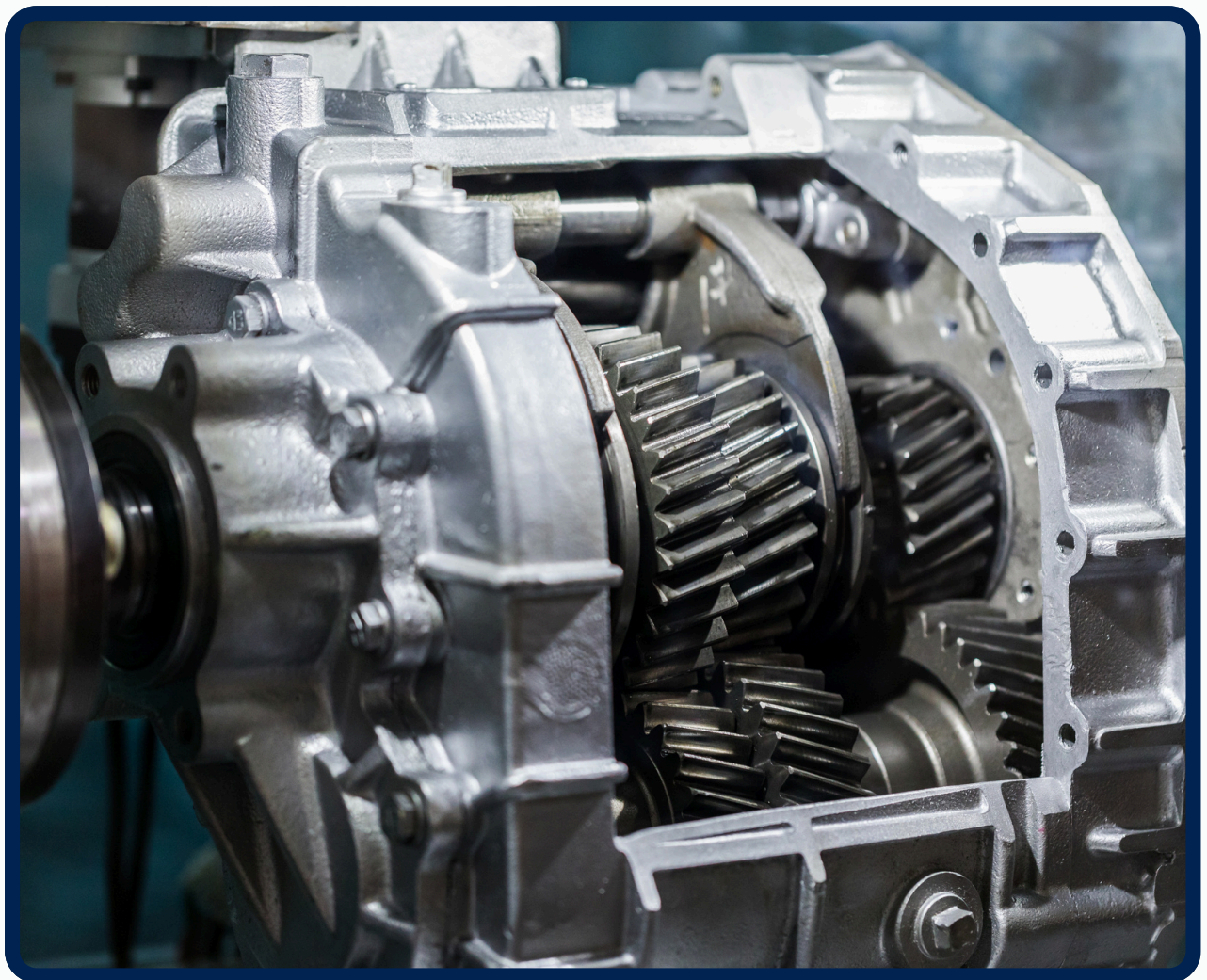


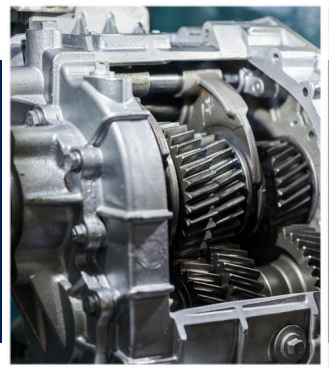
GEARBOX TROUBLESHOOTING, INSPECTION & MAINTENANCE OPTIMIZATION



OUR ACCREDITATION & PARTNERS



GEARBOX TROUBLESHOOTING, INSPECTION & MAINTENANCE OPTIMIZATION



OVERALL DESCRIPTION:

This course provides a comprehensive and practical guide to maximizing the lifespan and performance of your gearbox assets. Participants will gain the skills to move beyond reactive fixes by mastering advanced inspection techniques, effective troubleshooting methods, and strategic maintenance optimization. We'll focus on a holistic approach that integrates foundational knowledge of gearbox components with modern predictive technologies, ensuring reduced downtime, lower maintenance costs, and improved plant productivity.

Course Objectives:

Upon completion of this course, participants will be able to:

- Identify and describe key gearbox components and their functions.
- Master systematic troubleshooting methods to diagnose common gearbox faults and failures.
- Implement a structured inspection plan, including both visual and advanced non-destructive techniques.
- Understand the critical role of proper lubrication and its impact on gearbox health.
- Utilize condition monitoring technologies, such as vibration and oil analysis, to predict failures.
- Develop and optimize a cost-effective maintenance strategy tailored to specific gearbox applications.

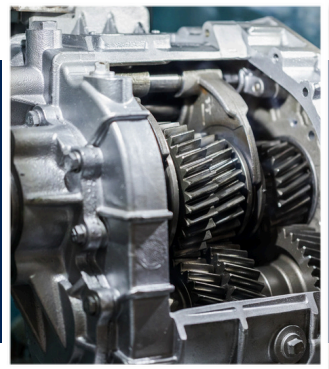
Course Outline:

Foundational Gearbox Knowledge

- Gearbox design and types: a practical overview
- Understanding common failure modes: pitting, wear, fracture, and fatigue
- The critical importance of effective lubrication



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Course Outline:

Systematic Inspection & Diagnosis

- Developing a thorough external and internal inspection checklist
- Practical troubleshooting techniques for noise, vibration, and temperature issues
- Introduction to advanced inspection tools: borescope, thermography, and stroboscope

Modern Maintenance & Condition Monitoring

- Implementing a Condition-Based Maintenance (CBM) program
- Practical application of vibration analysis for early fault detection
- Interpreting oil analysis reports to monitor lubricant and wear particle health
- Integrating data from CMMS for maintenance optimization

Maintenance Strategy & Optimization

- From reactive to proactive: building a strategic maintenance plan
- Best practices for corrective and preventive maintenance
- Practical case studies of successful gearbox maintenance programs
- Calculating the ROI of maintenance optimization efforts

WHO SHOULD ATTEND?

This course is designed for professionals responsible for the reliability and maintenance of rotating equipment. The ideal participants include Maintenance Technicians and Supervisors, Reliability Engineers, Plant Operators, Maintenance Planners, and anyone involved in the operation or inspection of industrial gearboxes.

Course Methodology:

We utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This training course will be conducted as a highly interactive workshop session. A variety of training methodologies will be used Before and during the course whenever applicable. Some of these methods are gamification, online pre-post test, role plays, self-assessment instruments, group exercises & case studies.

