WORLD CLASS

SUPERYACHT LABORATORY ANALYSIS

SPECTRO® | JET-CARE®

spectro-oil.com | jet-care.com

"Routine analysis and trending give an accurate insight into potential performance and reliability issues."

Maintaining the optimum condition of lubricating oils, hydraulic fluids, greases and fuels is critical to ensuring the efficient and safe operation of a vessel. That is well known and yet there is much more that analysis can provide as a predictive tool to avoid accelerated wear in engines and machinery and ultimately prevent failure, well before any other signs are evident.

Routine analysis and trending give an accurate insight into potential performance and reliability issues and allows precise programming of maintenance schedules to suit the vessel's operational cycle, negating downtime at inopportune periods and geographic locations.

Fluid analysis is also an essential tool during re-fit to ensure that optimum performance has been restored after repair and furthermore to identify wear situations which might only be able to be repaired in dry dock or refit. Classification Societies regularly defer extensive and invasive surveys, such as stern tubes and thrusters, if routine oil and fluid analysis is performed by a suitably qualified and accredited laboratory*.

Purchasing or selling a vessel requires a precise assessment of the vessel's mechanical condition by both buyer and seller. For the seller to endorse the pedigree of the vessel and for the buyer to confirm or refute the same. Historical maintenance records are, of course, important but a real time snapshot of mechanical condition can only be truly accurate through the use of spectrographic laboratory analysis of fluids. This gives a present and historical indication of potential problems that might pre-exist and manifest themselves after sale of the vessel.

Independent laboratory analysis is therefore the ultimate and effective security against engine and machinery malfunction, accelerated wear and failure.

QUALITY

Our unrivalled expertise, quality control and integrity are supported by industry recognised accreditation* that ensures each of our laboratories maintains the same exacting high standards.

UKAS (United Kingdom Accreditation Service) and SAS (Swiss Accreditation Service) verify that our laboratories comply with ISO/IEC 17025:2017, the testing and calibration laboratory standard. In addition, we hold Service Supplier Status for American Bureau of Shipping (ABS) and Lloyd's Register.

UKAS TESTING 0261

UKAS TESTING 1961

*The use of the UKAS/SAS marks does not imply that all activities are accredited by UKAS/SAS. Accreditation covers the laboratory activities in accordance with the schedule, which can be found on the Spectro | Jet-Care website.

ANALYSIS OFFERING

Analysis is performed from samples provided by the vessel, using easy to use sample kits that include the price of analysis. The kits include a sample pump to extract the fluid cleanly and directly to the bottle, labelling, and outer packaging to allow safe transit.

OIL ANALYSIS

Unscheduled downtime of critical equipment limits availability and therefore the profitability of the operator. Quality used oil analysis provides a core tool to monitor equipment condition with rapid turn times, coupled with clear and concise reporting, expensive downtime and repairs can be minimised and catastrophic failure avoided. Notwithstanding the downstream costs both reputational and in time of off hire/charter.

HYDRAULIC ANALYSIS

The regular sampling and testing of hydraulic fluids is key to ensuring critical control systems are kept in optimum perfect condition, as well as meeting safety standards. Regular testing of hydraulic fluid provides a clearer picture of system cleanliness and performance. Worthy of note is that even fresh hydraulic fluid straight from a drum can fail cleanliness tests and result in equipment failing to operate.

COOLANT ANALYSIS

Specific engines rely upon sealed coolant systems and these can be vulnerable to microbial contamination and coolant degradation with consequent and potentially damaging overheating issues. Furthermore, leakage can be identified through regular analysis.

FUEL ANALYSIS

Periodic monitoring of fuel tanks is fundamental to ensure that fuel cleanliness is maintained at all times and to identify where treatment is needed. Particularly now that the IMO 2020 regulations have caused supply chain stress for distillate fuel.

Water encourages the development of bacteria and fungi which could lead to blockages and consequent operational problems. The testing of samples for water content and microbiological growth of aerobic bacteria and viable fungal spores provide positive indication of fuel system contamination.

