

## Analysing and selecting parts for improvement

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### Overview

This standard covers the competences required for analysing and selecting parts for improvement. It involves applying the principles and processes of analysing and selecting parts for improvements within the chosen area/product range. You will be expected to co-ordinate and analyse information to identify and produce part families, using criteria such as part shape, part size, materials used to manufacture the part, and the manufacturing process used.

You will also be required to carry out an analysis within the chosen area/product range, typically focusing on customer schedules (volume), cost of producing the part, profit for each part as a percentage, manufacturing lead time, quality (scrap and non-conformance percentage) and the process/manufacturing route.

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 full 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:

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. obtain all the information, documentation and equipment required to carry out the activity
3. co-ordinate and analyse information to identify and confirm the representative parts for improvement within the chosen area/product range
4. evaluate and group the identified parts into appropriate part families
5. produce and confirm a finalised list of the representative parts for the chosen area/product range

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### Knowledge and understanding

#### You need to know and understand:

1. how to work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. the information required to conduct the activity, and where and from whom authority can be found
3. the principles and process of analysis
4. the techniques used to communicate the information and results gained by this process
5. how to create and present bar graphs/histograms
6. how to differentiate between lead time and cycle time
7. how the bill of materials (BOM) structure is configured for each of the representative parts
8. how to identify the origin/source of the parts within the chosen area
9. how to evaluate the information, in order to select the representative parts for the chosen area
10. the application of problem solving and root cause analysis
11. the extent of your own authority, and to whom you should report in the event of problems that you cannot resolve

### Scope/range related to performance criteria

1. Carry out an analysis against **three** of the following criteria:
  1. customer schedules (volume)
  2. cost of producing the part
  3. profit for each part, as a percentage
  4. manufacturing lead time
  5. quality (scrap and non-conformance percentage)
  6. process/manufacturing route
2. Produce part families, using **all** the following criteria:
  1. part shape
  2. part size
  3. materials used to manufacture the part
  4. manufacturing process

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