



## FY1Y 04 – Safe Handling of Refrigerants (Category 1)

This Unit comprises of the following combinations of National Occupational Standards (NOS) shown below by award it appears in.

# SUMMES18

## Decommission cooling systems, equipment and components



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### Overview

This unit is about decommissioning systems and involves making arrangements with the persons responsible for the work location for the safe recovery and disposal of system fluids and components. The person carrying out the work must be aware of the effect isolating part of a system has on the full system.

# SUMMES18

## Decommission cooling systems, equipment and components

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### Performance criteria

- You must be able to:*
- P1 liaise with other persons at appropriate points within the commissioning process to minimise disturbance to work routines
  - P2 check that conditions within the systems or components will permit safe de- commissioning
  - P3 identify any problems in the functioning of the equipment that could damage the system or lead to refrigerant leakage, should no action be taken
  - P4 decommission systems or components using tests and procedures that comply with industry requirements
  - P5 take precautionary actions to ensure that decommissioned systems or components do not prove a safety hazard

# SUMMES18

## Decommission cooling systems, equipment and components

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### Knowledge and understanding

*You need to know and understand:*

- K1 the importance of confirming the system design, specification, functions and outcomes of suspending the operation of the system
- K2 the basic operation of the system and equipment and the risks of leakage associated
- K3 the potential leakage points in systems equipment
- K4 the function and operation of the main components in the system and their role and importance for refrigeration leakage prevention and identification with it
- K5 basic ISO standards relevant to the system or installation
- K6 basic theory of refrigeration and/or air conditioning systems including thermodynamics
- K7 the requirements of EU and UK regulation concerning refrigeration and air conditioning, such as F Gas
- K8 the need to liaise with others whose procedures or routines may be affected by the suspension of the system operation
- K9 the potential hazards that could arise from de-commissioning activities and the checks to be carried out before de-commissioning takes place
- K10 de-commissioning procedures for temporary and permanent de-commissioning of systems
- K11 the precautions to ensure that de-commissioned systems do not prove a safety hazard –measures to prevent systems being brought into operation – safety and warning notices
- K12 how to safely collect and dispose of system contents that may be hazardous to health or the environment
- K13 how to complete systems de-commissioning records

# SUMMES18

## Decommission 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** decommission, recovery, safe disposal

## 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



# SUMMES25

Inspect and test mechanical systems, equipment and components

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**Suite** Mechanical Engineering Services

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