FLUID & LIFE

DRILLING INDUSTRY

Tight production deadlines, remote job sites, severe equipment load factors and rig sample compliance present tough challenges for drilling equipment.

Oil analysis gives you a window inside your equipment to identify and resolve mechanical issues at an early stage. Plus, by using Fluid Life's myLab[™] web-based reliability program management tool, you have the ability to track and manage rig sample compliance effortlessly.



Get the edge with <mark>routine</mark> fluid analysis

- Detect failures at an early stage
- Tighten up your contamination control efforts
- Manage machinery conditions at remote sites
- Prolong the life of your auxiliary equipment
- Optimize your oil drain intervals
- Ensure quality and cleanliness of diesel fuel
- Protect the investment of your diesel engines
- Maintain cooling system efficiency
- Plan and schedule upcoming mechanical repairs
- Manage rig sample compliance via myLab



Drilling Test Packages

Fluid Life offers specially designed, industry specific test packages to support your equipment reliability needs. Our Drilling 1: Basic package provides a broad overview of fluid condition across a variety of components. Drilling 2: Advanced also focuses in on particulate contamination in the hydraulics and top drive by ISO particle counts giving you a more comprehensive idea of whats happening in your rig.

| TEST | DRILLING 1: BASIC | DRILLING 2: ADVANCED |
|-------------------------------------------------|-------------------|----------------------|
| Spectroscopy (25 Elements) | Х | Х |
| Viscosity (40C or 100C) | Х | Х |
| Water by Crackle | Х | Х |
| Soot by FTIR (Engines) | Х | Х |
| % Glycol, Triggered GC (Engines) | Х | Х |
| % Fuel, Triggered GC (Engines) | Х | Х |
| Oxidation/Nitration/Sulfation by FTIR (Engines) | Х | Х |
| ISO Particle Count (Hydraulics, Top Drives) | | Х |

A variety of individual tests are also available on an à la carte basis.

Drilling Testing Recommendations

The following recommendations are suggested for the various drilling rig components by test package.

| COMPONENT | DRILLING 1: BASIC | DRILLING 2: ADVANCED |
|-----------------------------|-------------------|----------------------|
| Mud Pump | Х | |
| Top Drive Gear Box | Х | |
| Rotary Table | Х | |
| Transmission | Х | |
| Gear Boxes | Х | |
| Engines | Х | |
| Hydraulics - Main Hydraulic | | Х |
| Hydraulics - Catwalk | | Х |
| Accumulators | | Х |



Suggested Sample Schedule

| COMPONENT | SAMPLE FREQUENCY | |
|---------------------------------------------------|-----------------------------|--|
| Engines | Every 250 hours | |
| Mud Pump (Power End) | Every 30 Rig Operating Days | |
| Top Drive Gear box | Every 30 Rig Operating Days | |
| Hydraulic System (Catwalk, Top Drive, Draw-works) | Every 30 Rig Operating Days | |
| Rotary Table | Every 90 Rig Operating Days | |
| Transmissions | Every 90 Rig Operating Days | |
| Gear Boxes | Every 90 Rig Operating Days | |

Fluid Analysis Program Features

- ISO 17025 laboratory quality system
- Custom test packages for the drilling industry
- Flexible sample registration options
- Expedient freight options
- Next day laboratory turnaround available
- Convenient and flexible reporting options
- Sample Rank[™] results evaluation
- myLab[™] on-line data management toolkit
- Reliability consulting services
- Professional training seminars
- Four laboratories across North America and 40+ years experience
- Customer Care toll-free support

Contact Fluid Life to purchase your test kits and associated sampling supplies.

We're a company that's All Ways Reliable. From analysis and evaluation to planning and strategy, Fluid Life has the expertise to help you achieve a higher level of reliability.

EQUIPMENT RELIABILITY SERVICES

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