WEAR CHECK
The Leaders in Oil & Fuel Analysis
MONITOR
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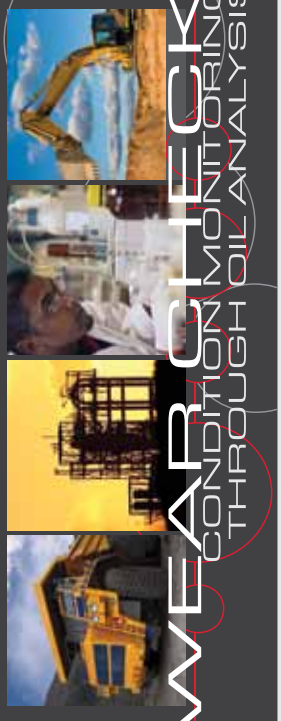
WEAR CHECK
CONDITION MONITORING
THROUGH OIL ANALYSIS



NEW JO'BURG LAB GOES FROM STRENGTH TO STRENGTH

WearCheck's successful new laboratory in Johannesburg recently passed its ISO 9001: 2008 annual re-assessment with flying colours. This maintains WearCheck's status as the only condition monitoring company on the African continent to earn ISO 9001, ISO 14001 certification and ISO/IEC17025 accreditation

Since its launch six months ago, WearCheck's new state-of-the-art laboratory in Johannesburg has outperformed the company's expectations, with month-on-month increases in the sample quantities and flawless accuracy ratings.

The laboratory recently passed a re-assessment of its ISO 9001: 2008 quality certification with no findings. Coupled with the company's ISO 14001:2005 environmental certification and ISO/IEC 17025 accreditation for testing and accuracy, this maintains WearCheck's status as the only condition monitoring company on the African continent to earn official ISO recognition for these three ratings.

Managing director Neil Robinson attributes the laboratory's success to the positive response by customers to the ISO recognitions, and to the dedication of the highly-skilled staff operating the lab.

Lab passes 17025 audit once again

The first management review audit of WearCheck's fuel and transformer oil laboratory, conducted in Johannesburg recently, revealed no findings - meaning that the laboratory's ISO/IEC 17025:2005 accreditation remains intact.

The laboratory was awarded 17025:2005 accreditation during 2012 following rigorous quality assessments conducted by SANAS (South African National Accreditation Systems) on behalf of the ISO (International Standards Organisation). Part of the requirement for maintaining the laboratory's accreditation status is to undergo regular assessment.

Melanie Hynd, quality administrator for WearCheck, is pleased with the outcome of the first audit. 'Through the regular audits, customers can be confident that WearCheck's laboratories are consistently maintaining the required quality and accuracy systems, giving maximum credibility to our laboratory results.'

'Approved supplier' status awarded to WearCheck

Thanks to WearCheck's ISO 9001 and ISO 14001 certification and ISO 17025 accreditation, and strict compliance with the guidelines, the company's status as approved supplier of aircraft engine oil analysis services to Johannesburg-based Vector Aerospace has been made official.

To ensure the safety of airline passengers, Vector Aerospace uses only suppliers who comply with strictly-defined quality-control systems. WearCheck has been conducting oil analysis on their aircraft for about 10 years.

Formerly operating as Pratt & Whitney Canada, Vector Aerospace Africa (Pty) Ltd is a fully-authorised Pratt & Whitney Canada (PWC) Distributor & Designated Overhaul Facility (DDOF) for the PT6A series engines.

Quality Assurance manager for Vector Aerospace, Wessel Pienaar, recently confirmed WearCheck's approval as a supplier. 'We look forward to continuing a sound business relationship,' he said.

ONE MILLION... AND COUNTING!

In February, senior diagnostician Steven Lumley became the fourth member of the WearCheck diagnostics team to have diagnosed a million oil samples. She joins diagnostic manager John Evans and diagnosticians Rowan Maartens and Michelle Allis in reaching this milestone.

'There are very few diagnostics departments anywhere in the world that can boast this level of experience. This WearCheck department consists of seven diagnosticians with a combined 120 years of experience and over seven million samples between them,' says diagnostic manager John Evans, who has spent the last thirty years in the oil analysis field.

