

# The Uptime machine blood sample!



## *Oil Sampling in the Lubrication Strategy*

The Why, What, When and Where basics of Oil Sampling  
I always use the analogy when talking about Condition Monitoring of Doctors taking blood samples to test for under-lying health issues. The same applies when oil sampling to assess machinery health.

Here's more details about the 4Ws mentioned above.

Why? I always start with the benefits and work backwards. Oil sampling should drive the oil changes as well as highlighting any early signs of an impending failure. Trending the results will maximise the life of the lubricant, reducing usage, with the potential of saving thousands of £s, \$s or €s in lubrication and labour spend. Most importantly it will drive positive sustainability by reducing waste and re-cycling of used oil.

**What?** Use Criticality as a method to target sampling. Target the units that are the number ones on your criticality survey, and larger fills above 20 Litres; smaller units can be included if high-lighted in the survey.

**When?** Frequency of sampling will change in the strategy. I would advise starting with a monthly frequency, this builds up a trending baseline of oil condition; machinery history and quality of lubricant will also have to be taken into account. Clean stock oil samples should be sent to the laboratory for baseline readings.

**Where?** Repeatable sampling is key to accurate results. The sampling regime needs to be repeatable with as few discrepancies as possible. Ideally the same operator, or technician taking samples in the same manner at each sampling. Location is also vital, in-line take off ports are best deployed, but must be situated at the correct point, for instance a turbulent area where the oil is well mixed. Sampling ideally should take place whilst the machine is running in its normal state. Downtime sampling can be employed but care must be taken not to drag any sump debris into the sample.

*Oil sampling as part of a Condition Monitoring Strategy is a key component to drive reliability in your production plant, it brings benefits on multiple levels when used in a holistic approach.*



Uptime Consultant Ltd  
The TechnoCentre  
Coventry University Technology Park  
Puma Way  
Coventry  
West Midlands, CV1 2TT  
[hello@uptimeconsultant.co.uk](mailto:hello@uptimeconsultant.co.uk)