

# SEMBIT2-19 -SQA Unit Code F9J5 04

## Carrying out mistake/error proofing (Poka Yoke)



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### Overview

This unit covers the competences required for carrying out mistake/error proofing (Poka Yoke), which is a method of making an activity 'foolproof'. It involves adhering to the principles and carrying out the procedures of mistake/error proofing to the chosen activity, to enable worksheets to be produced for the activity, which identify the problem, recommend any actions to be taken, and which indicate the benefits to be gained. Typically, worksheets would focus on the description of the mistake/error identified, the containment action taken, the root cause of the mistake/error and the permanent corrective action to be taken. You will be required to support trials on the suggested improvements, which will include determining their effectiveness, cost and complexity.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems with the activities that you cannot solve, or that are outside your responsibility, to the relevant authority. You need to ensure that all necessary job/task documentation is completed accurately and legibly. 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 produce.

Your underpinning knowledge will provide a good understanding of mistake/error proofing, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and application of mistake/error proofing, 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 use information and data to make recommendations for a suitable process on which to carry out mistake/error proofing
- P3 carry out the mistake/error proofing process to the chosen activity
- P4 analyse the data received and make recommendations for inclusion in the worksheet
- P5 use the worksheet to identify the root cause of the problem
- P6 recommend potential solutions and carry out agreed trials to measure the effectiveness of the solution
- P7 implement the optimum solution
- P8 gather information/data for the measurement and documentation of results from the activity

#### Knowledge and understanding

*You need to know and understand:*

- K1 mistake/error proofing, and the benefits of carrying this out
- K2 the difference and benefits between mistake/error proofing and prevention and detection
- K3 the selection criteria used to determine a suitable product or process on which to carry out the mistake/error proofing activity
- K4 how mistake/error proofing can lead to zero defects
- K5 the difference between errors and defects
- K6 the different types of mistake
- K7 how defects originate in products or processes
- K8 how the role of source inspection contributes to the reduction of defects
- K9 the use of mistake/error proofing (Poka Yoke) tools (such as cause and effect, and the 5 `why's)
- K10 the types of mistake/error proofing documentation
- K11 how to undertake trials and measure the effectiveness of mistake/error proofing projects
- K12 the different types of mistake proofing devices available
- K13 the roles and responsibilities of individuals within a mistake/error proofing team (including facilitator, timekeeper, scribe)
- K14 the extent of your own authority within the activity, 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. identify the benefits of mistake/error proofing in terms of:
  - 1.1. improved quality/compliance (such as ISO9001 and EFQM)
  - 1.2. reduced costs
  - 1.3. delivery or service
2. create a worksheet of the mistake/error proofing activity, identifying:
  - 2.1. the description of the mistake/error identified
  - 2.2. the containment action taken
  - 2.3. the root cause of the mistake/error
  - 2.4. the permanent corrective action to be taken
3. identify suitable solutions, and determine their:
  - 3.1. effectiveness
  - 3.2. cost
  - 3.3. complexity

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