

# Techenomics

## Capability Statement

TECHENOMICS your Condition Monitoring Partners

- ❖ **FLAC Services (Condition Monitoring)** - The complete industrial site management “system” that ensures the elimination of contamination of Fuel, Lubricants, Air and Coolants. The system can be applied to a complete mine site or modest workshop to reduce the wear caused by contaminants introduced through poor maintenance practices. It’s not uncommon to improve component life by 3-4 times and reduce lubricant consumption by as much as 50% when the FLAC system is implemented.
- ❖ **TOTAL FLUID MANAGEMENT SERVICES (“TFMS”)** – The total management of hydrocarbon products on a site including the disposal of final waste products. This service includes pump on, inventory control, lube change out by condition, refurbishment or reuse of “used” lubes where possible and if suitable the final disposal of lubes on site used a number of different reuse scenarios.
- ❖ **OIL ANALYSIS** - Techenomics operates five fully equipped laboratories capable of the most exhaustive testing of lubricating fluids and greases. This test work will determine the suitability of a lubricant for continued service, any abnormal wear that could indicate component failure and/or provide component repair requirements. All data is available on an interactive web based platform.
- ❖ **HYDRAULIC OIL TESTING** - Techenomics has developed a suite of tests to determine the useful life of hydraulic oil and its effective protection of the hydraulic system. This suite of tests includes foam testing
- ❖ **SPECIALTY LUBRICANTS AND GREASES** - Techenomics manufactures a select range of specialty products that includes greases, wire rope lubricants, including subsea products, drill pipe break out greases and heavy gear oils.

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Online Client Viewer



Techenomics specialises in providing oil analysis services, and specialty lubricants to the mining industry.



By implementing a regular magnetic plug inspection program you will have a very low cost, effective and immediate early warning condition monitoring tool.



Techenomics filtration services can assist companies with the design and installation of a range of fuel and oil filtration solutions.

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- ❖ **MAGNETIC PLUG PROGRAMMES** - This service is used to determine at a very early stage any metallic failure at a low cost. The service can include the provision of all magnetic plugs and trending of the data on the web based management platform. Techenomics also supplies Rare earth element magnetic plugs and can make them to any size required.
- ❖ **STRUCTURED MAINTENANCE PROGRAMMES** - The provision of equipment maintenance programmes based on the principles of FLAC and incorporating oil analysis and other condition monitoring tools.
- ❖ **PUMP ON LUBRICANT SUPPLY** - The provision of a specially designed lubricant truck to pump directly onto mobile equipment in the field.
- ❖ **WASTE OIL RETREATMENT** - Recycling of waste oil for use in the manufacture of ANFO for paddock blasting. This process has been successfully utilised on a number of mine sites with considerable savings in lower usage of diesel fuel and no costs for the disposal of used oil.
- ❖ **WASTE OIL RETREATMENT** - Another process used to recycle waste oil is a process of blending treated waste oil into the diesel burn process, where savings again can be considerable resulting from fuel usage of up to 7%.
- ❖ **LUBRICANT AND FUEL FARM DESIGN AND CONSTRUCTION** - Techenomics has the expertise to design and construct a wide range of facilities related to lubricant and fuel usage. Facilities have been installed in Laos, Indonesia and Australia.
- ❖ **FILTRATION** - Design, installation and maintenance of filtration systems on both mobile and fixed plant.
- ❖ **CHEMICAL CLEANING OF PIPEWORK** - The cleaning of pipe work especially hydraulic oil lines on barges, ships and off shore oil and gas facilities. This process often precedes hydraulic flushing.



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- ❖ **HYDRAULIC LINES FLUSHING** - Flushing of hydraulic lines on offshore equipment to ensure that NAS 7 cleanliness can be maintained
- ❖ **CLEANLINESS CERTIFICATION** - Certification of the cleanliness of fuels and oils as per the ISO 4404 or NAS codes.
- ❖ **FUEL TESTING** - The provision of fuel testing for either compliance to spec or to assist with fuel usage in poor fuel locations such as Indonesia.
- ❖ **GENERAL LUBRICATION ENGINEERING SERVICES** - Techenomics can provide a vast range of engineering services and field inspections for mobile plant, draglines, off shore equipment and fixed plant.
- ❖ **FUEL PURGING AND CONDITONER TREATMENT** – Techenomics can reduce fuel consumptions by up to 10% by cleaning the fuel system and dosing the fuel tank with a specialized fuel conditioner treatment. Trails have shown a considerable amount of savings by reducing consumptions.
- ❖ **NON DESTRUCTIVE TESTING**-Techenomics NDT services can be used in a wide range of applications including the mining, earthmoving, construction, offshore production, shipbuilding and engineering fabrication industries to name a few. Techenomics endeavors to work closely with its customers to help develop and implement NDT programs best suited to their needs. NDT allows an object, material or system to be examined without destroying it and is conducted to help determine the uniformity, quality and serviceability of materials and structures. Testing is done using a number of different methodologies including: Ultrasonic Thickness Gauging, Penetrant Testing, Magnetic Particle Testing, Visual Inspection, X-Ray, and Gamma Ray



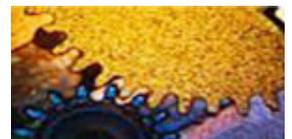
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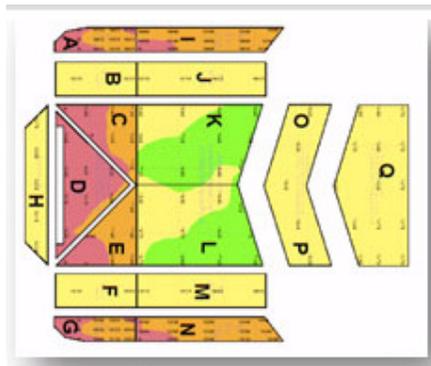
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❖ **STATIC WEAR TRAY PROGRAM**-Techenomics provides a unique tray monitoring service. Techenomics trained field staff monitor and record all areas of the rear dump tray by using specialized tools that display the current thickness of each plate in each location, this is then recorded by the field staff and later uploaded into the online software, know as Blue Oceans. The tools and functions that are built into the static wear tray module are very unique as the program has been designed to predict failures before they occur. The software functions utilize Microsoft technologies to enable this precision software to predict the future.



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## Example of Techenomics Oil Analysis Reporting

