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The new OELCHECK-App passes the practical test at Availon

The Availon service technicians use the App to enter the oil sample data directly online at the wind turbine.

They have tested it and found it to be a total success! None of the service technicians from Availon, the leading wind service provider, want to be without the new intelligent OELCHECK-App. Every service technician at Availon is now equipped with a smartphone on which the App is installed. The new App now makes it much easier to enter samples online right at the wind turbine.

In March 2016, the new OELCHECK-App was ready for its first test run. Availon, known for its flexible services, has been using the OELCHECK customer portal www.lab.report for years and was the ideal partner for the practice test. Two service teams started using the App, and it was not long before we received the first positive responses as well as suggestions for optimisation. These suggestions were quickly implemented and, since June 2016, the App has become the constant, everyday companion of all the Availon service technicians.

Everything is so easy with the new App

In Germany alone, 1,200 of the wind farms that Availon manages are equipped with a special QR-Code. The codes can be easily generated in a user account at www.lab.report. Printed on adhesive strips, the corresponding QR-Code was installed in the base of each tower as well as in the control cabinet in the wind turbine's nacelle. When a service technician inserts a new oil sample, he scans the QR-Code with his smartphone and selects the Appropriate system component. The App automatically recognises the system and components and performs all the subsequent steps. The technician just adds a few more details about the current sample and scans the barcode on the Sample Information Form. Finally, the App sends the data directly to OELCHECK.

Fewer queries, fewer errors

More than half a year has passed since the App was first used, and the response from the Availon service technicians is still consistently positive.

The digital input of the Sample Information Form via the App eliminates illegibility, incorrect entry and even smeared notes which previously led to queries and errors. The OELCHECK-App makes the work of the field service technicians much easier.

They just fill in the Sample Information Form with their smartphone at the top of the wind turbine, which saves time. The technicians particularly Ap-

Check-up

OELCHECK has grown at a breakneck pace since its founding in 1991. We documented the individual milestones of our development in the 2016 special summer edition of the OelChecker for our 25-year company anniversary. However, we are steadily growing and, since then, we have already taken decisive steps for the future of our company. Due to the growing demand for our all-inclusive analysis kits, we have expanded our premises with the commissioning of a newly built warehouse, Approximately 60 m² in size, for our sample containers, shipping bags and accessories.

There have also been some staffing changes in the interim. Not only have we taken on two more Apprentices, but we have also created additional positions. Our technical texts as well as marketing and press texts are now being developed and optimised by a technical editor.

The position of Personnel Manager has not yet been filled. As a contact person for all questions about legal issues related to human resources, the company pension scheme and various special tasks, this person will provide relief for the company management.

As of 1st December, the „Customer Service and Sales“ team will be supported by an additional staff member. We will also shortly be adding another sales representative in the back office. We would like to take even better care of our customers with on-site expert advice, because proximity to our customers is the focus of our expansion strategy for the coming years!

Yours, Barbara Weismann

preciate the automatic feedback they receive when the Sample Information Form has been received by OELCHECK.

One for all components - Availon uses the OELCHECK wind turbine kit

For nearly 10 years, Availon has been monitoring wind turbines at home and abroad with OELCHECK lubricant analyses. The analyses are the first indication for condition-based maintenance, as they provide crucial information on the condition of the respective lubricants and the monitored components. Additional activities, such as oil changes, frequency measurements or, if necessary, endoscopies, can be conducted based on this information.

Lubricant samples are regularly taken at six-month intervals. The Availon service technicians use the all-inclusive analysis kits for wind turbines. Irrespective of the particular turbine component, this type of kit can be used in accordance with the specific requirements of the oils and lubricants to be monitored. This means that the technicians are prepared for any circumstances and have less to lug with them when climbing up to dizzying heights. With the all-inclusive analysis kits, you can take lubricant samples from the main gearbox, the hydraulics, the main bearings, the blade bearings and, if necessary, even from a yaw drive or pitch drive.

Three building blocks that lead to success

Availon is constantly working to ensure and optimise the long-term revenues of the wind turbines that they manage. They achieve this through a high degree of technological competence, bespoke solutions and cross-brand services.

