TECHNICAL BULLETIN
Driving Compliance in Your Oil Analysis Program

Oil analysis programs come in all shapes and sizes to meet the needs of the maintenance team. However, just because you have a customized program doesn't mean it is able to deliver the impact, uptime and savings you desire. Exploring the performance and structure of your program will help you evaluate past results, redesign it to fit your goals and drive your program to excellence.

Is Your Program Underperforming?

Oil analysis programs underperform for several reasons. Below are the five largest, most common hurdles faced by maintenance departments regarding their oil analysis programs:

- **No Overall Strategy** – Without goals and a developed strategy, most maintenance is reactive instead of predictive. Problems may be resolved, but the underlying causes are never addressed.
- **Inconsistent Sampling** – When an oil analysis program is not compliant with its sampling schedule, trending analysis isn't possible. Unsampled equipment can even fail when a test could have identified problems much earlier.
- **Inadequate Test Selection** – Performing too many tests or tests that don't support your goals is a waste of money, and having too few tests will not provide enough detail to perform maintenance actions.
- **Missing Information** – Data analysis makes conservative assumptions when faced with missing information and cannot enhance predictive maintenance. The more information available, the more precise the recommendation.
- **Not Taking Action** – Leaving maintenance recommendations unaddressed wastes the time and energy used to collect and test the sample.

Do You Have an Effective Oil Analysis Program?

The key to improvement is identifying what your program is doing right and where it could use improvement. These four priorities address the critical elements needed to get an oil analysis program moving in the right direction.

Equipment Lists and Test Selection

Work with your oil analysis provider to create a complete and accurate equipment list in their system (ideally, this occurs before samples are ever taken). This sounds basic, but that information is valuable when evaluating test data and making maintenance recommendations.

Next, check to see if the tests performed on your samples will support your maintenance goals by maximizing the data density achieved through proper testing.

Sample Frequency and Compliance

How often samples should be collected depends on the type of equipment, the environment it operates in and the work it performs. But always remember you are in control of how often samples are pulled. The preventive maintenance recommendations from equipment manufacturers and oil distributors are good starting points, but they may be too often or too infrequently for your maintenance goals. Samples might need to be pulled between PMs, or sampling could be extended once data shows it would not expose equipment to greater risk from contamination and/or wear.

Once your company sets a sampling protocol, you need to stick to it. It is tempting to view sampling as non-essential work, especially with a line of downed equipment outside the maintenance bays. However, investing 10 minutes to collect a sample could end up saving 10 hours of maintenance in the future. Don't trade future work for today's convenience.

Periodic Program Reviews

Set aside time to assess the performance of your program. Measuring progress will help you identify areas that are performing well and which ones need improvement. Program Reviews also help you communicate the results of your efforts to management and maintenance personnel. Choose the key performance indicators (KPIs) that show how oil analysis affects the company's bottom line so everyone understands the value of the program.

Establish a Program Champion

Companies need at least one person within their organization to drive successful in the areas mentioned above. This program "Champion" will lead the oil analysis efforts and should be focused on saving the company money in the long run. Far from a "Lone Ranger", this position works with the maintenance team and will probably need to steer behavioral change within the company.

Realize How Oil Analysis Impacts Your Bottom Line

Oil analysis can be a difficult cost to evaluate. When done properly, predictive maintenance keeps operations running smoothly. Without oil analysis, equipment breakdowns require major repairs or replacement and disrupt production. But how can you compare the costs you experience to the cost of problems that were avoided?

Each company values oil analysis differently. If advanced warning about equipment failure is the highest priority, track the time saved ordering parts and waiting for labor. If your goal is to lower maintenance costs, compare the expense of the maintenance performed to complete overhauls or equipment replacement. Not every problem will result in equipment failure if left unchecked, so make sure your estimates line up with past numbers.

Regardless of what is being evaluated, management needs to see the monetary value of oil analysis. You may be more comfortable talking about sample report severities or contamination levels, but businesses evaluate projects in dollars and cents. When looking at decreased overtime for maintenance staff, take it one step further by multiplying the hours saved by the average overtime pay. When evaluating increased productivity, use the company's estimated revenue per hour to calculate the business impact. Typically, management responds well to reasonable, logical calulations, especially if you can use their numbers.
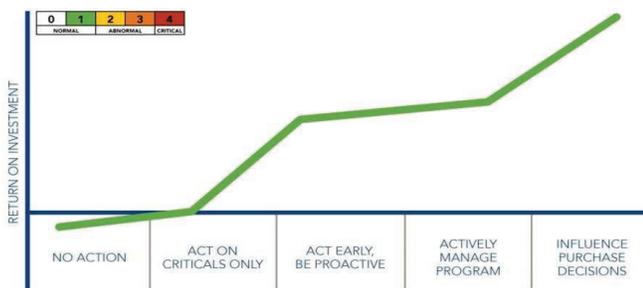
Maximize the Benefits of Oil Analysis

Oil analysis programs are all unique, but the most successful ones have several common traits.
They are able to establish:
• Impact: Check the right equipment with the right tests at the right time.
• Uptime: Follow through on oil analysis maintenance recommendations.
• Savings: Take actions to extend overall equipment life

Programs that focus on these items will reduce their overall maintenance and equipment replacement and repair costs by ensuring their equipment performs when needed.

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