'It is important to note that with this degree of expertise, there are very few things that the group has not seen before or can't explain. It also means that should something start to go wrong, either mechanically or with a lubricant, the team will become aware of it very quickly and can aid customers, OEMs, and oil companies alike with a wealth of statistical data and advice.'

Says John, 'WearCheck's extensive footprint and large customer base of data helps us to know whether the problem is restricted to a particular machine, or developing on other sites or with other customers on a local, national or global scale, which can be enormously useful. Our database contains data on almost ten million oil samples and that is a real treasure trove of information.'

Senior diagnostician Steven Lumley (centre, standing) of WearCheck recently diagnosed her millionth sample. In reaching this milestone, she joins diagnosticians Rowan Maartens (left) and Michelle Allis (inset) and diagnostic manager John Evans (seated at computer)

Internal Auditor Awards

Customer support assistants came out tops in 2012 – Lyn Gengan won the Internal Auditor of the Year Award for Pinetown, while Vasthie Naicker won the Gauteng Internal Auditor of the Year Award.

Lyn Gengan, customer support assistant based at WearCheck Pinetown, receives her Internal Auditor award from managing director Neil Robinson

Vasthie Naicker, customer support assistant at WearCheck Johannesburg, was presented with her Internal Auditor award by quality administrator Melanie Hynd

Long service milestone

It was a quarter of a century ago when Sheila Moodley first donned a WearCheck lab coat and started work as a laboratory assistant. She held this position for half her time at WearCheck, then moving into doing data capture for the next half. Sheila recently moved up to debtors accounts in the finance department, as she embarks on her 26th year with WearCheck.

Says Sheila, 'I have really enjoyed working at WearCheck, and am eager to learn more about my new field of work in finance. My favourite memory over the years with the WearCheck family is that nothing is ever stagnant – there is constant growth in the company, which gives one a corresponding opportunity for personal growth.'

Managing director Neil Robinson congratulated Sheila on reaching this significant milestone. 'On behalf of the WearCheck team, we salute Sheila for 25 years of loyal service, and wish her well in her new position.

'Staff retention through skills development is a major priority for us at WearCheck – our many long-serving team members have great insight to various different facets of the business from serving in different departments as their careers develop. This insight benefits our customers through enhanced customer service and a deeper understanding of their businesses over time,' said Neil.

Sheila Moodley has served WearCheck for 25 years

It's a small world

Entrenching WearCheck's worldwide reputation in the fields of oil analysis and condition monitoring, technical enquiries were recently received from:

- A shipping company in Greece
- A power plant in Karachi, Pakistan
- A lube company in Uruguay
- A gold mine in Kyrgystan

STEELPOORT SIGNS NEW SAMPLING CONTRACTS

The WearCheck Steelpoort team is expanding in response to a growing need for on-site sampling in the region. Pictured here are (front, from left to right) Michael Masemola, Captain Makofane, James Tshabalala and Lopi Molangoane, and (back, from left to right) Thomas Mdhlala, Rolet Mashego and Quintin Ras

The WearCheck Steelpoort team is busy working on three big new contracts – taking daily automotive samples from Anglo's Xstrata chrome mines on three sites – Helena, Magareng and Thorncliffe.

WearCheck's world-class Middelburg laboratory, which holds quality certification ISO 9001:2008, then processes the samples and results are presented to the customers in a format of their choice (telephone, fax, email, sms, WearCheck's customer web-site or post.)

Two new sample technicians – Rolet Mashego and Captain Makofane – recently joined the Steelpoort team to assist with the growing list of samples needing to be taken every day.

Technical support consultant Quintin Ras has taken up the challenge of a burgeoning workload.

'Our sampling technicians are very efficient, and have all undergone intense training courses to enhance their technical skills. Our timetable runs daily from 06h30 to ensure that we fit in with the mines' start time of 7am – samples need to be taken before they drain the oil. We already have two bakkies to get our samplers to site on time, and are awaiting delivery of a third bakkie imminently to further enhance our ability to service the region,' said Quintin.

WearCheck harnesses Indian wind power industry

The wind power industry on the sub-continent is blowing up a storm, with a currently-installed capacity of more than 16 000 megawatts, and annual market projections set to reach 5 gigawatts by 2015.