Availon relies on three crucial components from the OELCHECK performance portfolio for the monitoring of the wind turbines:

- **The special all-inclusive analysis kit for wind turbines**
  One type of kit for oil and grease samples from all of a turbine‘s components.
- **www.lab.report**
  The customer portal for online entry and management of all samples as well as the control of individual actions.
- **QR-Codes and the new OELCHECK-App**
  Fill in the Sample Information Form with your smartphone. A perfect complement to the customer portal.

Always at the cutting edge of technology and digitalisation, the service technicians at Availon use every option offered to them by OELCHECK.

Availon, fleet service partner for wind turbines

Availon offers maintenance and optimisation modules for wind turbines at the highest level of technical and professional capabilities for a high level of technical availability and high yields over the entire life cycle of a turbine. Founded in 2007 and headquartered in Rheine (North Rhine-Westphalia, Germany), Availon has additional subsidiaries and branches in Italy, Spain, Austria, Poland and the USA. With its inclusion in the Vestas family of companies in the spring of 2016, Availon has put itself at the top in the international wind service provider sector.

Further information: www.availon.eu

Keep cool at all times – even coolants need to be monitored

Radiator covers are not just for winter! This Applies to motor vehicles and construction machines as well as to the cooling of stationary engines which are operated with diesel, or natural or special gases. The cooling water fortified with coolant absorbs heat from the engine, transports it to the radiator and releases the heat quickly to the atmosphere. More than 400 l/min of coolant are pumped through the system in one truck engine alone, and more than 150 l/min in a passenger car. The coolant, which is usually mixed with 50% water at most, protects against corrosion, cavitation and deposits and reliably prevents freezing at sub-zero temperatures.

Because of their previous principal use, modern coolants are often referred to as „anti-freeze“; however, they can definitely no longer be compared with these products. Today‘s generation of long-term cooling protection (extended life coolant) is specially designed for long-term use in large diesel, natural gas and specialty gas engines. These liquids, which are often red in colour, are based on ethylene glycol and are generally free of nitrites, amines and phosphates. As they are expected to reach service lives of up to 1 million km or up to 10 years, they contain organic acids, among other things, as inhibitors. At the same time, they are formulated to be compatible with up to 100 different materials with which they come into contact.

Leading manufacturers have long formulated specific requirements for coolants for their engines. This illustrates just how crucial the reliable protection of engines is. Because, if the cooling system fails, there is a risk of a serious engine failure.
In order to avoid disruptions and failures, the following basic rules must be observed:

- Use only coolants stipulated by the OEM in the correct concentration!
- Do not mix different coolants!
- Check the concentration regularly!
- Do not contaminate the system with foreign substances when filling or topping up the cooling water!

Corrosion can occur if, e.g. an unsuitable coolant is used. Then, particles can detach themselves from the affected components and be deposited in the system. Even minimal deposits of less than 1 mm in thickness can severely limit heat dissipation, and therefore, the performance of the entire cooling system.

Double the safety of your engines – analyse coolant in addition to oil

Failures of the cooling system and associated engine damage are primarily caused by the improper handling of coolant and cooling water. Therefore, regular annual monitoring of the coolant is indispensable! OELCHECK will soon introduce the new analysis kits for checking coolants. In combination with regular inspections of the engine oils, your motors are doubly safeguarded!

The great 2016 OELCHECK customer survey: 98% of our customers would recommend us

In the spring of 2016, we wanted to find out again: How satisfied are our customers with OELCHECK‘s services? What can we still improve?

We selected a representative cross-section of 6,000 OELCHECK customers out of more than 31,000 and asked for their verdict. Our range of analyses and additional services was put to the test as was our customer portal www.lab.report, our competence, speed, friendliness, logistics and much more. We would like to offer our heartfelt thanks to all the participants who answered all our questions and sent us valuable suggestions.

We were particularly pleased with the additional increase in the recommendation rate! In our 2012 survey, 96% of all participants said they would recommend OELCHECK; this figure reached a remarkable 98% in 2016! We see this as confirmation that we have further improved our services to the benefit of our customers over the last four years.

