

# WEARCHECK IS GREEN AT HEART

At WearCheck we embrace earth-friendly best practice in every facet of our business model – as an extension of our ISO 14001 certification for environmental consideration, and because we care about our planet.

Our latest environment-friendly action is the installation of a 2 500 litre JoJo tank outside our Pinetown laboratory, which harvests rainwater from the roof of the building. This water is then used to flush the toilets.

Quality administrator Prinda Narasi explains, 'The tank has a reserve of 750 litres of municipal water to keep the system working even if there is not enough rain. We estimate that by substituting municipal water with rainwater, this will save many thousands of litres annually.

'Furthermore, we meticulously ensure that none of our process waste – including plastic waste – ends up as landfill. Instead, all our plastic oil sample bottles, caps and cores are recycled. They are melted down into pellets, which are used to manufacture industrial products such as drain grids.

'The oil from the oil samples that are submitted to WearCheck is not simply discarded but is also recycled. After the oil and water are separated, the oil is processed and then re-used in other applications. The oily tissue is converted to refuse-derived fuel and is used, for example, as a fuel for cement kilns.

'Another eco-friendly practice is that we hand all plastic courier bags and office paper to a recycling company,' says Prinda. 'We will continue to explore new ways to decrease WearCheck's footprint on our planet.'



*Getting tanked: WearCheck has embraced earth-friendly practice in every facet of our business model. Here, quality administrator Prinda Narasi (left) and Siphwiwe Mazibuko (stores) give the company's new rainwater harvesting tank the thumbs up*



*WearCheck's Sizwe Ndlovu points out the company's underground tank, where used oil samples are collected before being recycled*

## WearCheck passes Honeywell audit once again

WearCheck provides condition monitoring services to many sectors, some of which are highly specialised.

One of WearCheck's long-standing customers in the aviation arena is Honeywell Aerospace – a global company that invents and manufactures technologies that address some of the world's most critical challenges around energy, safety, security, productivity and global urbanisation.

Honeywell's SOAP (spectrometric oil analysis programme) laboratory engineer Perry Rexroad, from Phoenix Arizona, recently visited WearCheck's Pinetown laboratory to conduct an audit of the process of preparing the oil filters for analysis as well as laboratory instrument accuracy.

For more than 20 years, WearCheck has analysed oil samples and filters from Honeywell's aircraft components, and our diagnosticians have based their maintenance recommendations on these results.

As this work is unique and specialised, Honeywell requires that our diagnosticians are specifically trained and certified to diagnose their samples, and

that they undergo regular assessment to earn re-certification.

During the audit, WearCheck's three existing Honeywell diagnosticians (Daan Burger, Ravi Chetty and Steven Lumley) were successfully re-certified, and Ashley Mayer, the newest member of the diagnostic team, also received his Honeywell certification.



*Aerospace audit: Perry Rexroad (left) of Honeywell in the USA conducted an audit in WearCheck's Pinetown laboratory recently. WearCheck's three existing Honeywell diagnosticians (Daan Burger, Ravi Chetty (inset) and Steven Lumley (right) were successfully re-certified, and Ashley Mayer (at microscope) received his certification*

# MAKING HEADWAY

Meet WearCheck's newest scientist – Vincent Sithole. He joined the company last year as a research and development assistant and has recently been promoted to junior chemist at WearCheck's Pinetown laboratory.

Vincent is working on several interesting research projects in the lab, one of which is the assessment of the determination of glycol in used engine oil through headspace gas chromatography.

Vincent explains, 'The presence of ethylene glycol in used engine oil is an indication of antifreeze coolant leakage into the crankcase of an internal combustion engine, thus predicting engine-wear problems, therefore

this is an effective preventive monitoring tool.

'Glycol coolants break down in a high temperature engine environment, leading to the formation of acids that, in turn, attack nonferrous bearing surfaces, causing reactions with oil anti-wear and antioxidant additives.'

