offices, training centres and meeting places are virus-free.

For further information, or to order a HealthCheck disinfectant tunnel, please contact Chris Hattingh on +27 (0) 83 625 0808 or crish@wearcheck.co.za

UPCOMING EXPOS

The global Covid-19 situation continues to play havoc with event planning. If the following events do take place as scheduled, WearCheck will be present:

- Windaba 2020: 26 – 27 October
- Investing in African Mining Indaba: 01 Feb – 04 Feb 2021 at the CTICC (Cape Town International Convention Centre)
- Condition Based Maintenance (CBM) conference 2021 (date TBA)

FAREWELL

Some of WearCheck's family members have recently entered their golden years - we wish them very well for their retirement and thank them heartily for many years of loyal service to the company.



Diagnostician Daan Burger worked at WearCheck for 26 years

DAAN BURGER

Before retiring earlier this year, diagnostician Daan Burger diagnosed more than 600 000 samples while working at WearCheck for 26 years.

Daan's qualifications included a NHCT T4 and a diploma in Datametrics, along with a wealth of technical experience and a special interest in the aviation sector. His extensive knowledge enabled him to contribute many technical articles, for example on the intricacies of varnish, and to conduct presentations on the workings of aeroplane engines.

For Daan, it was exciting to witness how condition monitoring technology evolved as time progressed, and to be part of the WearCheck team that always remains abreast of the latest techniques.

The highlight of his career? 'I found it very satisfying to help people in charge of expensive machinery to prevent disaster through condition monitoring, and therefore save them a lot of money and time.'

PETER CARTY



Field service diagnostician Peter Carty joined the WearCheck family in 2002, and spent 18 years working in the team

KAY PILLAY



Credit supervisor Kay Pillay worked at WearCheck for 23 years, after joining the company in 1997

ROB SAHLI



Transformer technical manager Rob Sahli retired from WearCheck after 19 years

Upskill your workforce with WearCheck training

WearCheck runs a range of oil analysis 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.

To book a WearCheck training course, please contact Michelle van Dyk on training@wearcheck.co.za or call (021) 700-5460 or 082 381-3321

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
Lean Maintenance Planning	1
Operator Asset Care	1
Transformer Oil Analysis	1
Oil Analysis 1	2
Oil Analysis 2	1
WearCheck Practical (English / Zulu)	½
WearCheck Customised	

RELIABILITY SOLUTIONS TRAINING – WHY DO IT?

Have you ever wondered what those squiggly lines on your vibration analysis reports are, or tried to make sense of the circular plots and auto-correlation tools in your software?

Well, fear no more! We offer training programmes to enlighten you and help you become a more effective and capable reliability engineer or vibration analyst.

RELIABILITY

For Reliability Engineers, the Mobius Asset Reliability Engineering training series offered by WearCheck is based on ISO55000 and teaches you the skills to effectively increase your plant's reliability.

The courses cover topics including

- Strategy and planning your reliability programme,
- People Management,
- Defect Elimination,
- Asset Strategy Development,
- Works and Spares Management,
- Precision Skills
- Condition Monitoring.

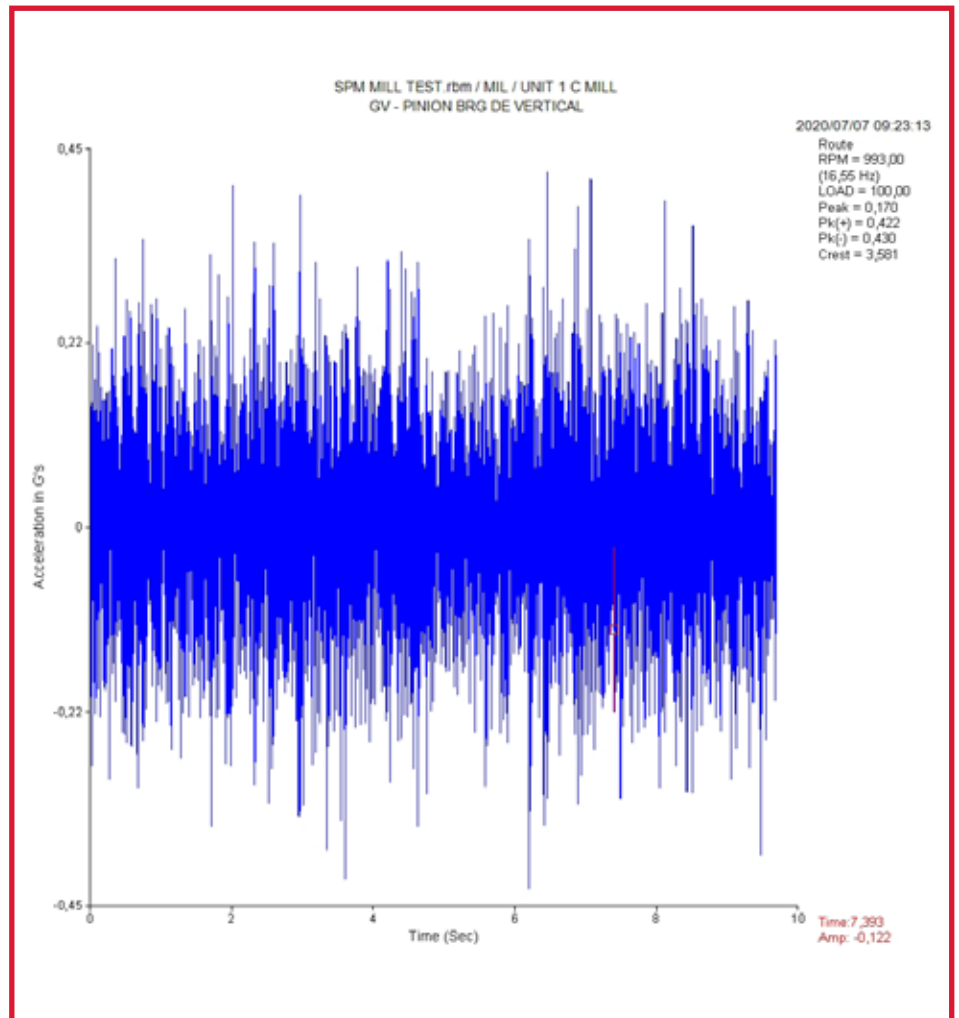
VIBRATION ANALYSIS

Our Vibration Analyst Specialist courses cater for the different levels of vibration training, and cover in depth the topics required to successfully analyse vibration.

