

Customer Testimonial from Clayton Engineering Limited

Fluid Sampling Promote Safe and Reliable Equipment for Marine Search & Rescue (SAR) customer

Clayton Engineering Limited is a specialist design and manufacturing company based in Knighton on the border of Shropshire and Mid-Wales. The company is engaged in the design and manufacture of specialist tracked and wheeled vehicles designed to launch and recover a variety of search and rescue (SAR) craft along with equipment, such as powered winches and derricks used in a marine environment. A range of high quality mechanical engineering products and the fabrication of complex structures are also produced by the company.

The safety and reliability of all the equipment designed and manufactured by Clayton Engineering is paramount, no more so than when the equipment is used by its major customer, a charitable organisation, which provides the pre-eminent marine search and rescue service in the UK and Republic of Ireland. The harsh and at times extreme weather conditions in which the equipment operates when lives can be at risk, dictates that equipment must be maintained in a cost effective and efficient manner to ensure that it is verifiably safe and reliable throughout its operational life.

The company uses a variety of monitoring techniques to ensure that the condition of both the engines, gearboxes and hydraulic systems used in the launch and recovery plant are maintained in a satisfactory condition. Systematic Oil Sampling (SOS) provides a window into the engines, gearboxes and hydraulic components allowing the pattern of wear rates to be determined and the correct maintenance to be implemented in a timely manner, which delivers increased reliability and reduced maintenance costs.

The company has been working with the Finning fluid condition and monitoring team since sampling was first introduced by the Caterpillar engine agents into the UK. With over 25 years' experience in interpreting the results of the analysis, Finning's and Clayton Engineering have built up a level of expertise which enables them to advise their customers on preventative maintenance activities. Their customer's equipment is situated at coastal locations around the UK and Republic of Ireland and the Finning's web site enables all sample analysis reports to be accessed quickly and efficiently. Potential issues are highlighted to enable preventative measures to be undertaken before failure occurs. This is particularly important in hydraulic circuits where the failure of one component can quickly cause damage throughout the system. Readily accessible historic records provide the opportunity to establish standard wear patterns and identify optimum maintenance schedules with particular emphasis on the exacting standards of hydraulic oil cleanliness required to maintain reliability.

With the equipment being used to launch and recover vessels in high waves and deep water, one of the main threats is the ingress of water through external seals. Fluid analysis allows early detection of any potential seal failures allowing maintenance to be scheduled in an efficient manner and saving the replacement of high cost components.

With a customer requirement to be able to operate for an unlimited time both on shore and in the sea the maintenance of the coolant system is also an important factor in delivering high levels of reliability.

Discussing the benefits of the service provided by Finning's fluid analysis, Brian Hughes, Engineering Director, of Clayton Engineering said "Coolant systems are renowned for causing damage across engine compartments and as a result can jeopardise the performance of our equipment. Too concentrated and the coolant becomes thick and too weak the coolant becomes thin. In both cases the coolant is less efficient which can lead to the point where the condition of other engine components is threatened".

All of the launch & recovery plant supplied to the SAR customer is still in operational service, with the first unit being supplied in 1974. This demonstrates what top class design, manufacture and maintenance can deliver.

Clayton Engineering takes pride in providing support to its customer in its task of saving lives at sea by designing, manufacturing and helping to maintain the launch and recovery equipment used to get the rescue craft and its volunteer crew into and out of the sea at a variety of challenging locations in the difficult environment in which they operate around the coasts of the UK and Republic of Ireland.

The service and support provided by Finning's fluid sampling service is a key element in helping Clayton Engineering ensure that it not only meets but exceeds their customer's expectations. The high level of customer satisfaction has resulted in a close and mutually beneficial working partnership with its customer, which is universally recognised to be the most effective, innovative and dependable marine search and rescue service, and is funded by voluntary contributions.