Vincent holds a Master of Synthetic Inorganic Chemistry degree, and notes with interest that his WearCheck lab work dovetails neatly with the subject of his thesis and published peer-reviewed journal articles – phosphorus/sulphur metal compounds (applied as antioxidants and anti-wear



*Vincent Sithole was recently promoted to junior chemist at WearCheck*

additives in petroleum products).

Before joining WearCheck, Vincent had embarked on his PhD while working as a teaching assistant at the University of KZN in Durban.

## TWO MILLION SAMPLES AND COUNTING

WearCheck couldn't be prouder of diagnostic manager John Evans, who recently diagnosed his two millionth oil analysis sample.

John diagnosed his first sample back in February 1983 when he worked for Barlows in Botswana. After a stint with De Beers in

Botswana, also in the oil analysis field, John joined the WearCheck team in 1989 as a diagnostician.

His promotion to diagnostic manager in 1997 meant his workload included a bit more admin, however, this did not slow down his sample diagnosing!

Not only has John clocked up the impressive sample diagnosis count, he has also authored more than 30 of WearCheck's ever-popular Technical Bulletins. Many of John's articles on condition monitoring have been published, and he has devised many of the company's customer training manuals. John has also published a book on oil analysis.

Whilst we don't have official statistics, we do know that it is extremely rare on a global level to have diagnosed this quantity of samples, therefore John's achievement aligns him with only a handful of top diagnosticians globally who have reached an equivalent milestone – among them, fellow WearCheck diagnosticians Michelle Allis and Rowan Maartens (recently retired).



*WearCheck's diagnostic manager John Evans recently diagnosed his two millionth oil analysis sample, ranking him alongside only a handful of top diagnosticians globally who have reached an equivalent milestone – among them, fellow WearCheck diagnosticians Michelle Allis and Rowan Maartens (recently retired)*



*Gert Nel, diagnostician, has been promoted to branch manager of WearCheck's transformer oil analysis laboratory in Cape Town*



*Agnes Swanepoel has joined WearCheck Rustenburg to handle business development and technical sales in the region*



*Ashley Mayer has re-joined WearCheck Pinetown as a diagnostician*



## WHAT IS THE PARTICLE QUANTIFICATION INDEX (PQI)?

The analysis of contaminants, wear metals and additives in used oil paints an accurate picture about the condition of the oil and the machinery that it lubricates.

The determination of the concentration of the parameters mentioned above is expressed in PPM (parts per million), 1 PPM is equal to 1/10000th of 1%. These concentrations (e.g. Fe = 100 PPM) are measured with a spectrometer, typically an ICP (Inductively Coupled Plasma) spectrometer. However, there is a fundamental limitation to measuring the concentration of wear debris with this technique – because of the way that the instrumentation operates, particles greater than about 5µ cannot be measured. This is because the sample is introduced into the instrument as an aerosol and the droplet size is of the order of 5µ. It is obvious that an abnormal wear situation could exist with large wear particles present, but the iron concentration might be low. i.e., all the wear particles are greater than 5µ.

The solution, then, would be to filter all oil samples through a 5µ membrane and examine the debris under a microscope. This practice is highly labour intensive, both in terms of preparing the membrane and in terms of examining the debris. To keep costs down and to make turnaround time as quick as possible without sacrificing quality, the PQ is used.

The PQI (Particle Quantifier Index) is a bulk magnetic index of the oil sample. The oil sample bottle is shaken and then placed in the instrument which uses a magnetic field that is disturbed by any ferrous (magnetic) material in the sample, irrespective of size. The extent to which the magnetic field is disturbed is proportional to the total ferromagnetic content of the oil. The PQ is a unitless number, but it is quantitative and can be trended, the higher the number the more ferrous debris present. Although the PQ is related to the total ferrous content of the sample it is difficult to express this as an actual concentration in mg per litre. This is because different iron and steel alloys have different magnetic properties.

