
Overview

This standard covers co-ordinating the maintenance and repair of equipment and machinery. Maintenance may be periodic or as required. You will need to be competent in relation to the maintenance and repair of equipment and machinery, and in relation to fault identification and rectification.

When working with machinery or equipment you should be trained and hold current certification, where required.

When carrying out your work you must consider the impact it will have on the environment.

This standard is suitable for those responsible for co-ordinating the maintenance and repair of equipment and machinery.

Performance criteria

You must be able to:

1. assess the risks associated with the activity to be carried out
2. confirm that suitable clothing and personal protective equipment (PPE) is worn by those carrying out the activity
3. co-ordinate the **inspection** of equipment and machinery to determine the requirements for its maintenance or repair
4. recognise **defects** in equipment and machinery
5. diagnose faults in equipment and machinery
6. obtain authorisation, where required, to carry out the work
7. co-ordinate the maintenance and repair work required
8. identify and establish the availability of **resources** required for the work
9. confirm tools, equipment and materials required to carry out the work are prepared, used, maintained and stored safely and correctly
10. confirm that equipment and machinery requiring maintenance or repair is safe and has been properly prepared before work commences
11. confirm that work is carried out in accordance relevant legislation, **instructions and specifications**
12. confirm components are marked up for disassembly and re-assembly purposes
13. confirm worn and damaged components are removed and replaced in accordance with **instructions and specifications**
14. confirm correct precautions are taken to prevent danger from contamination and the escape of **hazardous chemicals and substances**
15. refer to expert assistance when required in line with business practices
16. carry out the correct tests on completion of the maintenance or repair to confirm that the machinery or equipment is in good working order and safety devices are operating correctly
17. confirm equipment and machinery is correctly set or calibrated following maintenance or repair
18. confirm that **waste** is processed safely and correctly in accordance with relevant legal requirements and business practices
19. confirm that work is carried out in accordance with relevant environmental and health and safety legislation, risk assessment

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- requirements, codes of practice and business policies
20. follow industry and business guidance to minimise environmental damage
 21. confirm that records are maintained and stored as required by the relevant legislation and the business

Knowledge and understanding

You need to know and understand:

1. how to identify hazards and assess risks
2. the type of clothing and personal protective equipment (PPE) suitable for the activity
3. the reasons for maintaining equipment and machinery and the possible consequences of not doing so
4. the relevant legislative requirements relating to the maintenance of equipment and machinery
5. the manufacturer's requirements for the maintenance of equipment and machinery
6. the actions that may invalidate a manufacturer's warranty
7. the **methods of inspection** for equipment and machinery and when **inspection** should be carried out
8. the methods for the diagnosis of faults and the identification of the root cause
9. the typical faults that occur with equipment or machinery that you maintain and repair
10. the routine maintenance required by manufacturer's and why these must be adhered to
11. the components that require periodic replacement and the reasons for this
12. the factors that impact on the value of carrying out the maintenance or repair, such as urgency, cost, estimated working life of the equipment/machinery
13. the circumstances in which authorisation must be obtained prior to maintenance or repair
14. the **resources** required for the maintenance or repair work and how to establish their availability
15. the procedures for obtaining replacement components/parts
16. the **instructions and specifications** required for the maintenance or repair procedure and how to obtain these
17. the methods for preparing equipment and machinery for maintenance or repair
18. the dangers created by **stored energy** and the correct way to respond to these during the preparation stage
19. the **hazardous chemicals and substances** that may be present and how to deal with these
20. the ways of marking equipment and machinery for disassembly

- and re-assembly purposes and the reasons for doing this
21. the methods for setting or calibrating equipment or machinery following maintenance or repair
 22. the importance of checking that the activity is completed in accordance with **instructions and specifications** and the item is safe and in good working order following maintenance or repair
 23. how and where to refer problems that require expert assistance
 24. the relevant legal and business requirements for the handling, transporting and disposal of **waste**
 25. your responsibilities under current environmental and health and safety legislation, codes of practice and business policies
 26. the potential impact that your work could have on the environment and the ways in which this can be minimised
 27. the records that need to be kept and the importance of completing them

Glossary

Defects could include:

- rusting and rotting materials
- worn, damaged or missing components or parts
- leaking fluids and substances
- damaged tyres, tracks
- worn seals

Hazardous chemicals and substances could include:

- fuels
- oils
- fluids
- gases
- dust
- compressed air

Inspection:

- daily/weekly checks for routine inspection
- periodic inspections e.g. monthly or per number of hours run
- statutory inspections

Instructions and specifications:

- drawings/plans
- schedules
- method statements
- Standard Operating Procedures (SOPs)
- manufacturer's guidelines
- customer requirements
- verbal instructions

Methods of inspection:

- visual inspections
- functional and operational tests

Resources:

- labour
- tools
- equipment and materials to carry out the work (including PPE)
- replacement components

Stored energy:

- springs
- belt tension
- hydraulic pressure
- electrical discharge

Waste: may include hazardous and non-hazardous materials.

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