

SEMBIT2-06 - SQA Unit Code F9JF 04

Contributing to the analysis and selection of parts for improvement



Overview

This unit covers the competences required for contributing to the analysis and selection of parts for improvement. It involves selecting representative parts for improvements within the chosen area/product range from information provided. You will be expected to make recommendations for identifying and producing part families, using criteria such as part shape, part size, the material used to manufacture the part and the manufacturing process used.

You will also be required to make recommendations for the production of a finalised list of the representative parts for the chosen area/product range.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems that you cannot solve, or that are outside your responsibility, to the relevant authority. You will be expected to take responsibility for your own actions within the activity, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and procedures of analysing and selecting parts for improvement, and their application, in adequate depth to provide a sound basis for carrying out the activities to the required criteria.

Applying safe working practices will be a key issue throughout.

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Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
- P2 obtain all the information, documentation and equipment required to carry out the activity
- P3 select the representative parts for improvements within the chosen area/product range using information provided
- P4 make recommendations for the grouping of identified parts for into appropriate part families
- P5 make recommendations for the production of a finalised list of the representative parts for the chosen area/product range

Knowledge and understanding

You need to know and understand:

- K1 the health and safety requirements of the work area in which you are conducting the activity
- K2 the information required to conduct the activity, and where and from whom the information can be found
- K3 the principles and process of analysis (such as, pie charts, bar charts (Pareto analysis))
- K4 the techniques used to communicate the information and results gained by this process
- K5 how to create and present bar graphs/histograms
- K6 how to differentiate between lead-time and cycle-time
- K7 the bill of materials (BOM) structure for each of the representative parts
- K8 how to identify the origin/source of the parts within the chosen area
- K9 how to evaluate the information in order to select the representative parts for the chosen area
- K10 the use of problem solving and root cause analysis techniques
- K11 the extent of your own authority, and to whom you should report in the event of problems that you cannot resolve

Additional Information

**Scope/range
related to
performance
criteria**

You must be able to:

1. carry out an analysis against **three** of the following criteria:
 - 1.1. customer schedules (volume)
 - 1.2. cost of producing the part
 - 1.3. profit for each part, as a percentage
 - 1.4. manufacturing lead time
 - 1.5. quality (scrap and non-conformance percentage)
 - 1.6. process/manufacturing route
2. make recommendations for the production of part families, using **one** of the following criteria:
 - 2.1. part shape
 - 2.2. part size
 - 2.3. material used to manufacture the part
 - 2.4. manufacturing process

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