Although the PQ is a quantitative measurement, the laboratory uses it as a screening test, if the PQ is over a certain failure limit then the oil will be filtered through a 5µ membrane and the debris examined under a microscope; a qualitative description of the debris is given in the diagnosis.

The failure limits depend on the type of component that the oil has come from, a turbine is a far more delicate system than a gearbox. To give an example, the failure limit for a turbine is 25 and the failure limit for a gearbox is 250. These failure limits have been determined from correlation studies of tens of thousands of samples where both a PQ and an MPE (Microscopic Particle Examination) have been carried out.

A PQ measurement is carried out on all samples and approximately 20% of the samples fail, of the MPEs carried out on this 20%, roughly half would be expected to be normal.

In terms of non-magnetic wear material such as white metal or copper/brass/bronze, it is very unusual to find a non-ferrous metal wearing against another non-ferrous metal,

iron tends to be the major wearing element in all mechanical systems. Often, non-magnetic material becomes impacted into ferrous wear debris during the wear process so even non-magnetic material can have a magnetic signature.

Although the PQ is quantitative, the actual readings can be subject to fluctuations. This is because a few large particles with fast settling rates may be present with many small particles with slower settling rates. Getting a homogeneous mixture to measure accurately and consistently is no easy task. So, the readings can be trended but don't expect any nice straight lines.

A high PQ could be as a result of a lot of very small wear particles and, in this case, the iron would be very high. This indicates the onset of an abnormal wear situation. As wear progresses, larger particles will start to be generated and the PQ will increase, but the iron ppm might not as the particles are too big to be detected by the spectrometer. Eventually visible debris will be noted in the MPE.

*By John Evans, WearCheck diagnostic manager*



*New PQ. Getting PQ index readings for used oil samples is as accurate as ever at WearCheck. The PQ machine was recently upgraded in line with the company's policy of ongoing investment in new laboratory technology. Here, laboratory assistant Aaron Mchunu operates the new PQ*



### Management review

To keep the wheels turning smoothly and all the different departments working in synergy, WearCheck's management team meets regularly. The management review team members were snapped at their latest review meeting outside the Pinetown laboratory.

*Management review team (from right to left): Meshach Govender, Neil Robinson, Prinda Narasi, Eddie Perumal, John Evans, Juliane Strydom, Scott Sowman, Steven Lumley, Philip Schutte and Michelle Padayachee*

# EARN CPD POINTS WITH WEARCHECK TRAINING

**DID YOU KNOW?** When you complete Mobius training courses at WearCheck, you can now earn CPD (continuing professional development) points – this was recently approved by the South African Institute for Mechanical Engineers (SAIMechE).

The Engineering Council of South Africa (ECSA), in agreement with international engineering bodies, stipulates that South African engineering professionals must undertake CPD activities to keep abreast of expert knowledge, to demonstrate competence and to renew professional registration.

WearCheck has always placed value on ongoing skills training and knowledge development, and the company has presented several levels of oil analysis training for many years. In 2015 WearCheck became an accredited training partner for the internationally-acclaimed Mobius Institute, and began offering condition monitoring courses.

The SAIMechE has approved the following WearCheck courses for CPD points:

Course	Duration	CPD Credits
Introduction to Vibration	1 Day	1
Precision Balancing	2 Days	2
Vibration Analysis ISO CAT I	4 Days, incl. exam	3
Vibration Analysis ISO CAT II	5 Days, incl. exam	4
Vibration Analysis ISO CAT III	5 Days, incl. exam	4

WearCheck's Mobius trainer Dennis Swanepoel, who was among the first on the continent to complete his Vibration ISO CAT IV certification, is a qualified mechanical technician and has more than 20 years' experience in the reliability improvement field.

Says Dennis, 'The SAIMechE approval for CPD points is an excellent endorsement of our courses. Their ratings will be revised in 2021. They are currently validating the three-day Asset Reliability Practitioner ISO CAT course for CPD points, too.