The second annual WindPower India expo took place in Chennai, India in November 2012, attracting leading wind energy experts such as technology providers, policy makers, regulators, turbine manufacturers, component suppliers, developers and service providers.

Steven Lara-Lee Lumley, senior diagnostician based at WearCheck's Pinetown laboratory, attended the latest WindPower India to launch WearCheck's new wind turbine test kit to the international wind industry.

An ever increasing demand coupled with policy priority for renewables has made India one of the most dynamic wind power markets globally.

WearCheck's laboratory in Chennai services several 'wind' clients, the biggest amongst them being Gamesa – a global technological leader in the wind industry.

With a presence in over 40 countries, Gamesa also has production centres in the main wind markets. The company is also a world leader in the development, construction and sale of wind farms, having installed over 5,000 MW and having a portfolio of 25,000 MW in Europe, America and Asia.

Says Steven, 'Wind power is emerging as a truly sustainable and earth-friendly source of energy. The annual equivalent of around 25,000 MW of wind power is roughly equivalent to power generated using more than five million tons of petroleum (TEP) per year and prevents the emission into the atmosphere of about 36 million tonnes of CO_2 per year.

Senior diagnostician for WearCheck South Africa, Steven Lara-Lee Lumley, launched WearCheck's new wind turbine test kit at the latest WindPower expo in India recently. She is pictured here with Nissar Ahamed, manager of WearCheck India

'We are looking forward to offering the same products and services to South Africa's growing wind energy base.'

TECHNICAL TIP: Bismuth – a possible alternative to lead *by John Evans, diagnostic manager*

WearCheck has just become the first oil analysis laboratory in South Africa to offer the spectrometric determination of bismuth levels in used lubricating oils.

For many years 'white metal' (plain or hydrodynamic) bearings have been made of a lead/bronze alloy, usually containing 10% lead, 10% tin and 80% copper. Typical uses of such bearing can be found in big end and main bearing applications in internal combustion engines, and bearings in hydraulic pumps.

The alloy is very effective as a bearing material and relies on the fact that lead is insoluble in the copper/tin (bronze) alloy. The lead forms small pockets in the bronze matrix that deform and smear easily across the surface of the bearing. This lead coating has very low shear properties and forms a solid lubricating surface at high speeds. The soft lead is also good at minimising the effect of abrasive wear and contamination particles as they become embedded in the lead layer.

Typically, these bearings would consist of a lead overlay on a bronze matrix for fatigue resistance with a steel backing for strength.

As effective as these alloys may be, engineers are under pressure to find alternatives to the use of heavy metals such as lead. This has been primarily driven by the European Union under a directive concerning the Restriction of Hazardous Substances. Lead-based alloys for bearing materials are currently exempted from this directive but the race is on to find an alternative to lead.

Some success has been found with the metal bismuth replacing lead in an alloy containing 3% bismuth, 10% tin and 87% copper. The bismuth is also insoluble in the bronze matrix and operates in exactly the same way as lead.

Bismuth is a white crystalline metal with a pinkish tinge and a melting point of 271ºC. Like lead it is very dense, but considerably less toxic. The major producing countries are Peru, Bolivia, Mexico, Canada and Japan.

Since introducing the test in its trial phase, the use of bismuth has been noted in some engine oil samples, usually accompanied by the absence of lead. The analysis of bismuth will be useful in determining the presence of abnormal plain bearing wear in engines, and WearCheck can now offer this service.

Interestingly, bismuth naphthenate has also been used to replace lead naphthenate as an extreme pressure (EP) additive in greases, and sometimes shows up in grease analysis and helps to identify the additive chemistry of the grease.

EXTRA TBN DATA NOW IN SAMPLE REPORTS AT NO EXTRA COST

A new column of information has now been added to oil sample reports generated by WearCheck – the predicted TBN (total base number) result – which falls alongside the real TBN result.

HOW AND WHY ARE BASE NUMBERS MEASURED?

Engines produce acid when they operate (nitrogen and sulphur by-products), and these gaseous products land up in the sump of engines as sulphuric and nitric acids which, if not dealt with, will swiftly corrode bearings and other metals in an engine's internal surfaces and destroy them.

