

SERVICES

Assessments // Audits // Consulting



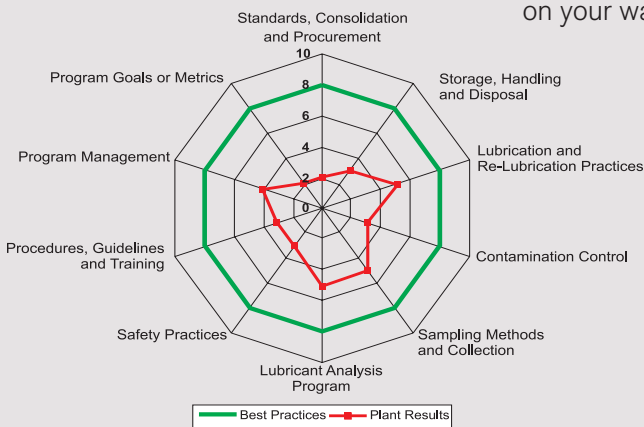
TRICO 
MAXIMIZE, OPTIMIZE, NEVER COMPROMISE.

1 - ASSESSMENTS



The Trico service team gathers data on critical equipment, maintenance practices, procedures and technologies that are presently in place. This is done through personnel interviews, record and document reviews and a detailed plant walk-through. With this information, we are able to create a report that compares our findings to the industry's "Best Practices" standards. This will help you pinpoint the strengths and weaknesses of your existing lubrication management program.

This comprehensive information is presented in a detailed written report along with a visual scorecard like the Lubrication Spider Chart below. Each Assessment report concludes with an Executive Summary that specifies your target areas for most rapid ROI, and lays out detailed "next steps" that will start you on your way to peak-performance lubrication management.



The spider chart provides a clear measure of how your company's lubrication management practices compare to industry standards. Just as important, it serves as a valuable tool in prioritizing those areas of improvement.

LUBRICATION ASSESSMENT SUMMARY

- Baseline established
- Project scope defined
- Target resources for maximum ROI
- Independent validation of existing conditions
- Management review
- PM program management



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2 - AUDITS

Trico has spent more than a decade fine-tuning the art of uncovering problems and developing customized solutions that reduce maintenance cost, improve reliability, and provide a blueprint for better machine operations.

The typical Lubrication Audit results in a complete list of a plant's oil and grease lubricated equipment with documented guidelines to provide the right product, in the right location, in the right amount, at the right time and in the right condition. While this is critical to equipment reliability, an audit conducted by Trico provides more.

Trico audits open the door for many new cost saving strategies, including a full list of recommendations on improving oil sampling procedures, assessing fluid storage and handling procedures, and setting appropriate target and alarm limits.

LUBRICATION EQUIPMENT AUDIT SUMMARY

- Equipment criticality
- Operating parameters/evaluation
- Maintenance history evaluation
- Determine oil sampling locations
- Recommend target and alarm parameters
- Lubricant testing/oil baselining
- OEM lubricant requirements
- Lubricant storage, handling and dispensing
- PM work task generation

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3 - CONSULTING

Using information gathered during the audit process, our hands-on consultants work with you to correct existing maintenance problems or enhance current practices.

Trico services specialize in building and supporting world class lubrication programs aimed at increasing equipment reliability. For instance, our oil analysis programs are specifically aimed at directing your maintenance activities by reporting not only your oil condition but also the equipment condition.

This information leads to enhanced troubleshooting abilities, directing root cause analysis (RCA) activities and the successful integration of your oil analysis data into your PdM (Predictive Maintenance) Program.

Trico offers consulting services in developing an equipment essential care program for operations and maintenance management systems. Our consultants assist in the start-up and installation of this integrated maintenance management package encompassing all three maintenance techniques – preventative, predictive, and proactive.

We also provide documentation and procedural development, such as standard operating procedures, work task outlines, maintenance practices, maintenance processes and procedures, and oil analysis. This assists in planning for the reduction of skilled maintenance personnel due to retirement and changing facilities. It also preserves and maintains valuable knowledge and best practices for continued use.



CONSULTING SERVICES

- Plant maintenance optimization
- Documentation and procedural development
- Contamination diagnosis and treatment
- PdM program assessment
- Organizational development
- People development
- Machine condition analysis
- Lubrication, PdM, and condition monitoring program development



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“To truly optimize production and gain healthy cost efficiency, you need to be proactive and comprehensive with your lubrication management program.”

Today's solutions for tomorrow's challenges.

Integrating a proactive lubrication program into your facility management systems can save a great deal of money and headaches. It helps you reach and exceed production goals, yet most companies fall short of implementing this valuable tool.

