MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

INSPECTION & OVERHAUL OF AIR COMPRESSORS

""Ensuring Reliable Operation Through Effective Inspection, Troubleshooting, and Maintenance Techniques""

Schedule

Date	Venue	Fees (Face-to-Face)
08 – 09 Jan 2026	Kuala Lumpur, Malaysia	USD 1995 per delegate
29 – 30 Apr 2026	Dubai, UAE	USD 1995 per delegate
15 – 16 Jul 2026	Manama, Bahrain	USD 1995 per delegate
25 – 26 Nov 2026	Muscat, Oman	USD 1995 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Air compressors are vital components in many industrial processes, providing reliable energy for tools, machinery, and systems. However, poor maintenance and delayed inspection can lead to inefficiency, breakdowns, and increased operational costs. Proper inspection and overhaul practices are essential to maximizing uptime and extending compressor life.

This hands-on, technical course equips maintenance professionals, engineers, and plant technicians with the knowledge and skills required to safely inspect, maintain, and overhaul air compressors. Covering both reciprocating and rotary compressors, the course includes operational principles, common failure modes, lubrication systems, and alignment techniques.

Objectives

By the end of this course, participants will be able to:

- Understand the types, design, and function of air compressors.
- Perform inspections and detect early signs of wear or malfunction.
- Execute overhauls, replacements, and alignments to factory standards.
- Troubleshoot operating problems such as vibration, overheating, and pressure loss.
- Plan and document compressor maintenance activities.
- Enhance safety and reliability through proactive servicing.

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Why Attend

- Reduce unscheduled shutdowns and production losses due to compressor failure.
- Extend compressor life through timely inspection and overhauls.
- Improve reliability and performance through precise maintenance procedures.
- Learn troubleshooting methods from real-world service cases.
- Strengthen safety compliance and team confidence during mechanical interventions.

Target Audience

This program is designed for:

- Mechanical maintenance engineers and technicians
- Plant engineers and rotating equipment specialists
- Maintenance planners and supervisors
- Facilities engineers and operations staff
- Technical professionals responsible for compressor upkeep

Individual Benefits

Key competencies that will be developed include:

- Mechanical diagnostics and fault identification
- Preventive maintenance execution
- Root cause analysis and corrective action
- Understanding of internal components and tolerances
- Safe overhaul and alignment techniques

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Fewer compressor failures and reduced downtime
- Improved equipment reliability and maintenance scheduling
- Better documentation and inspection recordkeeping
- Enhanced asset life cycle and spare parts management
- Stronger safety culture during inspection and repair operations

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Equipment Briefings – Types, parts, and working principles
- Technical Demos – Component inspection, lubrication, and alignment
- Troubleshooting Labs – Diagnosing vibration, pressure loss, and seal failures
- Templates – Overhaul checklists, inspection logs, and maintenance plans
- Case Studies – Real-world failures, repairs, and analysis
- Group Exercises – Repair simulation and performance optimization

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Course Outline

Detailed 2-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Compressor Fundamentals & Inspection Practices

- **Module 1: Overview of Air Compressor Types and Operation (07:30 – 09:30)**
- Reciprocating vs. rotary screw compressors
- Air compression cycles and energy consumption
- Key performance parameters: pressure, flow rate, efficiency
- **Module 2: Preventive Inspection and Monitoring (09:45 – 11:15)**
- Inspection intervals and checklist development
- Visual, vibration, thermal, and acoustic signs of distress
- Oil quality, filter condition, and seal wear monitoring
- **Module 3: Failure Modes and Early Warning Signs (11:30 – 01:00)**
- Common mechanical and electrical faults
- Diagnosing abnormal noise, pressure drops, and temperature spikes
- Root causes of lubrication failure, cavitation, and misalignment
- **Module 4: Workshop – Compressor Condition Assessment (02:00 – 03:30)**
- Sample walk-through using real maintenance data and inspection forms

Day 2: Overhaul Procedures & Troubleshooting Techniques

- **Module 5: Planning for Major Overhaul (07:30 – 09:30)**
- Disassembly, inspection, and documentation
- Wear measurement and part replacement criteria
- Seal, bearing, valve, and piston handling
- **Module 6: Reassembly and Alignment Techniques (09:45 – 11:15)**
- Shaft alignment methods and tolerances
- Bolt torque, clearance checks, and system flushing
- Ensuring operational safety during re-commissioning
- **Module 7: Troubleshooting System Failures (11:30 – 01:00)**
- Interpreting alarms, sensor readings, and system diagnostics
- Control panel settings and automation issues
- Responding to emergency shutdowns and restart procedures
- **Module 8: Final Simulation and Action Plan (02:00 – 03:30)**
- Team challenge to develop an overhaul strategy and troubleshoot case faults

Certification

Participants who complete the program will receive a **Certificate of Completion in Inspection & Overhaul of Air Compressors**, validating their ability to maintain, inspect, and restore compressor systems to optimal performance.

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Why Choose MAWA Events

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- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
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- **Client-Focused Solutions:** Customized programs designed to achieve your organisation's unique goals.

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