Oil formulators include additives that are specifically designed to neutralise the acids before they can corrode the engine. Typically these include calcium and magnesium overbased sulphonates. Base number is a measurement of the quantity of these additives and is expressed in the units of mg potassium hydroxide required to neutralise 1g of oil, or more conveniently, mg KOH/g. New engine oils have a wide range of starting base numbers from around 6 to over 70 depending on the application. Once a base number drops below a critical value, it is time to change the oil as the protection against acids is now not sufficient to offer the required levels of neutralisation.

Base number (BN) is classically determined by a chemical titration. These methods have been well described in internationally-accepted test methods such as ASTM D2896 and ASTM D4739. Titrations are time-consuming and have moderate to significant environmental impact. As a result, labs which perform a titration on all engine samples must pass this cost on to the customer, and the large additional work load slows down the turnaround time of the sample. Therefore, even though titrations are accurate, many labs have adopted alternative technology to obtain base numbers.

Heading up this new generation of techniques is FTIR, (Fourier Transform Infrared) spectroscopy, which uses highly advanced mathematical models to determine a predicted base number. While very cost-effective, the accuracy of the predicted results is dependent on the validity of the mathematical model and the presence of water and excessive soot in the sample.

THE NEW PREDICTED TBN RESULTS

WearCheck managing director, Neil Robinson, explains, 'Historically, WearCheck has always predicted the TBN of a sample based on the FTIR. Previously, if the predicted result was 6.0 mg/KOH or above we would just add +6 to the report.

'However, if the predicted TBN was lower than 6.0, then an actual TBN was carried out and this real result was displayed on the report. This explains how a report could have contained subsequent sample patterns of +6, +6, 5.8, 6.2, +6 and so on.'

'Previously, we added +6 to the report where necessary, because we felt it was dishonest to merely add a predicted TBN to the report claiming it was a real result – even though this is actually what some laboratories do. It is also risky to claim a predicted TBN result is real, because there are many reasons why a predicted value may differ widely from a real result, especially as the oil degrades or gets contaminated with high levels of water, fuel or soot, which is when you need to know a real result.'

'We are now confident that the predicted result is very close to the real result all the time, at high and low TBNs and even with fuel, soot or water present.'

'After an extensive R & D project by WearCheck's senior chemists using a large database of real results, a more realistic chemical titration and multifaceted chemeometrics, we now no longer use the predicted TBN to "+6" TBN concept.'

Neil continues, 'We have also changed our chemical titration method from ASTM D2896 to ASTM D4739 because the new method is more suitable for used oils. D2896 is designed for new oils and potentially gives higher than true readings when there is wear metal present.'

'Thus, there are now two TBN result columns on the report – a predicted value and a real value. The rules, however, have not changed; we will always predict the value and this will be added to the report under the predicted heading and will be the result we get and not just +6. Again, this was for honesty and transparency, we are not trying to pretend we have done a test that we have not.'

'If the predicted result is 6.0 and below, we will still then do a real TBN using our new ASTM method, and this result will now appear on the report under TBN, while the predicted value will not. However, older samples will still reflect +6.'

'I am happy that WearCheck's use of FTIR and actual titrations combined with the latest technology provides data that is highly accurate, cost-effective and fast. Based on this, our customers can optimise their maintenance decisions.'

A team from WearCheck attended the OilDoc conference in Germany recently. Pictured at the conference venue are (left) John Evans, diagnostic manager and (right) Neil Robinson, managing director of WearCheck Africa. With them is diagnostician Michelle Allis

WearCheck attends international oil conference

A delegation from WearCheck Africa recently attended the prestigious biennial OilDoc conference in Bavaria, Germany, where the latest developments in the fields of tribology, lubrication and maintenance are highlighted, with a focus on preparing for future opportunities and risks in these fields.

WearCheck was honoured to have diagnostic manager John Evans invited to chair the international session on Oil Condition Monitoring.

John's experience of the conference was highly positive. 'The speakers were extremely interesting and well-informed. This gathering of global tribology experts generated lots of valuable input and useful nuggets of information – it was well worth the trip to Europe to exchange ideas with the world leaders in our field,' he said.