There's an old adage that goes "Garbage in equals garbage out". Well, we have noticed many instances in industry where the wrong decisions are made because of insufficient data, or failures are missed by incorrectly-set parameters. In other words, if incorrect monitoring and analysis decisions are made, then the end result will be worthless. This can be remedied with the right training – upskilling vibration analysts reduces the chances of incorrect decisions being made.

As vibration and monitoring technology becomes exponentially more complex, it is essential to stay abreast of new techniques and equipment by undergoing regular training courses.

The tools that are used to capture vibration data are Digital Signal Analysers. After completing a vibration analyst training course, the analyst is empowered to know the capability of his equipment, understands signal processing, can fine-tune the sampling process and processing of the captured time waveform. In this manner, a successful vibration analysis programme is virtually guaranteed.



One of the interesting topics covered in the vibration analysis courses is the proper set-up and analysis of waveform, which is the building block of any vibration reading. Understanding the waveform and how to capture a proper waveform based on application is an essential skill for any analyst.

With all this said, the face of training during the global pandemic has changed, facilitating a transition from the classical classroom to online training. While classroom sessions are still possible with the correct Covid-19 protocols in place, these days the reality is self-paced online training and virtual classrooms. For condition monitoring training, this is the case. All our training has been adapted to be applicable, accessible and relevant using the available platforms.

Not only the classroom environment, but also the industrial environment, is changing with the range of online and wireless sensors that are being implemented.

How do you, as a user, make an informed decision on what to choose and what to ask for? Education is the answer.

Contact our trainers to for more detail and also to make sure that you attend the right course that will propel you forward in your aspiration to become a leader in reliability solutions and condition monitoring.

WEARCHECK 2020 TRAINING

OIL ANALYSIS COURSES

* Due to the ongoing Covid-19 situation, please contact WearCheck to confirm whether the courses will be held at a venue or online, as we strive to comply with lockdown regulations and keep our course delegates safe and healthy.

	Oil Analysis 1: Understanding oil and its analysis	Oil Analysis 2: Report interpretation
Course length:	Two day workshop	One day workshop
Namibia	8, 9 September	10 September
Gauteng	13, 14 October	15 October
Northern Cape	10, 11 November	12 November

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, please view Training at www.wearcheck.co.za. To book the above courses, please contact Michelle van Dyk on training@wearcheck.co.za or call (021) 001-2100 or 082 381-3321

PUBLIC / ONLINE MOBIUS COURSES

Course	CPD points	Sep	Oct	Nov
Vibration Analysis – CAT 1	3			
Vibration Analysis – CAT 2	4			
Vibration Analysis – CAT 3	4		5 - 9	
Precision Maintenance - Balancing	2			2 - 3
Asset Reliability Practitioner – ARP A (advocate)	2			
Asset Reliability Practitioner – ARP E (engineer)		30 - 4		
Asset Reliability Practitioner – ARP L (leader)				16 - 20

To book a Mobius training course, please contact Christene on christenef@wearcheck.co.za or call WearCheck Johannesburg on (011) 392-6322.

*All courses are presented at various venues throughout Africa, and many of them have an online option. When booking, please confirm date and venue, as some of these details may change due to Covid-19 restrictions.

All courses can be presented online or on-site at a customer's premises for a minimum of seven delegates. For on-site training, there may be an additional charge for the lecturer's travel and accommodation.

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 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 prinda@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/info/Technical Bulletins](http://www.wearcheck.co.za/info/Technical%20Bulletins)

Planet-friendly option

If you would prefer to receive future issues of WearCheck Monitor and Technical Bulletin via e-mail in pdf format instead of in printed form, please e-mail a request to: support@wearcheck.co.za. This option also applies to printed reports.

Head Office KwaZulu-Natal

No. 4 The Terrace, Westway Office Park,
Westville, KZN, 3610
PO Box 15108,
Westmead, KZN, 3608
t +27 31 700 5460
f +27 31 700 5471
e support@wearcheck.co.za
w www.wearcheck.co.za

Gauteng Office

30 Electron Avenue, Isando,
Gauteng, 1600
t +27 11 392 6322
e support@wearcheck.co.za



www.wearcheck.co.za

South African Branches

Bloemfontein +27 51 101 0930
Eastern Cape +27 41 360 1535
Middelburg/Witbank +27 13 246 2966
Northern Cape +27 66 474 8628
Rustenburg +27 83 938 1410
Steelpoort +27 79 513 9438
Vereeniging +27 16 421 3464
Western Cape +27 21 001 2100

International Branches

Botswana +267 311 6829
DRC +260 977 622 287
Ghana (Tarkwa) +233 20 896 8484
Ghana (Kumasi) +233 54 229 8912
India +91 44 4557 5039
Mozambique +258 84 697 7006
Namibia +264 81 229 6926
Pakistan +92 32 3425 7278
UAE +971 6 740 1700
Uganda +256 78 529 6994
Zambia +260 212 210 161
Zimbabwe +263 24 244 6369



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