VERIFICATION OF BUNKERED FUEL

The consequences of off-spec fuel can be significant and not only in engine performance but downstream too with microbial contamination.

Of equal seriousness are the environmental and legal implications of a high sulphur content, notwithstanding the attendant issues that high FAME content can cause or the safety issues of low Flash Point fuel.

The Spectro | Jet-Care Fuel Verification Sample Kit has been designed purely to assist with obtaining fuel samples at the time of bunkering. Security tagged to avoid tampering one sample is analysed to verify and understand the quality and specification of the fuel taken onboard. Further samples are kept onboard for future testing if required.

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FIRE WATER MIST ANALYSIS

Fire suppression by water mist generation is an important safety factor onboard. New regulations insist upon mandatory testing of this water to identify elements that may cause disfunction of the system when called to action during a fire.

GREASE ANALYSIS

Grease analysis is an important condition monitoring function as indications of advanced wear, overheating, grease degradation, contamination and bearing metal deposits can readily be identified. Equally where the wrong grease has been used, or indeed too much grease, this can be identified too.

DEBRIS & FILTER ANALYSIS

The analytical capabilities of Scanning Electron Microscopes (SEM), and powerful optical microscopes, are used for the in-depth examination of debris. Particles can be found within filters, on metallic wear debris detectors or during routine visual inspection of fluid test samples. By considering the type, form, quantity, size and condition of the particles we can make recommendations on the likely source of the debris. Early filter blockage happens for a reason – we can tell you why.

ANALYSIS KITS

OIL SAMPLE CASE

OIL RESTOCK KIT

HYDRAULIC FLUID SAMPLE CASE

HYDRAULIC FLUID RESTOCK KIT

FUEL VERIFICATION SAMPLE KIT

FIRE WATER MIST SAMPLE KIT

SINGLE HYDRAULIC KIT

SINGLE FUEL KIT

OIL EXTRACTION PUMP

ADAPTORS

LOGISTICS

Logistics are a vital aspect of any laboratory analysis program and the team at Spectro | Jet-Care are well aware that post Brexit this can cause challenges if customers are inexperienced in the correct procedures. Having addressed these issues and established the correct methodology and courier routes, the Spectro | Jet-Care logistics team can ensure swift passage without delay to any of our laboratories.

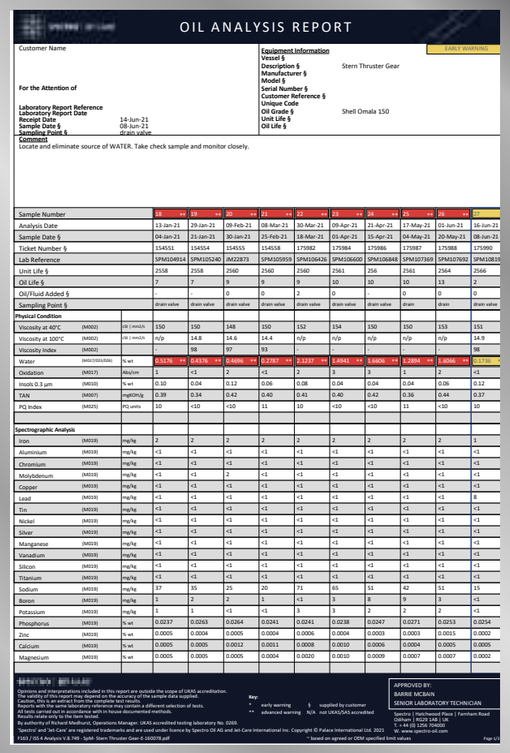
webECHO™

webECHO is a versatile online resource available 24/7/365 to manage your equipment, fleet data and access your latest reports and trends through a single portal. The integrated system allows you to download reports, view graphs, read the advice dialogue and analyse data in real time. It can also be run on a variety of mobile devices such as Apple and Android tablets and smartphones.