MEET THE RELIABILITY SOLUTIONS (RS) TEAM

Meet the RS team... standing, from left to right: Mathys Esterhuizen, Christene Fourie (customer services), Roelf Reyneke, Dennis Swanepoel, Pierre de Villiers, Amos Aphane, Frank Nkuna, Marcel Symons, Riaan de Beer, Gustav Lourens, Marius Grobler, Eddie Jnr Pieterse. Seated, from left to right: Jovan Combrinck, Philip Schutte (RS manager) and Eddie Pieterse

Rest assured... all the condition monitoring services that fall under the new reliability solutions division are being processed by this highly-skilled team of experts. For these analysts and technicians, the performance of specialised services such as vibration analysis, thermography, balancing and alignment, forms part of their daily routine.

The reliability services specialists are distributed around South Africa (in Johannesburg, Witbank, Middelburg, Mokopane, Richards Bay, Lephalale, Rustenburg and Springs), to form a comprehensive network spanning all areas where their services are required, including earthmoving, industrial, transport, shipping, aircraft and electrical industries.

Graduation Day at WearCheck

Five WearCheck Pinetown employees have been studying hard and learning new skills – in addition to fulfilling their normal work duties – via the company's internal ABET (Adult Basic Education and Training) courses.

During 2012, Joe Ngcobo, Gloria Ncama, Wellington Ndlovu and Aaron Mchunu passed the Level 2 certificate, while Elizabeth Mbambo earned her Level 1 certificate. Aaron, Joe and Elizabeth achieved merit passes for their respective exams.

The courses cover computer work, including basic word processing skills and numeracy, amongst other things. As a reward for their achievements in the classroom, the students visited uShaka Marine World at the end of the year, where the highlights of the day were watching the dolphin show and learning about sea creatures.
The students are set to continue with their numeracy studies in 2013.

ABET Facilitator Janet Peacock (left) is pictured here with WearCheck employees who are enrolled in the ABET courses (left to right) Wellington Ndlovu, Joe Ngcobo, Gloria Ncama, Aaron Mchunu and Elizabeth Mbambo

Mentee of the year

The successful internal mentorship programme run by The Set Point Group (WearCheck's holding company), now in its third year, has already processed 20 'graduates', and created several far-reaching sustainable community upliftment projects.

Every year, 10 employees (mentees) are selected from various Set Point divisions and paired up with a senior employee (mentor), who helps the mentee develop themselves in areas relevant to the their career path, and in line with the company's core values. Mentees continue with their existing work load throughout the course, and complete the extra work after hours.

In 2012, WearCheck's senior diagnostician Steven Lara-Lee Lumley was selected as the Mentee of the Year – a prestigious award which carried not only the honour and a spectacular trophy, but also a wonderful prize in the form of an Indian Ocean cruise on a luxury ship.

Says Steven, 'My mentor was Graeme Horsfield, CEO of Set Point, and what a wonderful mentor he was – I learned so much from him on a general business level as well as gaining invaluable insight into the workings of the Set Point Group. I particularly enjoyed working on the MAD (making a difference) community project, knowing we have changed the lives of orphaned children for the better.

'It was a real honour to be chosen as Mentee of the Year, and, while relaxing on the cruise recently, I felt it was truly a wonderful reward for all the hundreds of hours of overtime one puts in while undergoing the mentorship programme.'

Steven Lara-Lee Lumley, senior diagnostician at WearCheck, was selected as Mentee of the Year 2012 after undergoing the internal mentorship programme run by the Set Point Group

Boosting reliability solutions services

Paul Moodley is the new senior reliability services technician for WearCheck's Mpumalanga region. He has expanded the condition monitoring services available to local industry, in particular the mines and power stations, for which he is conducting advanced monitoring including thermography, infrared and vibration analysis, laser alignment and balancing.

Based at WearCheck Middelburg, Paul brings with him over 23 years' experience in the predictive maintenance field. Prior to joining WearCheck, Paul was a senior condition monitoring consultant at CMMC (Condition Monitoring Maintenance Consultants) and Andersen & Hurley, and before that he spent 18 years in the sugar industry at Tongaat-Hulett.

Paul has completed a variety of courses, including vibration analysis, balancing, thermography, fitting and computers (MS office and basic programming).