'For a plant to operate at maximum reliability, it takes competent and well-trained technicians who apply their world class knowledge and skills. WearCheck's training courses can enhance staff competency to boost the bottom line of the business.'

## LUBE TIP OIL LEVEL AFFECTS FOAMING

Before adding antifoam agents to get a handle on a foaming problem in a circulating system, one of the first things to check is the oil level. Both too much, and too little oil can lead to a foaming problem. Too much and there may be a piece of the machine touching the surface of the oil that shouldn't, churning and slinging the oil (high-speed pinion in gearbox). Too little oil, and a vortex can form inside the reservoir at the inlet for the circulating pump, sucking in air. If you cannot tell the level due to the foam, you may be able to stick a clear piece of tubing straight down to the bottom of the reservoir. Cover the end of the tubing to create a seal and pull it out to observe the actual oil level. Don't put anything into an oil reservoir unless you are certain of its internal configuration and components. – *courtesy of Van Richard, Sr. Reliability Engineer, Georgia Gulf Corporation*

## PRODUCT PICK Illuminating paraffin test kits

Illuminating paraffin (IP) is a highly-refined hydrocarbon fuel which has been formulated to burn cleanly, with reduced charring. It is however, also the main adulterant of diesel.

Because of its chemical similarity to diesel and the lower tax levied on the product, it is often added illegally to diesel to bulk up the volumes and increase profit, by unscrupulous dealers or to conceal the theft of diesel during transport.

Due to its lack of inherent lubricity the addition of IP to diesel has a detrimental effect on pumps and injectors. An eroded injector produces needle dribble and poor spray patterns, which is a major cause of piston crown meltdown. This is a result of the raw fuel burning directly on the piston itself at a much higher temperature than the melting point of the crown.

Poor spray patterns lead to loss of power, sooting, increased fuel consumption and smoke as the bigger fuel droplets fail to burn cleanly. Another effect is that these larger droplets reach the cylinder liner and thin out the lubrication film there, resulting in piston scoring and wear. This also results in dilution of the oil as the thinner oil is pushed past the rings into the sump. The resultant drop in the overall viscosity – and subsequent load-bearing properties of the oil – causes big end bearing wear.

It is therefore highly recommended that you check your diesel for IP contamination before using it. WearCheck offers a simple way to determine the presence of IP in diesel. It works in a similar way to a pregnancy test.

The results appear in the central window: one Line at "C" position indicates that the test is positive, in other words, there is Illuminating Paraffin in the diesel sample. (Please see the left test strip in the graphic).

When two lines appear in the test strip window – one at "C" and one at "T" position, it means that the test is successful, and that there is no Illuminating Paraffin in the diesel sample.

*\*Please note that this test is currently not suitable for testing potential contamination of biodiesel.*



WearCheck's Illuminating paraffin test kit, pictured here, offers a simple solution to determine whether your diesel is contaminated with IP, which is a major adulterant of diesel and can cause untold damage to your engine

WearCheck staff have been to many corners of the globe already this year, presenting papers and conducting customer training. Customers in many corners of Africa have signed up for WearCheck training recently, to enhance their investment in their condition monitoring programme.

## Engine power

Technical manager Steven Lumley conducted training for Cummins, Valvoline and Komatsu recently.

The training for Cummins, which took place at the Cummins South Africa training facility in Johannesburg, was customised especially for Cummins. Topics included an introduction to oils, additives, application storage, the tests performed and the relevance of each one, and well as the interpretation of test results.

Cummins develops  
engines for specialist

applications such as on highway, off highway and marine. Engaging the best possible methods for keeping the engines running at optimum output is of great value, therefore WearCheck training is an important part of the maintenance strategy.



A team from engine manufacturers Cummins recently underwent condition monitoring training by WearCheck's technical manager Steven Lumley (third from left)

## Seoul sisters and brothers

Members of the International WearCheck Group (IWCG) get together each year in a different member country to share ideas

about the latest technological innovations, discuss new condition monitoring trends, learn about new laboratory practices and instruments and to keep the international WearCheck business network going.