When evaluating the questionnaires, it also became clear how much value the users place on our lubricant analyses and how intensively they are occupied with their possibilities. OELCHECK customers are using the analyses not only to extend the oil service life and for early detection of damage and clarification of the causes of damage, but a total of 44% stated that they also use them to evaluate fresh oils during production and quality control.

LAB.REPORT

39% of the survey participants already benefit from our customer portal for online entry and management of all samples as well as for controlling individual actions. As www.lab.report has been online for about two years, we were particularly curious about how our customers rate the portal. The design and functionality were evaluated as „good“ or even „very good“.
The following, above all, provide real added value:

- the display of all previous laboratory reports and accompanying documents as a PDF file
- querying of the sample status
- the forwarding of laboratory reports
- the management of all reports for multiple users
- the graphical representation of trend curves.

Those who use the customer portal do not want to be without it and Appreciate the advantages of digitalisation. Of the 61% of our customers who do not use www.lab.report, 70% said they had not even known about the portal. We recommend that you visit www.lab.report to see this simple, time-saving Application for yourself.

Our homepage, www.oelcheck.de, the information platform for our services, has now also become a standard reference guide for the analysis of lubricants and oil. 51% of respondents regularly visit the „Knowledge from A-Z“ section and make use of OELCHECK‘s extensive expertise. That is why we are already working intensively on our own knowledge database on the topics of lubricant analyses and lubrication. It will be available in 2017 under the domain www.oelcheck.wiki – we will keep you posted!