Paul Moodley

Giving power to the people

Pierre de Villiers joined the WearCheck family in February this year, serving as a senior technician, based in Mpumalanga. Pierre is part of the WearCheck team responsible for all the predictive maintenance on various power stations, using a variety of condition monitoring techniques to predict potential problems and avert power outages, such as industrial oil analysis and vibration analysis.

Spanning a long career in the industry, Pierre's extensive experience in the field gives him invaluable insight into power maintenance. He spent 10 years managing ABB's condition monitoring department, as well as eight years running Anglo Coal's condition monitoring, and a further 10 years with Eskom, also in the condition monitoring sector.

In addition, Pierre has undergone a variety of condition monitoring courses on vibration and oil analysis. He has also completed Unisa's MDP (management development programme).

Pierre de Villiers

Bringing condition monitoring to Zululand

Riaan Geel, based in Richard's Bay, joined WearCheck as the lead technician in October last year, expanding WearCheck's presence into northern KwaZulu-Natal – a region where big local industries include dune mining, shipping and aluminium smelters.

Riaan's responsibilities include providing condition monitoring services to many of these local industries, as well as several mines that are further afield, including mines in Zambia and Malawi; and industrial plants in Pietermaritzburg.

With plenty of experience in the condition monitoring arena, Riaan is able to offer top-class predictive maintenance service to customers in his region. He served as regional manager in KZN for Aveng LTA, and spent five years as a consultant. Riaan also worked as a senior vibration technician with ABB.

Added to this, Riaan has undergone many training courses, and is one of only a few condition monitoring technicians in South Africa that has obtained his level 3 certification from both Technical Associated (TA) and Mobius (iLearn). His expertise includes oil analysis, balancing and laser alignment.

Riaan Geel

Mathys Esterhuizen

Keeping 'current' in the Vaal Triangle

Senior analyst Mathys Esterhuizen joined WearCheck's reliability solutions division in November last year, and has since been based in the Vaal Triangle at one of the region's power stations.

Mathys is part of the team that monitors the condition of the power station using various condition monitoring techniques, particularly vibration analysis and thermography.

With many years' experience in the predictive maintenance field behind him, Mathys spent eight years in ABB's condition monitoring division, and prior to that he performed condition monitoring for Andersen Hurley Instruments for nearly three years.

Topping this, Mathys has undergone several condition monitoring courses, including vibration (level 3), thermography (level 2) and laser alignment.

WELCOME BACK LOSHINI!

WearCheck chemist Loshini Govender has rejoined the team at WSL (WearCheck Speciality Laboratory) after a four year absence during which time she relocated to Holland to be with her husband, where he was working on contract.

When Loshini previously worked at WearCheck from 2007 – 2009, part of her responsibilities were to set up the WSL. She now has her original position back, and is currently taking care of the WSL and all the specialised laboratory equipment in the lab. We caught up with Loshini in the lab recently for a chat...

MONITOR: HAVE YOU NOTICED ANY CHANGES AT THE WSL SINCE YOU LEFT?

Loshini: 'There have been lots of positive new developments, one of the key ones being the awarding of 17025 accreditation to the WSL. Our test results are extremely accurate – the 17025 accreditation has given both customers and staff complete confidence in our lab results. I believe we have doubled our sample turnover since I left, and I am certain this is partly as a result of the 17025 accreditation.'

MONITOR: WHAT DID YOU DO IN HOLLAND?

Loshini: 'Well, I took a well-earned "sabbatical" from work, and dedicated the time to looking after my husband and two daughters. I also learned to speak Dutch – this was essential just to survive in many instances! But I missed the sunshine, and it is lovely to be back in sunny South Africa!'

MONITOR: IT'S LOVELY TO HAVE YOU BACK AGAIN, LOSHINI!

The WSL is in very good hands – Loshini holds a National Diploma in Analytical Chemistry from ML Sultan Technikon, and has many years' experience as a laboratory chemist prior to joining WearCheck, her most recent being with GE Energy where she worked closely with transformer oil testing, and set up their laboratory for them.

Loshini Govender, chemist

Making life sweeter for the orphans

It was a day of sheer delight for the more than 100 orphans who live at St Vincent's Children's Home in Mariannhill, when the WearCheck team arrived in December bearing Christmas gifts and hosted a wonderful party.