WearCheck MD Neil Robinson (back row, fifth from left), along with delegates from Canada, USA, Hungary, UK and Argentina attended the 2018 International WearCheck Group (IWCG) meeting in Seoul, South Korea in July

## African Utility Week 2018



Ian Gray (right) and Des Rodel of WearCheck's Transformer Chemistry Services division were at African Utility Week 2018 to showcase the company's transformer condition monitoring programme

## IMVAC PRESENTATION

Dennis Swanepoel of WearCheck's reliability solutions division in Johannesburg was invited to present two papers to delegates in Antwerp, Belgium, who were attending the latest IMVAC (International Machine Vibration Analysis and Condition Monitoring Conference).

Paper one, titled 'Tried and Tested Tube Mill Monitoring', focused on tube mills used for coal milling in the power generation industry.

In a mill, the drive train typically consists of a motor (>2MW), a gearbox (>8ton) and a girth gear(>7meter), all driving a tube mill with a >70ton ball load. Power generation losses typically amount to 135MW if the mill is shut down unexpectedly.

With more than 10 years of experience in the field of tube milling applications, Dennis was able to discuss various special methods in the fields of oil analysis, vibration analysis, advanced signal processing, operational deflection shape analysis, thermal analysis and operational visual inspections.

Paper two was called 'Is Video Amplification Real?' The analysis of two case studies was discussed, where video amplification was used, and this data was then compared to traditional operational deflection shape analysis.

Examining the two cases, a correlation between the two technologies was evident, and the different merits of each technology was discussed.

Dennis elaborates, 'I shared all my experience obtained during the data collection processes, to help other aspiring condition monitoring technicians know what to expect, and how to make an informed choice of technology to address specific condition monitoring problems.'



Dennis Swanepoel of WearCheck's reliability solutions division recently presented two papers to delegates at IMVAC in Belgium

## UPCOMING EXPOS

Please come and visit WearCheck at stand 6 at **Electra Mining Africa** in Joburg in September, and at **Windaba** in Cape Town in November.



# SIZWE RACKS UP 40 YEARS AT WEARCHECK



*WearCheck's storeman Sizwe Ndlovu has worked at the company for 40 years*

**1978** – the first “micro on a chip” is patented in Texas, Argentina wins the FIFA World Cup, Sweden bans aerosol sprays, and the South African Railways even makes history! The SAR Class 6E1, Series 4 locomotive no. E1525 reaches a speed of 245kph – a still-unbeaten world rail speed record on 3 feet 6 inches Cape gauge track.

This is a snapshot of the world in 1978 – the year when Sizwe Ndlovu joined the WearCheck family, 40 years ago.

At that time, WearCheck had begun initially as a soil analysis company, which later changed to oil analysis in 1976.

So, at the then fledgling oil analysis company, Sizwe began his career as stores assistant, where he was tasked with keeping the stores neat and tidy and clean.

Today, and as the company has grown, he is now in charge of the store room, as well as holding many other responsibilities, which include looking after all the chemicals used in the laboratory. He

re-orders chemicals and gas cylinders when stocks get low and fills all the machines with chemicals. Sizwe has completed a course in the control of Hazardous Materials and Basic Fire Fighting training.

The only employee who has been at WearCheck longer than Sizwe is laboratory supervisor Vigie Manikum, who is in her 42nd year with the company. And, keeping it in the family, Sizwe's brother Wellington Ndlovu has also reached an important milestone this year – he celebrates 35 years with WearCheck.

It doesn't end there – there are also four employees who have spent an impressive three decades working at WearCheck – Sheila Naidoo, Prinda Narasi, Lyn Gengan and Sheila Moodley all clocked up 30 years in the Pinetown office this year.

Managing director Neil Robinson expressed gratitude for long term dedication from staff. 'I offer sincere congratulations to Sizwe for staying with us for 40 years, and to Wellington, for being here for 35 years.

