

Overview

This standard identifies the competences you need to lead a maintenance team, including agreeing and monitoring budgets, developing and updating maintenance schedules such as preventive, corrective, predictive and reactive programmes in accordance with approved procedures and policies. Working with in company and/or contract maintenance staff you will also be responsible for ensuring that staff have the appropriate skills knowledge and understanding required to maintain the equipment, components, products or services.

You will also be required to identify and implement a systematic approach to improving the maintenance activities undertaken.

Your responsibilities will require you to comply with organisational policy and procedures for the maintenance activities undertaken, and to report any problems with the maintenance activities that you cannot personally resolve or that are outside your permitted authority, to the relevant people. You must ensure that that all necessary data, documentation is completed accurately and legibly and stored in the correct location and format. You will be expected to work with minimal supervision, taking personal responsibility for your own actions, and for the quality and accuracy of the work carried out by the maintenance team.

Your underpinning knowledge will provide an in depth understanding of your work, and will provide an informed approach to applying a range of maintenance schedules and programmes. You will know how the equipment or service supplies functions and the purpose of the individual components and associated defects, in adequate depth to provide a sound basis for leading the maintenance activities, correcting faults and ensuring the repaired equipment/services functions to the required specification and remains compliant with all standards and regulations. In addition, you will have sufficient knowledge on how to develop maintenance teams and how to identify and implement a systematic approach to improving the maintenance activities undertaken

You will understand the safety precautions required when carrying out the maintenance activities. You will also understand your responsibilities for safety and the importance of taking the necessary safeguards to protect yourself and others in the workplace.

Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. develop, gain agreement and review maintenance budgets
3. produce, agree and update maintenance procedures, schedules and plans
4. produce and maintain a departmental competency skills matrix of team members
5. ensure that schedules and plans are capable of meeting all relevant outputs required
6. lead maintenance activities within the department
7. complete and store relevant maintenance data and documentation accurately
8. identify and lead on making improvements to maintenance processes and procedures
9. ensure maintenance activities are carried out correctly in line with agreed company processes and procedures
10. create and update visual management documentation and systems to support the activities of the maintenance department
11. report and evaluate the impact of maintenance programmes and improvement activities

Knowledge and understanding

You need to know and understand:

1. the health and safety requirements of the area in which the maintenance activity is to take place, and the responsibility these requirements place on you
2. the information systems that are in use within your organisation, and how to record data to the system
3. how to obtain and interpret legislative and regulatory documentation
4. how to obtain and interpret company policies and procedures
5. how to prioritise your own and your team's workload to ensure that targets are met
6. the process to be followed to develop and gain agreement on departmental budgets
7. the importance of regularly monitoring departmental budgets and the implications for the business if this is not carried out
8. how to communicate effectively, listen, question, support and coach others to work towards the departmental targets
9. the importance of ensuring that teams have the required skills, knowledge and understanding in order to maintain equipment to the required standards
10. how maintenance teams access training and development programmes once a need training need has been identified
11. the specific health and safety precautions to be applied during the maintenance procedure, and their effects on others
12. how to complete and review risk assessments
13. hazards associated with carrying out activities (such as handling oils, greases, stored pressure/force, misuse of tools, using damaged or badly maintained tools and equipment, not following laid-down maintenance procedures) and how to minimise these and reduce any risks
14. the importance of ensuring employees wear protective clothing and other appropriate safety equipment (PPE) during the maintenance process
15. the importance of having access to up to date data and information such as drawings, specifications, manufacturers' manuals and other documents needed in the maintenance process
16. the importance of implementing an effective maintenance strategy to reduce the amount of equipment/component failures/downtime
17. how to deal with changes requested to the maintenance schedules

18. who to contact for clarification of the maintenance requirements or problem
19. who should be involved in authorising any changes required to maintenance activities
20. the principles of the different types of maintenance programmes such as preventive, corrective and predictive and their benefits
21. the procedure for purchasing/obtaining replacement parts, materials and other consumables necessary for the maintenance activities
22. how to determine the resources that are required to undertake the maintenance activities
23. the methods and parameters used to calculate how long it should take to complete specific maintenance activities
24. the company policy on repair/replacement of equipment or components during the maintenance process
25. the procedures to be adopted for the dismantling/re-assembly of various types of assemblies
26. the process to determine if products or service supplies are fit for purpose
27. the basic principles of how the equipment functions, operation sequence, the working purpose of individual units/components and how they interact
28. the importance of keeping up to date with new technologies, manufacturing processes and systems
29. the applications of mechanical and electrical measuring and testing equipment
30. the importance of keeping up to date maintenance documentation and/or reports
31. the equipment operating and control procedures to be applied during the maintenance activity
32. the problems associated with the maintenance activity, and how they can be overcome
33. the organisational procedure(s) to be adopted for the safe disposal of waste of all types of materials
34. how to conduct a systematic plan, do, check, act (PDCA) approach to problem-solving and business improvement
35. how to use "root cause" problem solving analysis using the 5 whys/how technique
36. how to evaluate improvement ideas in order to select those that are to be pursued
37. how improvements to the process are achieved by engaging the knowledge and experience of the people working on the process

38. how to create Standard Operating Procedures (SOP's) and correlate work activities into them.