Limit values for test methods

Test method	Unit	Test standard	Engine oil			Gear oil			Hydraulic oil			Turbine oil			Lubricating grease			Possible causes for changes
			Typical values for			Typical values for			Typical values for			Typical values for			Typical values for			
			Fresh oil	Used oil	Warning value	Fresh oil	Used oil	Warning value	Fresh oil	Used oil	Warning value	Fresh oil	Used oil	Warning value	Fresh grease	Used grease	Warning value	
AN/NZ – Acid Number	mgKOH/g	EN 12634, DIN 51558	1.2 -3.0	FO + 1.2	FO + 150%	0.5 - 1.4 (3.5)	FO ± 0.5	FO + 100%	0.25 - 1.0	FO + 0.2	FO + 100%	< 0.1	< 0.14	< 0.3	2 - 5	FG + 2.5	FG + 3.5	Increase due to oxidation, additive degradation, mixing with acidic gases, liquids or water.
Bleeding test, oil loss	%	OPM[1]													7-35	FG ± 50%	< 4 >80	Oil loss due to bleeding oil, destruction of the „fatty structure“, excessive strain or overheating.
BN – Base Number	mgKOH/g	ISO 3771	4.0 - 14.0	FO - 20%	FO - 50%													Only relevant for engines. Decrease due to oxidation, sulphur content in the gas or fuel, long oil change intervals.
Chlorine Content (ICP)	mg/kg	DIN 51408-2	< 30	< 30	> 300													Only relevant for engines. Chlorine-containing landfill gases or biogases in gas engines, impurities.
Conradson Carbon Residue	% by weight	DIN 51551	< 0.2	< 0.5	> 0.8													For heat transfer oil and compressor oil, rarely engine oil and fuel. Usually an indication of the possible formation of deposits.
Density	kg/m³	DIN EN 12185	0.7 - 0.9	FO ± 1%	FO ± 1%	0.8 - 0.95	FO ± 1%	FO ± 1%	0.75 - 0.85	FO ± 1%	FO ± 1%	0.78 - 0.85	FO ± 1%	FO +/- 1%				Material constant, influenced by viscosity, type of base oil, rarely by additive. Change usually only by mixing.
Dispersing capacity	%	OPM[1]	100	> 85	< 75													Only relevant for engines. Note fuel and soot content as well as the silicon percentage and coolant.
Color scale	-	ISO 2049	2 - 5	nn	nn	1 - 6	FO + 2	FO + 3	1 - 3	FO + 2	FO + 3	1 - 3	FO + 2	> 5				Visual comparison of oil staining in comparison with coloured glasses. Influenced by oxidation products and mixing.
Solid Contaminants	% by weight	DIN EN 12662	0	< 0.2	> 1.5	0	< 0.5	> 1.0	0	< 0.1	> 0.2	0	<0.01	>0.02				Solid impurities insoluble in oil and n-heptane, separated from the oil by a 0.45 µm membrane filter.
Flash Point, closed cup	°C	DIN EN 2592	180 - 250	>220	< 180	180 - 250	> 220	< 180	190 - 220	> 200	< 180	180 - 215	> 200	< 175				Emergence of a short-term pilot flame. Decreases due to thermal stress (cracking), mixing (fuel).
FT-IR Spectrum		DIN 51451													Comparison of fresh grease and used grease			
- Oxidation	A/cm	DIN 51453	0	1 - 25	20 - 30	0	1 - 5	5 - 10	0	1 - 5	5 - 10	0	1 - 3	3 - 6				Lubricant aging due to oxidation. Evidenced by the presence of esters and/or certain additives.
- Nitration	A/cm	DIN 51453	0	1 - 20	20 - 25													Only relevant for engines. Poor combustion, piston wear, ring wear, valve problems, fuel quality, timing.
- Sulfation	A/cm	OPM[1]	0	1 - 10	20 - 25													Only relevant for diesel and gas engines. Increases due to highly sulphur-containing fuels or unpurified biogas.
- Water content	%	ASTM E2412	< 0.1	< 0.1	0.1 - 0.2	< 0.1*	< 0.1*	0.1 - 0.15*	< 0.1*	< 0.1*	0.1 - 0.15*	< 0.1	< 0.1	< 0.1				To distinguish between „soft“ water, tap water or cooling water elements such as sodium, calcium and potassium.
- Water content (K.F.)	ppm	DIN 51777-2	< 250	< 800	1,400	< 200	< 750	1,200	< 200	<450	1,000	< 100	< 100	> 300	500 - 2,000	< 2,500	> 3,500	Precise water indication, changes due to free water or moisture. Some oils emulsify water.
- Soot content	%	DIN 51452	< 0.1	0.1 - 2.5	2.5 - 3.0													Usually only relevant for diesel engines. Reference to „diesel effect“ (air in oil) in hydraulics.
- FAME content	%	ASTM D7593	0	< 2	4.0													Only relevant for diesel engines which are operated with FAME-containing fuel (B7, B10, and B100).
- Glycol content	%	Headspace-GC	negative	negative	0.08													Only relevant for engine oils. Consider for > 0.8% elements, such as sodium, potassium, boron, and possibly water.
- phenolic AO	%	OPM[1]										100	80 - 15	≤ 5				Only relevant for turbine oils. Degradation of anti-oxidants and ageing-retarding additives.
i-pH Value		ASTM D7946	7.0	> 5.0	< 4.0													Common only for gas engine oils from landfill gas engines. Initial pH.
IR (infrared) Index		OPM[1]	100	95	89	100	97	95	100	97	96	100	98	97				Comparison of fresh oil with a sample. Poor correlation indicates mixing or oil decomposition.
RULER	%	ASTM D7590	100	> 40	< 20	100	> 60	< 25	100	> 60	< 25	100	50	< 25	100	> 30	< 10	Content of antioxidants, such as phenols, amines, ZnDDP and salicylate, which are still effective.
Fuel content	%	ASTM D7593	< 0.3	< 1/2	< 2/6													Only relevant for engine oils (petrol/diesel). Oil becomes thinner. Note the viscosity change.
LAV – Air Release Characteristics	min	DIN 51381							2 - 4	> 6	> 8	1 - 3	< 5	> 6				Air separation characteristics at 50°C. Deterioration due to impurities, mixing, and degradation of additives.
OPA – Optical Particle Analysis	RKL	ASTM D7596 ISO 4406 SAE AS 4059	21/19/16			21/19/16	20/18/15	> 22/19/16	21/19/16	18/15/12	19/16/13	21/19/16	17/14/11	18/15/12				Optical Particle Analysis (OPA). Particles are sorted and counted according to contour and size. Photography of particles > 20 µ.
Particle Count	RKL	ISO 4406 SAE AS 4059	21/19/16			21/19/16	20/18/15	> 22/19/16	21/19/16	18/15/12	19/16/13	21/19/16	17/14/11	18/15/12				Count for 3 classes (4, 6 and 14 µm) of the particles in the oil. Only with light oils. No conclusions on origin of particles as with OPA.
Particle Count, microscopic	RKL	ISO 4407	-/19/16			-/19/16	-/18/15	-/19/16	-/19/16	-/15/12	-/16/13	21/19/16	17/14/11	18/15/12				Count for 2 classes: 5 and 15 µm. Also for dark oils. Optical viewing, photography and weighing of the filter.
Penetration	0.1 mm, NLGI	DIN ISO 2137																Measurement, for the penetration depth of 1/10 mm of a test cone into the grease. Specified for classes 000 - 6 according to NLGI.
- Unworked penetration	0.1 mm, NLGI	DIN ISO 2137													FG, typical	FG ± 1	FG +1/ -2	How deeply does a test body penetrate into grease? Division into classes. Deep, soft grease: Class 000, usually: Class 2 or 3.
- Worked penetration	NLGI class	DIN ISO 2137													FG, typical	FG ± 1	FG +1/ -2	Grease is initially „worked“ with 60 strokes of a grease worker. Then, penetration information via classification into classes 000 - 6.
Pourpoint	°C	DIN ISO 3016	- 35	FO ± 3	FO ± 6	- 20	FO ± 3	FO ± 6	- 30	FO ± 3	FO ± 6	- 25	FO ± 3	FO ± 6				Temperature at which the lubricant barely begins to flow. The pour point is 3°C above the solidifying point.
PQ-Index	-	OPM[1]	< 25	< 45	> 80	< 25	< 60	> 100	< 25	< 25	> 30	< 25	< 25	> 25	< 25	< 250	> 500	Ferromagnetic wear debris and iron content to distinguish between corrosive and abrasive wear.
Sulphate ash	% by weight	DIN 51575 DIN 51803	< 2.0	FO ± 20%	FO ± 40%										1.0 - 4.5	FG + 1.5	FG + 2.5	With „low-SAPS“ oils, note the element contents for sulphur, phosphorus and zinc. Change due to mixing and abrasion.
Viscosity	mm²/s	DIN ISO 2909		stay in grade	stay in grade			± 15%			± 10%			± 7%				Evaluate changes in comparison with the pre-test for trend analyses. Only of limited value without comparison to the fresh oil value. Indication is part of the product description and is stated on the packaging. Altered VI indicates a mixture or destruction of multi-range additives.
- 40°C/100°C			dependent on the respective SAE class			ISO VG 220 - 680			ISO VG 22 - 68			ISO VG 32 - 46						
- VI – Viscosity index						95 - 180	FO - 10		98 - 160*	FO ± 8		98 - 140	FO ± 5					