'Staff who remain for long periods really get to know our business, and our customers, inside and out. This reduces the need for retraining, and keeps processes running smoothly, which in turn boosts our customer service and helps maintain WearCheck as a successful operation. Thank you to all long-serving members of our family. We feel honoured as, these days, there are not many businesses who can boast about having as many long-time staff members as we do.'



*Stores assistant Wellington Ndlovu has worked at WearCheck for 35 years*



*Senior laboratory technician Sheila Naidoo has been with WearCheck for 30 years*



*Quality administrator Prinda Narasi has spent 30 years with WearCheck*



*Customer support officer Lyn Gengan has worked at WearCheck for 30 years*



*DP admin clerk Sheila Moodley has been employed by WearCheck for 30 years*

## WearCheck opens second Namibian lab

Our newest laboratory is officially open in southern Namibia, bringing to 16 the number of laboratories that we operate in nine countries around Africa and beyond.

Situated at Skorpion Zinc mine near Rosh Pinah, the new lab is strategically placed to answer a growing call for world class condition monitoring services in the region, particularly in the burgeoning mining and construction industries.

The lab is open to any industry requiring used oil analysis and other reliability solutions services. It is fully equipped with the latest instruments and technology and is backed by its own uninterrupted power supply. To enable maintenance managers to make quick decisions, the lab offers 24-hour sample turnaround time.

*Continued on page 7*



*WearCheck Namibia is open for business! Laboratory manager Leandra Smith is standing by to process used oil samples and other condition monitoring services for industrial operations in the southern Namibia region*

# WEARCHECK 2018 TRAINING COURSES

Venue	Oil Analysis 1: Understanding oil and its analysis	Oil Analysis 2: Report interpretation
	Two full days	One full day
Namibia	11-12 September	13 September
Gauteng	16-17 October	18 October
Northern Cape	6-7 November	8 November

Oil Analysis One covers two full days and costs R5 250. Oil Analysis Two and the NetCheck course cover one full day each and each costs R2 650. [Please note that the Oil Analysis Three course will not be run this year]. All courses include course material, refreshments, giveaways and certificates. Prices exclude VAT and are subject to change.

For more details on course content, view Training at [www.wearcheck.co.za](http://www.wearcheck.co.za). For bookings phone Michelle van Dyk on +27 (0)61 223 1708 or email [training@wearcheck.co.za](mailto:training@wearcheck.co.za).

## ON-SITE TRAINING

All courses can also be presented at the customer's premises for a minimum of seven delegates.

WearCheck also offers two more on-site courses:

- WearCheck Practical (in English or Zulu), a half day course costing R650 plus VAT per delegate

## RELIABILITY SOLUTIONS TRAINING COURSES

Mobius training is offered in 153 countries, and is recognised the world over as the standard for reliability solutions technicians. Mobius courses are run by WearCheck on demand. Costs include the examination fee for CAT I and II, and are as follows:

- One day on-site condition monitoring overview: R15 000.00 (RSA only)
- Four day non-certified basic: R10 000.00 preparation for CAT I (including RSA)
- Five day CAT I: R15 000.00
- Five day CAT II: R16 450.00

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

- WearCheck Customised – oil analysis for workshop technicians, a full day course costing R1 525 plus VAT per delegate.

For on-site training, there may be an additional charge for the lecturer's travel and accommodation, if needed.

## ARRANGE A TRAINING COURSE NEAR YOU

Training courses can also be arranged in any of the following areas:

Bloemfontein	Rustenburg
Cape Town	Steelpoort
Kimberley	Botswana
Makopane	Namibia
Middelburg	Tanzania (Mwanza)
Nelspruit	Zambia (Kitwe)
Port Elizabeth	

*\* Prices exclude VAT, and are valid until the end of 2018.*

*Note: the condition monitoring overview courses do not include any training material, and a minimum of six candidates is required for all training courses. There may be an additional charge for the lecturer's accommodation and travel.*

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A second Namibian WearCheck laboratory has provided condition monitoring services to the Husab Uranium Project since 2016. Swakop Uranium, owners of the mining operation, awarded WearCheck a contract to supply and operate an on-site laboratory.