That's because when it comes to establishing and maintaining this type of program, there's often not enough time, manpower and knowledge to get it done. Some companies lack the internal capabilities to effectively maintain their systems. Others find that the people who had the knowledge have retired or moved on. Even when that “tribal knowledge” is passed along, it can be incomplete or flawed.

That's where Trico can help.

A veteran leader in lubrication management, Trico uses a customized three-stage process that helps companies dramatically cut maintenance costs, reduce downtime and extend equipment life. Whether you need an assessment of your facility, personnel training or solutions to specific machinery problems, Trico can help you solve even the toughest in-plant maintenance and reliability challenges.

Find out how Trico can help improve your lubrication management practices. Contact us at 800.558.7008 or visit www.tricocorp.com.

3 steps

to lubrication management

1 - ASSESSMENTS

The Lubrication Program Assessment is a critical step in improving the overall lubrication program within the plant. We assess and rate your current program compared to industry “Best Practices”. We then provide a detailed report summarizing opportunities for improvement in key areas versus current efforts and conditions. This provides plant personnel with a roadmap to address plant status, and provide direction on where to focus resources to ensure improvements in equipment reliability and reductions in overall maintenance cost.

2 - AUDITS

An Equipment Lubrication Audit is performed to obtain information about the specified equipment including its internal design, the system design, the present operation and environmental conditions. We will gather the necessary information and outline recommended equipment lubrication requirements.

3 - CONSULTING

Our specialists in lubrication and PdM program implementation, documentation integration, and root cause analysis provide practical solutions in the interest of extending asset reliability and helping your people operate more proactively.

TRICO'S TEAM



Jim Hudson

Jim has over twenty years of experience in the manufacturing industry developing and implementing maintenance programs that encompass operator basic care, lubrication, condition monitoring, and precision maintenance. With a degree in mechanical engineering, he has used his skills in the roles of project engineer, planner, supervisor, reliability engineer, and maintenance manager in all areas of an integrated pulp and paper mill. Jim is well known in equipment reliability management for the pulp and paper industry as an author and presenter of numerous technical papers and presentations.



Kevan Slater, CLS

Kevan is the founder and past president of Schematic Approach Inc., a leader in the field of condition assessment and asset management of rotating equipment. With over thirty years in the maintenance industry, Kevan's "in the field" approach has been developing, advocating and implementing technical, business and operating strategies for improving the reliability of industrial equipment to numerous companies.



Paul Dufresne, CMRP

Paul has an extensive background in vibration analysis, lubrication management, infrared thermography, airborne ultrasonic technology, reliability centered maintenance methodologies, root cause analysis and reliability program implementations using PdM and basic care computerized maintenance management system hardware and software.



Kelly Wollschlager

Kelly has worked for Caterpillar Power Systems as a Field Service Technician for the last two years. His experience includes inspecting, diagnosing, repairing, and maintaining power generation equipment, industrial engines, and marine engines. Prior to working for Caterpillar Power Systems, Kelly spent twelve years with the U.S. Army in the power generation field working with gas, diesel, and turbine engines, and electrical troubleshooting, diagnostics and repair.



Kristopher Sonne

Kris has spent the last decade working in the field in both oil and vibration analysis. He has an extensive background in developing condition monitoring routes, work management review and execution, validation and calibration of condition monitoring equipment in the Pulp and Paper, Automotive, Food Manufacturing, and Chemical Processing industries. Kris is certified with the MLTI and Vibration ISO Category II.



Kris Bagadia, PE, CPE

Kris holds a Bachelor of Mechanical Engineering, and Master of Industrial Engineering from Marquette University. Kris has been involved with CMMS for over two decades including; designing, developing, testing, and implementing CMMS programs. He has a strong understanding of maintenance functionality and how a CMMS can accomplish them.

Trico's Service Customers

Join the growing group of leaders that recognize the value of superior lubrication management.

Abitibi - Consolidated	International Paper
Anheuser Busch	JM Huber
Bruce Power	Krueger Paper
Citgo	LaFarge
Domtar	Millennium Chemical
Dow	Ontario Power Generation
Duke Power	Sanofi Pasteur
DuPont	Sappi Paper
Dynegy	Smurfit Stone
Ford Motor Company	Suncor Refining
Genentech	Sunoco
General Motors	Tembec
Georgia Pacific	Wecast Industries
Gerdau Ameristeel	Weyerhaeuser
Goodyear Tires	Whirlpool

For extended biographies on service team members please visit www.tricocorp.com/services/service-team.aspx