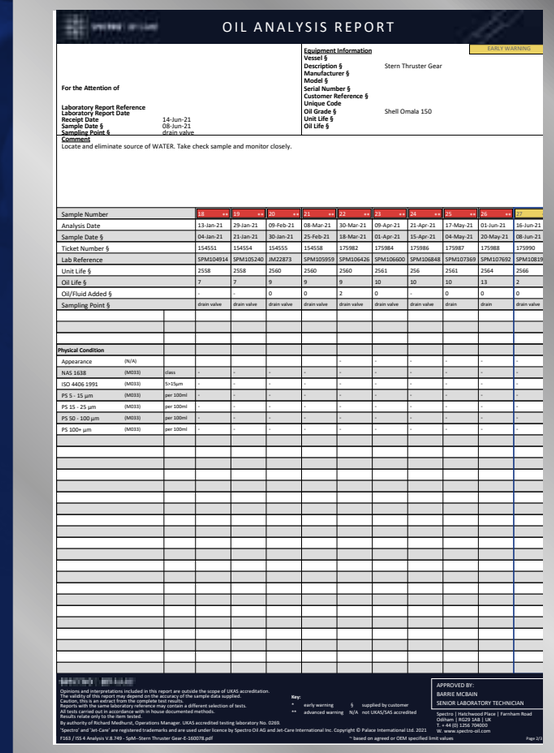
webECHO is available at no extra charge as part of our support service and is a convenient and user friendly way to manage your analysis results and trend monitoring.

REPORTING & TECHNICAL SUPPORT

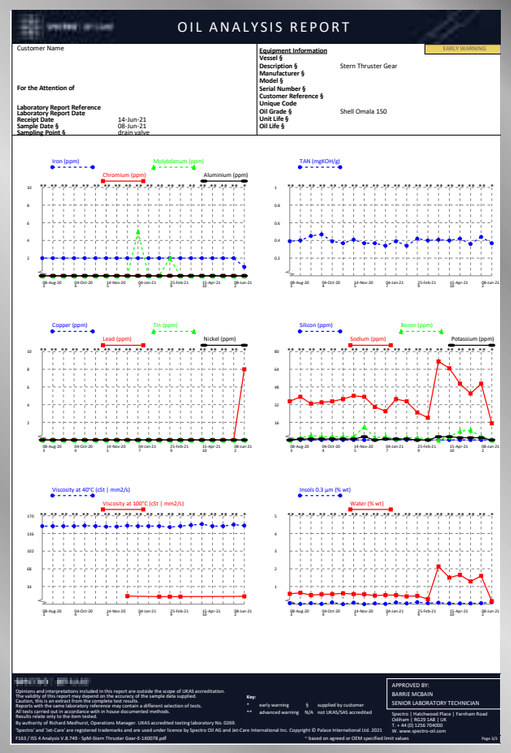
Within two working days your results are reported either by email or can be accessed through our online portal, webECHO™. The analysis reports are provided in PDF format and show the equipment history which can be discussed further with our technical team, who not only understand laboratory analysis but marine equipment and vessel operation.



OIL ANALYSIS REPORT PAGE 1



OIL ANALYSIS REPORT PAGE 2



OIL ANALYSIS REPORT PAGE 3

IDEA DATA SOLUTIONS

A strategic partnership between Spectro | Jet-Care and IDEA Data Solutions provides enhanced options to the IDEA YACHT management solution, allowing customers' automatic visibility of their laboratory analysis results in the IDEA software.

Customers can submit a request to send a fluid or debris sample via IDEA YACHT by using the Spectro | Jet-Care sample kit unique number to complete the online label and send the sample in the usual way to their chosen laboratory. On completion of the laboratory analysis they will receive their analysis report via email as well as be able to access the results automatically from the software. This allows full tracking of the sample progress, as well as building a history of report analyses within a single archive.

In addition, Spectro | Jet-Care and IDEA will continue to review potential future enhancements to bring efficiencies to the day to day management of yachts.

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