[1] = OELCHECK test method
FO = fresh oil
FG = fresh grease

A multiplicity of criteria

Lubricants are subjected to a constant process of change. Increased operating temperatures (> 40°C) and contact with oxygen cause them to age, and they become contaminated by foreign substances, primarily dust, water or wear particles. When analysing an oil sample, OELCHECK determines more than 40 values, assesses their interactions, and comments on the results in the laboratory report.

The element content indicates wear, contamination and the condition of the additives, but a large number of other test methods contribute to the sound and meaningful assessment of an oil sample. We have listed the most common of these test methods as well as their reference values for fresh and used lubricants and the associated warning values for you.

Interpreting the values

The reference values or tolerance ranges published here can be used for general orientation only. This particularly Applies to the data on the values for used lubricants and most warning values. The information above is based on our extensive experience and data from more than 3 million used oil samples in the OELCHECK database.

The informative value of the published tolerance ranges depends on the type of turbine or engine, the oil filling quantity, the type of oil and the usage time (mileage) of the lubricant. In our specification of the reference values, we have made a departure from the usual service life and oil filling quantities. In principle, however, each Application must be individually assessed according to its specific circumstances!

Diagnostics with the highest level of accuracy can only be produced by the OELCHECK engineers who draw on the experience of the OELCHECK database, but it is ultimately important to take all values into account and to consider the individual conditions of use. That is why having the correct and complete information from the customer regarding the sample is as important as the expertise of the diagnostic engineer.

