



## FY1K 04 – Inspect and Test Refrigeration Systems and Components

This Unit comprises of the following National Occupational Standards (NOS)

## SUMMES20

Identify and rectify faults in cooling systems, equipment and components



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### Overview

This unit is about identifying and rectifying faults in a range of systems. It involves diagnosing mechanical faults with the systems and electrical faults within the main systems including both the main electrical isolator and electronic components.

It will involve liaising with different types of customer and a range of clients.

## SUMMES20

### Identify and rectify faults in cooling systems, equipment and components

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#### Performance criteria

- You must be able to:*
- P1 diagnose faults in systems or components using procedures that comply with industry
  - P2 liaise with other persons to agree fault rectification procedures which will minimise disruption to work routines
  - P3 rectify faults in systems to restore the systems or components function to performance specification
  - P4 take precautionary actions to prevent the unauthorised use of unsafe systems or components

# SUMMES20

## Identify and rectify faults in cooling systems, equipment and components

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### Knowledge and understanding

*You need to know and understand:*

- K1 how to interpret information on system or component performance in order to locate faults, including feedback from users, visual inspections, checks or diagnostic tests
- K2 the work procedures for the rectification of faults in systems or components, which will ensure minimum disruption to customers and routines
- K3 how to liaise with others to ensure co-operation in the fault rectification process
- K4 the work actions and sequences required to rectify faults in systems and components
- K5 the measures to ensure that systems do not present a safety hazard to potential users, or damage the workplace environment, when carrying out rectification procedures
- K6 the actions to be taken when the system or component cannot be restored to full performance
- K7 how to isolate unsafe systems and components

## SUMMES20

Identify and rectify faults in cooling systems, equipment and components

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**Relevant occupations** Building and construction; Skilled Trades Occupations

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**Suite** Mechanical Engineering Services

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**Key words** diagnose, rectify, customer liaison

## SUMMES25

### Inspect and test mechanical systems, equipment and components



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#### Overview

This unit is about carrying out pre-commissioning checks and tests on systems.

The person carrying out the work must be able to undertake the various checks and tests necessary before the system is brought into operation.

They are required to check the operation and correct position of components. They must also carry out tests to ensure there are no leaks and undertake cleaning or flushing of the system.

In the case of ductwork, there is a specified, permissible level of air leakage.

It is important that they are aware of the effect that isolating part of a system has on the full system.

# SUMMES25

## Inspect and test mechanical systems, equipment and components

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### Performance criteria

- You must be able to:*
- P1 confirm that the system or components installation complies with industry requirements
  - P2 check that input services to the system components are suited to their intended purpose
  - P3 check system or components for soundness using procedures that comply with industry
  - P4 carry out pre-commissioning tests and checks in accordance with industry requirements
  - P5 check that the system cleanliness, additives and charging comply with industry

# SUMMES25

## Inspect and test mechanical systems, equipment and components

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### Knowledge and understanding

*You need to know and understand:*

- K1 the procedures, equipment and legislative requirements for applying specified tests to systems
- K2 the methods of establishing that input services adequately supply all components within the system
- K3 the methods of connecting components to systems
- K4 the actions to take where pre-commissioning checks or tests reveal basic or complex system or component defects
- K5 how to complete pre-commissioning documentation confirming the safe pre-commissioning of systems and components



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**Key words** pre-commissioning check, clean & flush, leaks