360 Compression Services, LLC
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Introduction to 360 Compression Services

Oil Condition Monitoring Program

driven by a globally powered software package.

"**LOAMS", Lube Oil Analysis Management System,**
developed by one of the largest analytical companies in the world, Bureau Veritas, gives every user cloud-based access to real time analytical results, out of range warnings, ranked by criticality on every asset tracked.

360 Compression Services partner, Gates Engineering has been subscribed and utilizing LOAMS for over 18 years, providing support to our lubricants customer base which has spanned into many countries around the globe. Consistent real time Oil Condition Monitoring can assist in moving your equipment and maintenance program into another level of service, providing information for predictive maintenance, and avoiding unplanned down time or catastrophic failures.

LOAMS provides:
Equipment & Sample Report Management based on the following analytical data;

Wear Metals Testing

- Motion between lubricated parts is always accompanied by friction between opposing part surfaces
- Particles produced as the parts wear remain suspended in the circulating oil.
- Wear metal testing indicates the relative wear rates of the lubricated parts

Contaminants

- Substances often enter a component's oil system from external sources
- Key types of contamination include silicon dioxide (sand) and grease
- Contaminant testing ensures that the level of contamination will not impact on a component part's operational performance

Additives

- Additives are chemical compounds added to oil, fuels and coolants to impart specific benefits
- They create new fluid properties, enhance properties already present and reduce the rates undesirable changes take place
- Testing measures levels and changes due to additives

Physical Analysis

- Basic testing carried out on most samples to determine some key physical characteristics of the oil
- Example includes viscosity which is the lubricant's internal resistance to flow at a given temperature relative to time. Changes in viscosity indicate improper servicing, dilution, contamination or lubricant breakdown.
- Other analysis include water testing, fuel soot and fuel dilution

Infrared Analysis

- When an organic compound, such as lubricant oil, is exposed to infrared light the substances present will absorb the light at specific wavelengths
- In this way, certain contaminants and physical changes can be directly measured as a molecular spectrum
- This is most frequently used to test for oxidation, nitration, water and fuel soot

Ferrography

- This is an analytical technique in which wear metals and particles are magnetically separated and arranged according to size and composition for further examination
- This is higher end testing that often draws premium rates – and is composed of Direct Reading Ferrography, Analytical Ferrography and Interpretation and Reporting

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LOAMS provides a digital platform to;

Maintain clean equipment lists, submit samples and print jar labels online and create custom search filters.

- Keep equipment lists clean and sampling histories intact with the power to add, delete, update, merge and move units between locations
- Maintain scheduled sampling intervals
- Print bar-coded jar labels and register trackable sample information online prior to the sample's arrival at the laboratory
- Create custom search filters to easily locate data using multiple equipment parameters
- Save filters to quickly locate commonly viewed test results and download, print or email to others

MANAGEMENT REPORTS

Fluid analysis only saves you money if you are saving equipment. The management reports within LOAMS provide a comprehensive view of all the data your oil analysis program generates.

- Keep equipment lists clean and sampling histories intact with the power to add, delete, update, merge and move units between locations.
- Document program strengths and eliminate weaknesses to elevate overall program performance.
- Know that oil samples are shipped to the laboratory as soon as they are taken.
- Monitor sample transit time to pinpoint issues that could be slowing turnaround time and costing you money in delayed maintenance action.
- Enforce compliance with required sampling schedules to catch small problems in all the components you are testing before they become catastrophic failures.
- Address critical samples immediately and monitor those at lesser severities for changes in sample condition – trend analysis is key to achieving "normal" sample results across the board, which is the true measure of a successful fluid analysis program.

TREND GRAPHING

Track oil analysis trends. Compare unit and component performance.

- Track oil analysis trends in abnormal test results for individual pieces of equipment using multiple test parameters.
- Overlay test results by make or model to compare equipment performance between individual units or across populations of units.
- Chart sample condition for specific components to view performance compared to similar models or families of component types.

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CONFIGURATION AND ADMINISTRATION

User roles are defined by permissions which determine what individual users can and cannot do in LOAMS.

- Designate roles, permissions, and preferences to determine how oil analysis data is received, displayed, and communicated to others.

COMMUNICATIONS

User preferences determine how and when information is received, how it's displayed and how you can communicate it with others.

- Utilize filters to automate email distributions of sample reports and management reports specific to other LOAMS users and non-users.

360 Compression Services & Gates Engineering provides sampling kits which include preprinted labels, sample bottles, mailer boxes and prepaid shipping to your nearest Bureau Veritas Lab. We also provide sample collection training and critical sampling points for more accurate and useful information.

Please request a quote for your specific needs and we will build a scheduled program fitting your vision of maintenance and risk prevention.

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