We have already published warning values for the 30 elements which point to impurities, additive condition and wear:

- for hydraulic oils in OelChecker, Winter 2014
- for gear oils and industrial oils in OelChecker, Spring 2015
- for engine oils in OelChecker, Summer 2015.

They are available in the download area at www.oelcheck.de

OELCHECK makes your life easier!

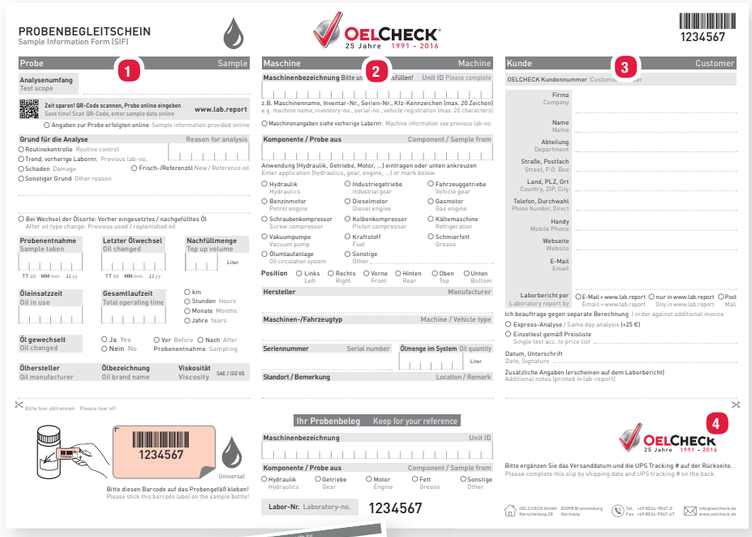
As a leading laboratory for lubricant analyses in the German-speaking world, we are successfully working on changes. In this way, we continue to expand our pioneering role. So that you receive your laboratory reports on the next working day after we receive the sample, we focus not only on the optimisation of internal processes, but also work to process your inquiries quickly and completely, thus constantly improving your customer experience. Current innovations are available in our Sample Information Forms. We have also launched the next phase of digitalisation with the OELCHECK-App.

Optimised Sample Information Forms

From now on, you will receive an all-in-one analysis kit from OELCHECK with a Sample Information Form in a new look. The improved arrangement of the questions and content is intended to provide more clarity and a quicker orientation. The clearly structured design supports intuitive visual scanning guidance. The new, bilingual Sample Information Forms are in German and English. In addition, the printed information forms are structured in the same way as their digital counterparts on our customer portal at www.lab.report.

The new OELCHECK Sample Information Forms are divided into four clearly separated areas:

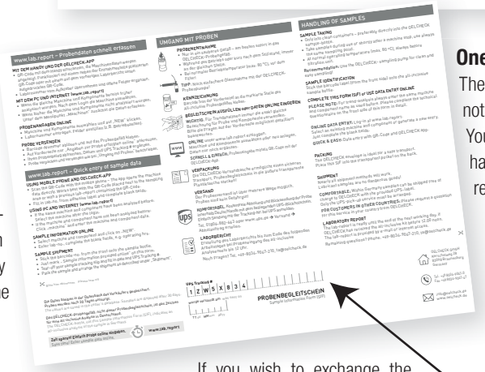
1. Sample Information
2. Machine Information
3. Customer Information
4. Detachable sample document including adhesive barcode label with the laboratory number



From universal to very specific

OELCHECK's Universal Sample Information Form can be used for any type of lubricant and any machine. However, in many cases, we recommend using one of our specialised Sample Information Forms. These are adapted to the respective lubricant Application and can record special data, which are then output in the laboratory report. These special Sample Information Forms have also been adapted to the new, clearly structured design and are now available for the following Applications:

- Gas engines
- Gears
- Hydraulics
- Refrigeration compressors
- Fuel
- Power stations and turbines
- Engines
- Compressors
- Wind energy plants
- Grease



If you wish to exchange the Universal Sample Information Form from a paid-up all-inclusive analysis kit for a special Sample Information Form, you can download it at www.oelcheck.de. Then, provide the sample container with the laboratory number of the universal form. Please always keep the separable customer slip from the Universal Sample Information Form. It bears the laboratory number under which your sample is recorded at OELCHECK. At the same time, you can also note the UPS tracking number on the back.

