

EM125 Carry out preventative planned maintenance on engineered systems within food and drink operations		
SQA Unit Code	HD5T 04	
Level 3	SCQF Level 6	Credit value 53

Unit Summary

This standard identifies the competences you need to carry out preventative planned maintenance activities on engineered systems used in food and drink operations, in accordance with approved procedures. You will be required to carry out the maintenance activities on engineered systems involving at least two of the following interactive technologies: mechanical, electrical, fluid power or process controller.

You will need to organise and carry out the maintenance activities to minimise down time, and ensure that the maintained system performs at optimal level and functions to the required specification.

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, tools or equipment used that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You must ensure that all tools, equipment, and materials used in the maintenance activities are removed from the work area on completion of the work, and that all necessary job/task documentation is completed accurately and legibly. 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 that you carry out.

In order to be assessed as competent you must demonstrate to your assessor that you can consistently perform to the requirements set out below. Your performance evidence must include at least one observation by your assessor.

You must be able to:	You need to show:
<p>1. Carry out preventative planned maintenance on engineered systems within food and drink operations</p> <p>This means you:</p> <p>Work safely at all times, complying with health and safety and other relevant, food and drink regulations, directives and guidelines</p> <p>Follow the relevant planned maintenance</p>	<p>Evidence must be work-based, simulation alone is only allowed where shown in <i>bold italics</i></p> <p>Evidence of carrying out preventative planned maintenance on engineered systems within food and drink operations as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.</p>

<p>schedules to carry out the required work</p> <p>Carry out the maintenance activities within the limits of your personal authority</p> <p>Carry out the maintenance activities in the specified sequence and in an agreed timescale</p> <p>Report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule</p> <p>Complete relevant maintenance records accurately and pass them on to the appropriate person</p> <p>Dispose of waste materials in accordance with safe working practices and approved procedures</p>	
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You need to know and understand:

Evidence of knowledge and understanding should be collected during observation of performance in the workplace. Where it cannot be collected by observing performance, other assessment methods should be used.

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 not to compromise food safety
2. the isolation and lock-off procedure or permit-to-work procedure that applies to the system being maintained, including critical control points
3. the specific health and safety food and drink precautions to be applied during the maintenance activities, and their effects on others
4. the requirements of the BRC guidelines and standards in relationship to the maintenance activities
5. the specific requirements of your customer/client specifications in relationship to the maintenance activities
6. your responsibilities in relationship to Hazard Analysis and Critical Control Points (HACCP, TACCP, VACCP) during the maintenance activities
7. what constitutes a hazardous voltage and how to recognise victims of electric shock
8. how to reduce the risks of a phase to earth shock (including insulated tools, rubber mating and isolating transformers)
9. the importance of wearing protective clothing and other appropriate safety equipment (PPE) during the maintenance activities, and where it may be obtained
10. hazards associated with carrying out maintenance activities on an integrated system (handling fluids, stored pressure/force/temperature, electrical supplies, process controller interface, using damaged or badly maintained tools and equipment, not following laid-down maintenance procedures), and how to minimise

- these and reduce any risks
11. how to obtain and interpret drawings, charts, specifications, manufacturers' manuals, history/maintenance reports and other documents needed for the maintenance activities
 12. the various planned maintenance schedules that are generally used (such as condition based maintenance, scheduled maintenance, and total preventative maintenance (TPM))
 13. the basic principles of how the system functions, its operation sequence, the working purpose of individual units/components, and how they interact
 14. the principles of the equipment's design features for safe operation in a food or drink environment such as minimising the chance of contaminants or foreign bodies in the final product
 15. the equipment operating and control procedures, and how to apply them in order to carry out the planned maintenance activities
 16. the testing methods and procedures to be used to check that the system conforms to acceptable limits
 17. how to make sensory checks by sight, sound, smell, touch
 18. the procedure for obtaining consumables and 'lived' items that will require replacing during the maintenance activity, including their safe/hygienic storage before use
 19. company policy on repair/replacement of components during the maintenance activities
 20. methods of checking that components are fit for purpose, and the need to replace 'lived' items such as lubricants, filters, seals, gaskets, belts, chains and bearings
 21. how to make adjustments to components and assemblies to ensure they function correctly
 22. the processes in place to segregate the tools and equipment used into high or low risk areas
 23. the checks required to ensure that all tools, materials and components are all accountable before operating the equipment
 24. the cleaning requirements/policies in place before returning the equipment into full operational production
 25. the generation of maintenance documentation and/or reports on completion of the maintenance activity
 26. the problems that can occur during the planned maintenance activity, and how they can be overcome
 27. the organisational procedure to be adopted for the safe disposal of waste of all types of materials including any spoilt food or drink products
 28. the extent of your own authority and to whom you should report if you have a problem that you cannot resolve

Evidence of performance may employ examples of the following assessment:

- observation
- written and oral questioning;
- evidence from company systems (e.g. Food Safety Management System)
- reviewing the outcomes of work
- checking any records of documents completed
- checking accounts of work that the candidate or others have written