

The Evolution of Oil Sampling Techniques

Oil sampling has always been a task that is subject to a multitude of opportunities to fail at achieving the desired result due mainly to the high level of human factor involved in the task.

Over the past 15 years or so there have been improvements made to sampling techniques such as the Live remote sample box developed by Fluid Transfer Management back in 2005 where the box could be remote mounted and a live feed line was installed from the pressure side of a circuit into a T piece on the rear of the sample box and returned back to tank or a predetermined suitable return point providing a constant feed of systems oil past the test point making it always ready for the serviceman to take a live sample of representative oil from the desired component.



Fluid Transfer Managements LRS installed on over 5,000 machines Australia wide.

In recent years FTM have introduced a new smaller version known as the LRS Mini designed to suit a larger range of machines and targeting the small to medium equipment market based on the size of the unit.



In both these versions there is a need for the machine to be running at the time the sample is taken due to the pressure required to extract the sample.

Occupational Health and Safety

Live testing within much of the mining industry has recently come under review and within some major mining companies is no longer permitted without going through a multitude of approvals which for a task such as oil sampling would be cost prohibitive to say the least.

Introducing the CareTaker™ ALRS (Automated Live Remote Sampling) system

FTM, its partners and related entities introduced a new business division, FTT (Fluid Transfer Technology) with the sole purpose of investigating and developing new innovative products for industry with focus on several key areas.

Safety and increased profits for end users are several of these areas so with this in mind FTT has designed and patented a fully automated oil sampling system.

Removing the human interaction completely from an operating machine and providing a live oil sample in the process, immediately eliminates danger to any serviceman involved in the oil sample taking task.

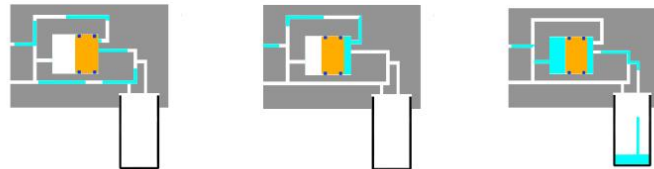
Oil samples can be taken in various ways relative to specific site requirements as below:

- In cab operated controller where the serviceman can contact the operator and request he activate the sample system ready for removal at the next service interval.
- Predetermined timer set for regular hour interval sampling and subject to oil temperature (sample system recognises oil temp elimination cold samples)
- Remote activation via telemetry or blue tooth.

How does it work?

1. The oil sample bottle is attached to the CareTaker™ ALRS and oil is extracted from the Compartment via the 'live closed loop circuit'.
2. The oil sample bottle is then collected when the machine is parked and turned off.
3. A replacement bottle is attached and the process is repeated at the next required interval.

How does ALRS work?
The ALRS operates in three steps



Step 1.

We purge the unit with fresh fluid.

Step 2.

We collect a measured amount of fluid in our sample chamber.

Step 3.

We discharge our sample chamber into the sample bottle.

