

Overview

This standard covers the activities required to maintain and repair equipment and machinery. Equipment and machinery may be manual or mechanical.

Maintenance includes periodic checking of equipment and machinery as recommended by the manufacturers. This is carried out in order to optimise the performance and maximise the working life of equipment and machinery. It also covers repairs required due to defects or faults. You will carry out all activities in accordance with instructions and specifications.

When working with equipment and machinery you must be appropriately trained, and hold current certification where required, in line with the relevant legislation.

Your work must conform to all relevant legislation and codes of practice, industry standards and guidance.

This standard is suitable for those who complete the routine maintenance and repair of equipment and machinery.

Performance criteria

You must be able to:

1. obtain the relevant information to carry out the work activities in accordance with organisation procedures
2. maintain the health and safety of yourself and others at all times, in accordance with the relevant legislation and codes of practice
3. assess the risks associated with the site and the work to be carried out before starting work and throughout the activity, checking and confirming the findings of any existing risk assessments
4. confirm that all training and certification required to maintain and repair equipment and machinery has been completed in accordance with legislative, manufacturers' and organisational requirements
5. confirm that appropriate personal protective equipment (PPE) for the work to be carried out is worn at all times
6. select, prepare, use, maintain and store the tools and equipment required to carry out the maintenance and repair safely, in accordance with the relevant legal requirements and manufacturer's instructions
7. confirm that all equipment has been checked, tested where required, and is fit for purpose, in accordance with the relevant legal requirements and manufacturer's instructions
8. identify the equipment and machinery requiring maintenance and repair
9. inspect equipment and machinery to determine the requirements for maintenance and repair and record and date this in accordance with legal requirements
10. where repair cannot be carried out immediately, label or tag the item and take it out of service, in accordance with legal requirements
11. locate the relevant maintenance instructions and manufacturer's specifications for the equipment and machinery being maintained
12. prepare equipment and machinery for maintenance and repair safely and in line with the relevant maintenance instructions and manufacturer's specifications
13. take the correct precautions to prevent the escape of substances and minimise dangers from contamination and hazardous chemicals
14. identify and mark up components that need to be disassembled and reassembled
15. obtain the replacement components and parts required to complete the

Carry out maintenance and repair of equipment and machinery

maintenance and repair work in accordance with the manufacturer's specifications

16. check the replacement components and parts before fitting and refer to the manufacturer for alternatives where they are not available
17. carry out routine maintenance and repair of equipment and machinery in line with the relevant maintenance instructions and manufacturer's specifications
18. keep the work area safe and in a condition suitable for the maintenance and repair work
19. set and calibrate equipment and machinery where required after maintenance and repair, in line with the relevant maintenance instructions and manufacturer's specifications
20. test the equipment and machinery after maintenance and repair in line with the relevant maintenance instructions and manufacturer's specifications
21. re-inspect equipment and machinery after maintenance and repair and record and date that it is now safe to return to service
22. clean, service and store the tools and equipment used to carry out the maintenance and repair work safely and correctly
23. deal with waste safely and correctly, in accordance with site procedures
24. deal effectively with issues that arise within the scope and limitations of your own responsibilities and report issues which cannot be resolved, in accordance with organisational procedures
25. complete and store all relevant documentation in accordance with legal and organisational requirements

Knowledge and understanding

You need to know and understand:

1. how to identify and access information relevant to the required work
2. the hazards associated with the maintenance and repair of equipment and machinery
3. the relevant health and safety procedures and Safe Systems of Work (SSoW)
4. the legislative, manufacturers' and organisational requirements for the maintenance and repair of equipment and machinery and when additional training or certification is required to carry out maintenance and the replacement of parts
5. the tools, equipment and personal protective equipment (PPE) required to carry out the maintenance and repair and how to select, prepare, use, maintain and store these safely, in accordance with the relevant legal requirements, manufacturer's instructions, and organisational procedures
6. the legal requirements for checking and testing equipment and why it is important to maintain all equipment to a high standard
7. the potential health and safety risks resulting from the lack of, and the poor-quality maintenance of equipment and machinery
8. the inspection methods for equipment and machinery to determine the maintenance and repair requirements and how often these should be carried out
9. the methods for the assessment of defects and faults and the identification of the root cause
10. the legal requirements for records of maintenance and repair of equipment and machinery
11. the instructions and specifications required for the maintenance and repair of equipment and machinery and the actions that might invalidate a manufacturer's warranty
12. when equipment and machinery needs to be serviced, and repaired by an authorised agent
13. where to locate the maintenance instructions and specifications for the equipment and machinery
14. the methods of preparing equipment and machinery for maintenance and repair
15. the dangers created by stored energy and the presence of hazardous chemicals and substances and how these should be dealt with
16. the components and parts that require periodic replacement and the reasons for this

17. the organisational procedures for obtaining replacement components and parts and what to do if they are incorrect or unavailable
18. how to mark-up components for disassembly and re-assembly and the reasons for doing this
19. the function and maintenance requirements of individual components
20. the procedures to follow where damage, and wear to components exceeds the manufacturer's recommended limits
21. the methods for setting or calibrating equipment and machinery following maintenance and repair
22. the importance of testing and re-inspecting the equipment and machinery on completion of maintenance and repair to confirm that it is safe and in good working order before retuning it to service
23. how to handle, transport, store and dispose of waste and hazardous chemicals and substances, in accordance with the relevant legal and organisational requirements
24. the potential impact that your work could have on the environment and the ways in which this can be minimised
25. the issues that can occur when carrying out maintenance and repair, the actions to take and organisational procedures for reporting issues that cannot be resolved
26. the scope and limitations of your competence, responsibilities and accountability
27. the legal and organisational requirements for the completion and storage of documentation

Glossary

Equipment and machinery could include:

- hand-held powered equipment
- pedestrian-controlled powered equipment
- fixed equipment

Hazardous chemicals and substances could include:

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

Instructions and specifications:

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

Organisational procedures refer to procedures set by the organisation you are employed by or the organisation that you are doing the work on behalf of (the client or customer)

Safe System of Work (SSoW) – is a method of work that puts in place control measures arising from a risk assessment, in order to manage identified hazards, which are broken down into four elements: safe person; safe equipment; safe place; and safe practice.

Stored energy:

- springs
- belt tension
- hydraulic pressure

Carry out maintenance and repair of equipment and machinery

- electrical discharge

Links to other NOS

Specialist maintenance and repair of land-based equipment and machinery is covered in the Land-based Machinery Operations suite.

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