One form – all information

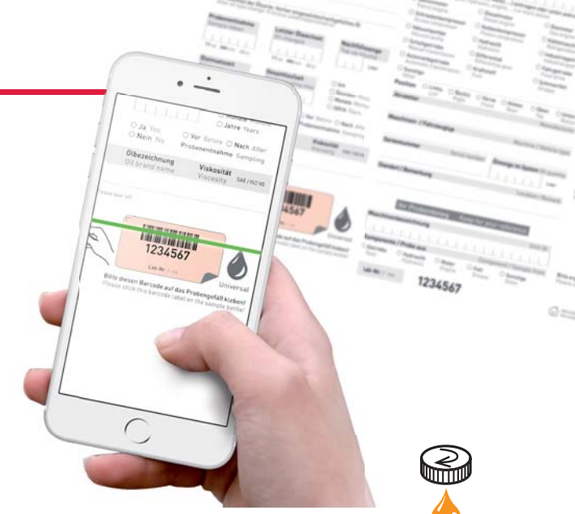
The front of our new Sample Information Form is not the only side that has a lot to offer!
You will find all the information you need for handling your all-inclusive analysis kit on the reverse side:

- Instructions for data input are found on the front, via App, or at www.lab.report
- Instructions for sampling and labelling the sample container
- Notes on packing and shipping
- Input field for your sample's UPS tracking number

You will find your UPS tracking number on the UPS return slip which is included in every all-inclusive analysis kit in Germany. Enter this number into your customer document to trace the sample. With this UPS slip, pickup and return of the sample are free of charge within Germany.

QR-Code meets OELCHECK-App

As a user of our free customer portal, you can enter your samples more efficiently, easily and faster. We have now published our clever OELCHECK-App specially for use at the sampling point. The supported languages are German, English and Chinese.



In combination with QR-Codes for machines and systems, the OELCHECK-App makes life easier for the service technicians who take individual samples.

The advantages are:

- Automatic recognition of the machine and display of previously sent data
- Simpler and more efficient sample input
- No transmission errors and queries due to illegible or handwritten data
- Direct transmission of the data to OELCHECK
- Automatic confirmation of data input from OELCHECK

Before starting

The service technicians from Availon, one of the leading service providers in the wind industry, have tested the new App extensively and no longer wish to be without it.

So that you can benefit from the improved digital sample input for your lubricant samples, you also need:

- **A free user account at www.lab.report**
  Visit www.lab.report and log in or click on „Create account".

- **Individual QR-Codes for all your machines**

  Add machines using the „Machines" tab by clicking on „New machine". Click on the QR-Code symbol and save the QR-Code. Print it out and attach it to the relevant component of the machine from which a sample is taken.

- **Convenient OELCHECK-App**
  Download the OELCHECK-App from your App store to your smartphone or tablet at no charge.

Practical use

After sampling, use the OELCHECK-App to scan the QR-Code attached to the respective component of your machine. Follow the App's instructions.

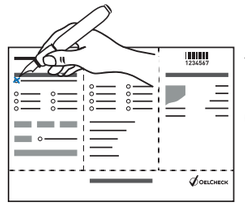
If you are testing lubricants from different components of the same machine, select the relevant component or re-create the dataset.
Then, scan the lab number or barcode of your Sample Information Form.

These can be found both at the bottom left and middle as well as at the top right of your Sample Information Form.

Barcode on the Sample Information Form

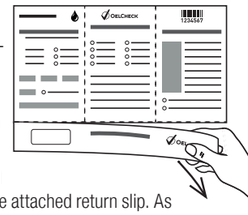
The customer data and machine data as well as the date are already pre-filled by the App. You simply add a little sample-related data, such as operating hours or oil refills.
Confirm with „Save & Send". Your data are now sent to OELCHECK. After successful transmission, you automatically receive a confirmation of the data input from OELCHECK.
You can always see the information you have provided at www.lab.report; this information and the status of your sample can then be transferred to the laboratory report.

