EM111 Use engineering drawings and documents in maintenance activities in food and drink operations		
SQA Unit Code	**HD5J 04**	
Level 3	**SCQF Level 5**	**Credit value 5**

Unit Summary
This standard identifies the competences you need to make effective use of text, numeric and graphical information by interpreting and using technical information extracted from engineering drawings, technical manuals, reference tables, specifications and charts used in food and drink operations in accordance with approved procedures. You will be required to extract the necessary information from the various drawings and related documents in order to establish and carry out the maintenance requirements and to make valid decisions about the quality and accuracy of the equipment being maintained. Food and drink operations is a term used in this standard to cover the following sub sectors of Meat, Drinks, Confectionery, Fresh Produce, Bakery, Seafood and Dairy.

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: Evidence must be work-based, simulation alone is only allowed where shown in ***bold italics***
1. Use engineering drawings and documents in maintenance activities in food and drink operations This means you: Use the approved source to obtain the required drawings and specifications Correctly interpret the drawings and specifications for food and drink operations Identify, extract and interpret the required information	Evidence of using engineering drawings and documents in maintenance activities in food and drink operations as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Use the information obtained to ensure that work output meets the specification Deal promptly and effectively with any problems within your control and report those which cannot be solved Report any inaccuracies or discrepancies in drawings and specifications	

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 information sources used for the drawings and specifications that you use in your work activities
2. how drawings and documents are obtained, and how to check that they are current and valid
3. how to use other sources of information to support the drawings (including electronic component pin configuration specifications, standard reference charts for limits and fits, tapping drill reference charts, cable current carrying capacities, thread reference tables)
4. the procedures for reporting discrepancies in the drawings or documents and for reporting lost or damaged drawings/documents
5. care and control procedures for the drawings and documents, and the importance of returning them to the designated location on completion of the work activities
6. the basic drawing conventions that are used, and why there needs to be different types of drawings
7. the types of drawings used, and how they interrelate (including isometric and orthographic, first and third angle, assembly drawings, circuit and wiring diagrams, block and schematic diagrams)
8. imperial and metric systems of measurement, tolerancing and fixed reference points
9. the meaning of the different symbols and abbreviations found on the drawings that you use (including surface finish, electronic components, weld symbols, linear and geometric tolerances, pressure and flow characteristics)
10. how damage or graffiti on drawings can lead to misinterpretation
11. the extent of your own responsibility, when to act on your own initiative to find, clarify and evaluate information, and to whom you should report if you have problems 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