
Maintenance Audit Training Course: Practice Scoring, Plant Walk-Downs and Action Plans

22 – 26 February 2027
Barcelona





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Programme Summary

Maintenance audit is the subject of this one-week training course for maintenance, asset and operations managers, ending in a scored audit report and action plan for one site. Maintenance functions often report activity rather than results, so leaders lack evidence of where practice is weak. The programme moves from audit principles, through diagnosis of practice and plant condition, to the design of corrective actions, then applies them to one site. Mars Training Centre UK delivers this maintenance audit programme for plant owners, operators and asset-intensive service organisations.

The Business Case

A maintenance function can look busy while equipment condition declines, backlogs grow and spend drifts away from risk. A structured maintenance audit replaces opinion with scored evidence from records, interviews and plant observation. Leaders who can run and challenge an audit direct limited budgets towards the gaps that matter and can show owners why.

- Unplanned Downtime: Falls as audit findings expose weak planning, inspection and defect handling.
- Maintenance Cost Control: Improves as work volumes and spares are compared with equipment risk.
- Safety-Critical Equipment Assurance: Strengthens as condition and test evidence is checked on site.

Principles and Evidence Base

- ISO 55001 asset management requirements: They provide the management system criteria against which maintenance practice is scored in Sessions 1 and 2.
- EN 15341 maintenance key performance indicators: They frame the indicator review that tests reported results in Session 2.
- EN 13306 maintenance terminology: It fixes the vocabulary used for audit questions, findings and corrective actions in Sessions 1, 4 and 5.

Intended Participants

- Maintenance managers who own planning, execution and reporting for a plant or fleet.
- Asset managers who must test whether maintenance spend protects asset value and performance.
- Operations directors who rely on maintenance results and need independent assurance.
- Reliability and engineering leads who will lead or join audit teams.

The programme serves oil and gas, power and utilities, manufacturing and facilities operators, and suits mixed groups.



Learning Outcomes

1. Participants will be able to construct an audit scope, sample and scoring scale for a maintenance function.
2. Participants will be able to evaluate planning, scheduling, spares and work order evidence against defined criteria.
3. Participants will be able to diagnose weaknesses in reported maintenance performance indicators.
4. Participants will be able to classify equipment condition and housekeeping findings from a plant walk-down.
5. Participants will be able to prioritise corrective actions by risk, effort and benefit.
6. Participants will be able to justify an audit report and improvement roadmap to site leadership.

Programme Structure

Day 1: Maintenance Audit Principles and Scope

What does a maintenance audit examine, and what evidence makes a finding stand up?

- ISO 55001 Management System Criteria
- EN 13306 Terminology for Audit Questions
- Audit Scope and Sampling Plan
- Evidence Hierarchy Grid
- Scoring Scale Design

Day 2: Diagnosing Maintenance Practice and Performance

Do the records and indicators show what the maintenance function says it achieves?

- EN 15341 Indicator Review
- Work Order Backlog Sample Check
- Planning and Scheduling Practice Scorecard
- Spares and Stores Evidence Check
- Interview Guide for Supervisors and Contractors

Day 3: Plant Walk-Down Inspection and Condition Findings

What does the plant itself reveal that the paperwork does not?

- Walk-Down Checklist Design
- Lubrication and Housekeeping Observation Sheet
- Equipment Condition Rating Scale
- Safety-Critical Equipment Spot Check
- Finding Classification and Photographic Log



Day 4: Designing Corrective Actions and Improvement Roadmaps

Which gaps should be closed first, and with what resources?

- Gap-to-Target Matrix
- Risk and Effort Prioritisation Grid
- Corrective Action Register
- Improvement Roadmap Timeline
- Benefit and Resource Estimate

Day 5: Applying the Maintenance Audit to One Site

Is the audit evidence sound enough to present to site leadership?

- Applying the Session 1 Scoring Scale to Site Evidence
- Reconciling Session 2 Indicators with Session 3 Findings
- Testing Session 4 Priorities with Site Leaders
- Rehearsing the Closing Meeting
- Completing the Scored Audit Report and Action Plan

Methodology

The programme uses a field-style audit method built on anonymised work order extracts, indicator sets, interview notes and plant photographs from several sectors. Participants work in audit teams, score evidence, challenge each other's ratings and defend findings in mock closing meetings, with feedback from the facilitator on every work product.

- Suggested activity: Scoring a sample work order backlog and recording the evidence behind each rating.
- Suggested activity: Walking through plant photographs and classifying condition findings by severity.
- Suggested activity: Building a one-page improvement roadmap from a set of audit gaps.

Capstone Output

Each participant completes a scored audit report and action plan for one site. It holds the audit scope, a scoring summary, an indicator review, walk-down findings, a prioritised corrective action register and a roadmap. The report is used to brief site leadership, agree owners for each action and set the follow-up review.



Frequently Asked Questions

Is a maintenance audit course suitable for managers who have not led an audit before?

Yes. The maintenance audit method starts from scope, evidence and scoring, and assumes responsibility for maintenance or asset results, not prior audit experience.

Which standards does maintenance audit practice rest on in this course?

Maintenance audit practice here rests on ISO 55001 for management system criteria, EN 15341 for maintenance key performance indicators and EN 13306 for maintenance terminology.

How is the maintenance audit report used at work?

You use the maintenance audit report and action plan to brief site leadership, agree action owners and set a follow-up review of the findings.

How does a maintenance audit differ from a reliability engineering programme?

A maintenance audit scores how well the function plans, executes and reports its work, while a reliability engineering programme analyses equipment failure and designs strategies for specific assets.