

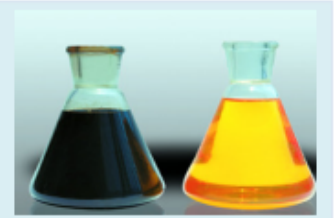
## **Oil Analysis – Saving Companies Millions**

Techenomics offer condition monitoring services which include oil analysis, oil monitoring, and lubrication and filtration solutions to fixed and mobile plants, all of which can significantly extend the life of equipment, lower unscheduled downtime and most importantly decrease costs and save companies a lot of money.

### **What is Oil Analysis?**

Oil Analysis is the analytical results of a lubricants property, suspended contaminants and wear debris. Oil Analysis is performed during routine Preventative Maintenance to provide meaningful and accurate information on lubricants and the machine condition. Oil analysis is the best tool to penetrate into the working heart of the equipment to reveal vital information about its condition and performance.

Techenomics laboratories are capable of analysing many different types of lubricants (both petrol and diesel engines) from mining companies, power stations, agricultural machinery, paper mills, offshore, marine, road and rail freight companies.



### **How Techenomics can Save Companies Millions of Dollars**

Companies should have their oils analysed as it is a known fact that when there is a problem with machinery almost 80 to 90% of the time, the oil carries details and early warning signs of potential problems or failures.

Just as the oil carries the information, so too does the coolant, grease and fuels, they all carry tell tale signs of potential problems or issues within compartments that can easily be rectified or corrected by having lubricants analysed.

Techenomics has the ability to analyse these lubricants by numerous testing methods and procedures, from ASTM standards to in-house testing methods, all of which produce accurate and high quality results to help in diagnosing the performance and characteristics of the lubricant as well as the machinery health.

#### **Oil Analysis, if used correctly, can:**

- **Provide maintenance personnel with the ability to improve availability rates on equipment,**
- **Lower downtime**
- **Save extraordinary amounts of money that could be used on other maintenance requirements.**

## Why Use Techenomics to Analyse Your Oil?

Techenomics provide actual solutions that are associated or in conjunction with Oil Analysis. Techenomics analyse the sample just as other laboratories do, but it's what Techenomics does with the data interpretation that stands out from the rest.

### To evaluate the sample, Techenomics:

- ✚ Have laboratory chemists who investigate and report on the lubricants fundamentals and ability to perform its duties
- ✚ Results and comments are then viewed by the chief chemist
- ✚ Results and comments are then evaluated by the mechanical failure analysis team
- ✚ Once all parties have agreed with the outcome and commentary in the report, it is then sent to the client via email
- ✚ The report is then uploaded to the unique Online Blue Oceans Software that allows clients to view historical data anytime they like
- ✚ Emergency testing can be reported on within one working day from the receipt of the sample, at a minimum of 1 hour to a maximum of 16 hours.

The combination of both the laboratory chemists and the maintenance engineers knowledge to evaluate each and every sample, provides clients with highly detailed insight information into the sample results that can reduce downtime on their equipment, achieve a higher and more effective availability rate and save companies huge amounts of money.

### Oil Test Package

TESTS	TECHNIQUE	STANDARD
Wear metals & additives (Pb, Fe, Cr, Al, Ni, Cu, Sn, Si, Na, B, Mg, Ca, P, Zn)	Rotating Disk Electrode Spectrometer	ASTM D6595
Oxidation, Sulphation, Nitration and Glycol	FTIR	ASTM D7418 / ASTM E 2412
Low level water, % water, quantitative water	Crackle, Hatch and Karl Fischer	ASTM D6034
Hydraulic Cleanliness	Laser Particle Counter	ISO 4406
Viscosity	Spectro Visc Viscometer	ASTM D445
PQ90	Ferrous Debris Analyser	N/A
Quantitative Fuel %	Flash Tester	ASTM D3828
TBN / TAN	Total Base & Acid Number	ASTM 2896 / 974