For the second year running, these special children, aged between three and 16 years, were treated to a fun day of jumping castles, water slides, lunch and sweets. Even Santa made an appearance to hand out special gifts to each child. For many of the orphans, this is the only gift they received since the WearCheck party the previous Christmas.

To finance the gifts and the party, WearCheck staff clubbed together to raise funds from their own pockets, which the company then matched Rand for Rand – resulting in R7 000 for the children's treats.

While the Christmas party was loads of fun, the important thing is the long-lasting effects of kindness of the WearCheck staff and the knowledge that an ongoing difference is being made in the lives of vulnerable children.

WearCheck is a long-term benefactor of St Vincent's, and has helped with several other projects at the orphanage, including the donation of a computer learning centre, and the installation of a sustainable vegetable gardening system.

Santa Claus (alias Scott Sowman, WearCheck's financial manager) arrived at the WearCheck Christmas party at St Vincent's Children's Home in Mariannhill in December. Bravely sitting on Santa's knee is one of the children, while WearCheck staffer Elizabeth Mbambo (cleaner) helps distribute gifts

LUBE TIP

Keep hydraulic fluids cool. (The bulk oil temperature at the exterior of the reservoir should never exceed 60°C).

Keep hydraulic fluids clean. (There is general agreement among hydraulic experts that 75 – 80 % of hydraulic failures are caused by fluid contaminated with dirt, wear particles and other foreign material. In today's high-pressure systems, clearances between wear surfaces are very small, making contamination control critical).

Immediately repair fluid leaks. If oil can escape, dirt and dust can re-enter the system. (A fluid leak of one drop per second is equal to 400 gallons in a 12-month period.)

(From "*The Practical Handbook of Machinery Lubrication*")

Mining Indaba™

WearCheck once again had a stand at the highly popular Mining Indaba™, which took place in Cape Town in February. This served as a good opportunity to showcase our services to the greater mining industry, in particular the new Reliability Services division which enables us to offer a complete condition monitoring solution to all industry and mining. Thank you to all our existing and new clients who visited us there.

2013 TRAINING COURSES

VENUE	NetCheck Software package	Oil Analysis 1 Understanding oil and its analysis	Oil Analysis 2 Report interpretation	Oil Analysis 3 Management
Course length	One full day	Two full days	One full day	Half day
Gauteng (Kempton Park)	18 – 22 Februrary	18 – 22 Februrary	18 – 22 Februrary	18 – 22 Februrary
Cape Town	12 – 15 March	12 – 15 March	12 – 15 March	12 – 15 March
Middelburg	11 – 14 June	11 – 14 June	11 – 14 June	11 – 14 June
Gauteng (Kempton Park)	15 – 19 July	15 – 19 July	15 – 19 July	15 – 19 July
KwaZulu-Natal (Pinetown)	19 – 23 August	19 – 23 August	19 – 23 August	19 – 23 August
North West Province (Rustenburg)	17 – 20 September	17 – 20 September	17 – 20 September	17 – 20 September
Gauteng (Kempton Park)	14 – 18 October	14 – 18 October	14 – 18 October	14 – 18 October
Namibia	19 – 23 August	19 – 23 August	19 – 23 August	19 – 23 August

COSTS

Oil Analysis One covers two full days and costs R4 392. Oil Analysis Two and the NetCheck course cover one full day each and each costs R2 196. Oil Analysis Three is a half-day course and costs R936. All courses include course material, refreshments, giveaways and certificates. Prices exclude VAT and are subject to change. There will be a scheduled price increase for courses run after 1 May 2013.

BOOKINGS

For more details on course content, view Training at www.wearcheck.co.za. For bookings phone Michelle van Dyk on (011) 392-6322 or email 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 R525.00 plus VAT per delegate
- WearCheck Customised – oil analysis for workshop technicians, a full day course costing R1278.00 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
Cape Town
Kimberley
Makopane
Middelburg
Nelspruit
Port Elizabeth
Rustenburg
Steelpoort
Botswana
Namibia
Tanzania (Mwanza)
Zambia (Kitwe)

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 melanie@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 melanie@wearcheck.co.za. Before you do this, why not check out the 55 titles already available on the website: www.wearcheck.co.za

JOINING TOGETHER TO SUPPORT THE PLANET

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

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