39. the techniques required to communicate information using visual control systems (such as card systems, colour coding, floor footprints, graphs and charts, team boards, tool/equipment shadow boards)

40. the extent of your own authority and to whom you should report if you have a problem that you cannot resolve

Scope/range related to performance criteria

1.

Lead a maintenance team by carrying out **all** the following:

- 1.1 communicate the maintenance activities to the team
- 1.2 involve the team in planning how the maintenance activities will be undertaken
- 1.3 allocate specific maintenance activities to each team member
- 1.4 motivate the team to present their own ideas on improvements that could be made to the maintenance process and procedures
- 1.5 encourage the team and/or individuals to take the lead where appropriate

2.

Lead maintenance activities on **two** of the following types of equipment:

- 2.1 mechanical equipment (such as cyclic and rotational devices, gearboxes, drives, linkages)
- 2.2 production machinery (such as machine tools, presses, transfer mechanisms)
- 2.3 process equipment (such as furnaces, chemical baths)
- 2.4 rotating electrical machinery (such as generators, motors)
- 2.5 stationary electrical equipment (such as transformers, switchgear)
- 2.6 stationary plant and equipment (such as air receivers, accumulators, tanks, piping)
- 2.7 emergency standby or alarm/warning systems and equipment
- 2.8 fluid power equipment (such as pipework, cylinders/actuators, pumps)
- 2.9 process controller (such as program controller, input/output interfacing, wiring/cabling, monitoring sensors)
- 2.10 electrical components (such as power supplies, switch gear and distribution panels, control systems)
- 2.11 environmental systems (such as air conditioning, lighting, fume extraction)
- 2.12 engines (such as piston, turbine)
- 2.13 rotating or reciprocating machinery (such as pumps, compressors)
- 2.14 Integrated systems (such mechanical electrical, fluid power, process control)
- 2.15 structural equipment /components (such as aircraft wings, bodies, boat hulls/super structures)
- 2.16 services (such as water, gas, air, electricity)
- 2.17 other specific type of equipment

3.

Develop and update maintenance procedures, schedules and plans to include

three of the following:

- 3.1 preventive maintenance (routine inspections and adjustments)
- 3.2 corrective maintenance (activities identified from preventative maintenance activities)

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- 3.3 predictive maintenance (analysis of the equipment's condition)
- 3.4 reactive maintenance (unexpected equipment/component failure)
- 3.5 maintenance prevention (equipment/component design and development)

4.

Plan, schedule and carry out maintenance activities using **two** of the following resources:

- 4.1 complete in-house staff
- 4.2 combined in-house/contract staff
- 4.3 complete contract maintenance staff

5.

Create and maintain visual management records to include **three** of the following:

- 5.1 preventive maintenance (routine inspections, and adjustments)
- 5.2 corrective maintenance (activities identified from preventative maintenance activities)
- 5.3 predictive maintenance (analysis of the equipment's condition)
- 5.4 reactive maintenance (unexpected equipment/component failure)

plus supporting documentation associated with four of the following

- 5. equipment performance
- 6. equipment downtime/failure
- 7. overall equipment effectiveness (OEE)
- 8. maintenance costs
- 9. health and safety
- 10. staff development and training
- 11. maintenance procedures/instructions
- 12. operator manuals/working instructions
- 13. regulatory compliance

1.

Identify and implement improvements in the services provided by the maintenance team to include **four** of the following:

- 1.1 equipment downtime during maintenance
- 1.2 equipment performance monitoring systems
- 1.3 overall equipment effectiveness (OEE)
- 1.4 maintenance procedures
- 1.5 operator instructions
- 1.6 visual management systems/documentation
- 1.7 resource planning
- 1.8 costs
- 1.9 staff development and training
- 1.10 health and safety
- 1.11 procurement
- 1.12 other specific improvement

2.

Maintain equipment which complies with **three** **of the following:

- 2.1 organisational guidelines and procedures
- 2.2 equipment manufacturer's operating specification/range
- 2.3 British, European or International standards or directives
- 2.4 recognised compliance agency/body standards or directives
- 2.5 health, safety and environmental requirements
- 2.6 customer standards and requirements

3.

Complete the relevant maintenance documentation to include **one** from the following:

- 3.1 job cards
- 3.2 permit to work/formal risk assessment and/or sign-on/off procedures
- 3.3 maintenance log or report
- 3.4 company-specific documentation

Behaviours

Additional Information

You will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as:

- strong work ethic
- positive attitude
- team player
- dependability
- responsibility
- honesty
- integrity
- motivation
- commitment

Leading maintenance activities

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