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## Overview

This standard identifies the competences you need to support colleagues in producing technical information for engineering activities, in accordance with approved procedures. You will be required to assist in producing the technical information for engineering activities such as machining, assembly, fabrication, materials processing and finishing, maintenance, installation and commissioning, material handling and lifting, and other manufacturing or operational activities.

You will assist in providing the technical information in the correct form for the specific engineering activities to take place, and to pass this on to the appropriate people, within agreed timescales. You must also ensure that the technical information you provide is accurate, and conforms to organisational and safety requirements.

Your responsibilities will require you to comply with organisational policy and procedures for producing the technical information. You will report any problems that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work to instructions, either alone or in conjunction with others, taking personal responsibility for your own actions and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will enable you to adopt an informed approach to the techniques and procedures used for gathering the appropriate information and presenting it in the required format. You will have an understanding of the engineering activities for which the technical details are required, in sufficient detail to enable you to make informed decisions.

You will be aware of any health, safety and environmental requirements applicable to your area of work. You will be required to demonstrate safe working practices throughout, and will understand the responsibility you owe to yourself and others in the workplace.

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## Performance criteria

### You must be able to:

1. produce technical details that contain all the relevant and necessary data for the engineering activity to be carried out
2. present the technical details in the appropriate formats
3. make sure that codes and other references used in the technical details follow agreed conventions
4. pass on the technical details to the appropriate people within agreed timescales
5. record technical details and store them securely in accordance with organisational requirements
6. undertake changes to technical details within agreed control procedures

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## Knowledge and understanding

### You need to know and understand:

1. how to access information on health and safety regulations and guidelines relating to the technical information being produced
2. the implications of not taking account of legislation, regulations, standards and guidelines when specifying the technical information
3. how to obtain information on the engineering requirements, and the types of information available (such as customer requirements and instructions, quality control requirements and the product specification)
4. how to extract information from drawings, documents and related specifications
5. the types of data that should be included in the technical information you are producing
6. the factors to be taken into account when determining the technical information, especially those covering working conditions and safety
7. the development of the technical information (to include both master documents and working instructions)
8. how to prepare the technical information (to include the format, structure and style of presentation)
9. the process used in the organisation to validate the technical information produced
10. the control procedure for ensuring that the technical information is maintained up to date
11. the procedures for changing technical information, and why control procedures are used
12. the importance of maintaining records; what needs to be recorded, and where records are kept
13. how to access and use the appropriate information and documentation systems
14. the importance of customer care and satisfaction
15. the importance of providing right information at the right time
16. the types of problem that can occur with specifying technical information for engineering requirements, and how they can be minimised
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the extent of your own authority and to whom you should report in the event of problems that you cannot resolve

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## Scope/range related to performance criteria

1. Carry out **all** of the following when determining and producing the technical information:
  1. use the correct issue of company information
  2. collect relevant data needed to produce the technical information
  3. ensure that health and safety regulations and safe working practices are taken into account
  4. ensure that the influence of working conditions on technical performance is recognised and included in the technical information
  5. produce the technical information in the appropriate formats
  6. resolve any problems as they occur, within your level of responsibility
2. Assist in producing technical information for **one** of the following engineering activities:
  1. drawing/design activities (such as mechanical, electrical/electronic, motor vehicle, aerospace, marine)
  2. manufacturing activities (such as machining, detail fitting, fabrication of components, pressing)
  3. material processing activities (such as heat treatment, casting, injection moulding, purification)
  4. composite manufacture (such as wet lay-up, pre-preg laminating, resin infusion, blow moulding)
  5. finishing activities (such as stripping finishes, painting, plating, anodising, veneering, lacquering)
  6. assembly activities (such as mechanical, structural, fluid power, electrical/electronic, woodworking)
  7. installation activities (such as mechanical, electrical/electronic, avionic, structural, environmental equipment)
  8. plant and equipment (such as site preparation, plant layout, equipment changeover, equipment replacement)
  9. equipment capability studies/performance measurement
  10. movement of materials, components or finished goods
  11. business improvement activities
  12. engineering safety audits or risk assessments
  13. quality control/quality assurance
  14. modification and repair activities
  15. commissioning/decommissioning
  16. maintenance activities
  17. research and development
  18. testing and trialling

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19. engineering support services

3. Assist in producing technical information that includes **five** of the following:

1. equipment operating detail (function)
2. specific or specialised equipment required
3. equipment performance parameters
4. materials required/used
5. physical characteristics (dimensions, weight)
6. tooling required
7. environmental considerations/operating conditions
8. timing/delivery details
9. manufacturing methods
10. cost/budget estimation/details
11. manufacturing detail
12. aesthetics/finish details
13. processing requirements
14. quality requirements/control
15. work instructions or procedures
16. monitoring/servicing frequency
17. number/volume required
18. training required
19. resource requirements
20. customer interface requirements
21. equipment/component interfacing
22. safety requirements

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4. Take account of applicable local and national standards and conventions when producing the technical information, to include **three** of the following:

1. terminology
2. referencing and indexing
3. nomenclature
4. geometric tolerancing
5. colour codes
6. document format and layout
7. symbols and abbreviations
8. safe working practice and procedures
9. company instructions
10. recognised compliance agency/body's specifications (such as MOD)

5. Ensure that the technical information complies with **all** of the following, as appropriate:

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1. organisational guidelines and codes of practice
  2. customer standards and requirements
  3. equipment manufacturer's operating specification/range
  4. BS and/or ISO standards
  5. recognised compliance agency/body's standards
  6. health, safety and environmental requirements
6. Record the technical information and present it to the appropriate people, using **one** of the following:
1. specific company documentation
  2. written or typed report
  3. verbally
  4. electronic mail

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