WearCheck MD Neil Robinson is determined to make world class condition monitoring services as accessible as possible to industrial operations on the African continent. 'The learning curve for equipping and operating a remote laboratory has been a steep one, however every project is a learning experience and with each new laboratory, the implementation process is bettered.

'As industry needs evolve, we are constantly redesigning our labs to present reliability solutions in areas which previously seemed almost impossible to imagine having a world-class laboratory present.'

Offering a wide range of condition monitoring services for the mining sector – including used oil analysis – WearCheck Namibia is available for use by other industries, such as quarrying, industrial, transport, power generation and shipping operations.

In addition to two in Namibia, WearCheck's labs can be found in South Africa (six), Zambia (two) and one each in Zimbabwe, DRC, Mozambique, Ghana, Dubai and India.

WearCheck Namibia is situated at Skorpion Zinc mine site, about 25km north of the town of Rosh Pinah and can be contacted via email: [leandras@wearcheck.co.za](mailto:leandras@wearcheck.co.za) or telephone +264 81 229-6926.



*Good sign - WearCheck's Pinetown laboratory and offices recently received smart new signage. The accounts department popped out the front door to inspect it and give their stamp of approval. Pictured (from left) are Megan Nunez, Kay Pillay, Thabani Dlamini, Allison Naidu, Brandon Bisunath and Chamaine Pillai*

# VIBRATION ANALYSTS PASS WITH FLYING COLOURS

Ongoing professional development and training has always been a priority at WearCheck, ensuring that staff stay up-to-date with constantly-evolving technology.

Ten of the company's reliability solutions technicians recently passed their CAT certification through the Mobius Institute, which is a worldwide provider of education in reliability improvement, condition monitoring and precision maintenance. Four technicians achieved CAT 111 certification, while six technicians earned CAT 11 certification.

WearCheck is the certified Mobius training centre for Africa.

CAT 11 students underwent a compulsory 18-month practical experience, followed by four days of lectures and a full day examination. CAT 111 students had to complete a 36-month practical experience, lectures for four days and examinations.

Vibration database setup and fault analysis are the predominant focus of both CAT 11 and CAT 111. The training sessions are practical and hands-on, enabling the technicians to hone their skills and progress to the next level.



These reliability solutions technicians from WearCheck earned their CAT 111 certification: (from left to right) Louis Peacock, Marius Grobler, Eddie Pieterse (Jnr) and Kobus Venter

Technicians who gained their CAT 111 certification are Louis Peacock, Marius Grobler, Eddie Pieterse (Jnr) and Kobus Venter. Those who earned their CAT 11 certification are Adriaan Bouwer, Jovan Combrinck, Nande Magxagxa, Adriaan Schoonbee, Siphon Zwane and Hein Coetzer.

The successful candidates hail from WearCheck bases all around South Africa.

WearCheck's reliability solutions consultant, Mobius trainer and CAT 1V graduate Dennis



These reliability solutions technicians from WearCheck successfully earned their CAT 11 certification: (from left to right): Adriaan Bouwer, Jovan Combrinck, Nande Magxagxa, Adriaan Schoonbee, Siphon Zwane and Hein Coetzer

Swanepoel, is proud of the achievements of his team. 'Well done, guys, now for the next level!'

The Mobius Institute Board of Certification (MIBoC) is ISO/IEC 17024 and ISO 18436 accredited, providing globally-recognised certification to category I-IV vibration analysts in accordance with ISO 18436-1 and 18436-2.

Mobius courses are also run for customers by WearCheck anywhere, any date, on demand.

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## 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 [prinda@wearcheck.co.za](mailto:prinda@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](mailto: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)

## JOINING TOGETHER TO SUPPORT THE PLANET



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