Before sending the sample, stick the barcode from the sample information code on the sample bottle.

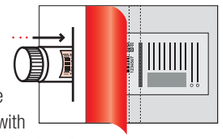


Tick „Sample data has been entered online" on the top left of the Sample Information Form.

Tear off your reference slip of the Sample Information Form and add the Unit ID for your reference on the front, and then add the shipping date and the UPS tracking number on the back of the attached return slip. As you have already submitted your data via the App, you do not need to provide any other information.



Now, place the Sample Information Form in the transparent plastic envelope on the outside of the shipping bag and, along with the sample, send it to the OELCHECK laboratory.



Do you need help?
At www.oelcheck.de, you will find detailed instructions for using the new OELCHECK-App under „Downloads" among other places.
If you have any additional questions, please contact us by phone at +49-8034-9047-210 or by email at ta@oelcheck.de.
The OELCHECK team is there for you!

OELCHECKER

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The OELCHECK team on the road!

Slovenian natural gems and Italian delicacies - that was our 2016 team trip.

Enjoying the sun and recharging your batteries before winter; that's the way to have the most fun with your colleagues!

On Friday the 23rd of September, we went to the Slovenian town of Bovec. The atmosphere was already fantastic on the way there!

After a lunch break in our hotel, we discovered Soca Gorge, a natural gem in the Julian Alps.

During our hike, the sun invariably invited us to take a comfortable rest.

A daring alternative, on the other hand, was to jump from the rocks into the cool waters.

Before dinner, our team spirit was called on for string pulling, horseshoe throwing and bridge building.

Two attractions awaited us on Saturday. A rafting tour through the Soca gorge...

...in which some of us wanted to personally check the water temperature of 11°C...

... as well as breath-taking panorama tours over the beautiful gorge and the Plužna waterfall.

In the evenings, we had Slovenian folklore and dance lessons.

The journey home on Sunday led us across Italy.
We started in Udine at the culinary GPS City of Trophy.

We were spoiled with Italian delicacies at many places in the old town.

It was not easy for us to say goodbye! But during our trip, we once again realised how nice it is to have something to share with colleagues during our spare time!

在做什么 NEWS FROM CHINA 在做什么

OELCHECK at China Wind Power and Inter Lubric

In the autumn of 2016, OELCHECK was represented at China Wind Power in Beijing and Inter Lubric in Guangzhou.

China is the largest wind turbine producer in the world, ahead of the USA and Germany. By 2020, the country will invest an additional €96 billion in new wind energy projects for a total capacity of 80 gigawatts.

The challenges are enormous and can only be overcome if the maintenance of the plants keeps pace with the development. Lubricant analysis plays an increasingly important role in China. OELCHECK already monitors the lubricants and the condition of a large number of plants in the Far East. However, our presence at China Wind Power has once again shown how much explanatory work can still be done in China in terms of condition monitoring.

At Inter Lubric China, the leading trade fair for the international lubricant industry, everything revolves around lubricating oils, pastes, greases and metal processing agents. During Inter Lubric, visitors were able to benefit from participating in the „International Lubricant Training Course". The two lectures by OELCHECK were particularly well attended.

Graduate industrial engineer Steffen Bots focused on the situation of international sales markets for lubricants. The current development trends in automotive, industrial and marine lubricants were highlighted and the most important European and American specifications presented.

Andrew Zeng, Branch Manager at OELCHECK China, introduced the basics and advantages of lubricant analysis in his lecture along with STLE (Society of Tribologists and Lubrication Engineers).

Re-audit of the Chinese CNAS accreditation!

As is already the case for the OELCHECK laboratory in Germany, China also holds the certification and accreditation to prove that it meets the highest quality standards. Accreditation by CNAS (China National Accreditation Service) corresponds to ISO/IEC 17025:2005, the definitive international quality standard for testing laboratories, etc. In the autumn of 2016, our laboratory in Guangzhou successfully passed the re-audit. Our Chinese colleagues were supported locally by Dr Thomas Fischer, Scientific Director at OELCHECK.