



**Australian Government**

**MEM18096 Maintain, repair/replace and  
adjust refrigerant flow controls and  
associated equipment**

**Release: 1**

# **MEM18096 Maintain, repair/replace and adjust refrigerant flow controls and associated equipment**

## **Modification History**

Release 1. Supersedes and is equivalent to MEM18096A Maintain, repair/replace and adjust refrigerant flow controls and associated equipment

## **Application**

This unit of competency defines the skills and knowledge required to perform the selection, maintenance, repair/replacement and adjustment of refrigerant flow controls, either liquid or vapour (mechanical or electronic types) to achieve desired operational performance.

The associated equipment includes controllers and/or valves required to ensure proper operation of the flow device.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where rectification, modification involving electrical disconnection and reconnection is required unit MEM18049 Disconnect/reconnect fixed wired equipment up to 1000 volts a.c./1500 volts d.c. should also be selected.

A Refrigerant Handling Licence must be held by any person who carries out work in relation to refrigeration and air conditioning equipment.

**Band: A**

**Unit Weight: 6**

## **Pre-requisite Unit**

MEM05006	Perform brazing and/or silver soldering
MEM10010	Install pipework and pipework assemblies
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools

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MEM18002	Use power tools/hand held operations
MEM18055	Dismantle, replace and assemble engineering components
MEM18086	Test, recover, evacuate and charge refrigeration systems

## Competency Field

Maintenance and diagnostics

## Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	<b>Determine job requirements</b>	1.1	Follow standard operating procedures (SOPs)
		1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, job sheets or work instructions
2	<b>Undertake preventative maintenance checks on refrigerant flow controls</b>	2.1	Identify the location and interpret the operational parameters of the refrigerant control
		2.2	Carry out visual inspection and testing with appropriate test equipment by following refrigeration principles, procedures and safety requirements
		2.3	Identify the refrigerant type
3	<b>Undertake fault finding on refrigerant flow controls</b>	3.1	Identify and interpret flow control and its characteristics
		3.2	Inspect, test and assess the operational function of the flow control and associated valves using appropriate test equipment and techniques against specifications

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- |   |   |     |   |
|---|---|-----|---|
| 4 | <b>Repair or replace refrigerant flow control</b> | 4.1 | Select for replacement/repair appropriate flow control or components relevant to system operation using manufacturers' catalogues and specifications  |
|   |   | 4.2 | Remove and safely contain the refrigerant from the system in accordance with refrigeration principles and procedures and relevant standards and codes |
|   |   | 4.3 | Dismantle faulty components and repair/replace to manufactures' specifications, as required   |
|   |   | 4.4 | Select replacement parts from manufactures catalogues   |
|   |   |     |   |
| 5 | <b>Return to service refrigerant flow control</b> | 5.1 | Evacuate system and recharged with refrigerant safely, in accordance with refrigeration principles and procedures and relevant standards and codes    |
|   |   | 5.2 | Leak test system and adjust flow control to manufacturers' specifications   |
|   |   | 5.3 | Undertake performance check and return to service   |
|   |   | 5.4 | Complete maintenance records/service reports according to SOPs and legislative requirements   |

## Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

**Associated valves include one (1) or more**

- check valves
- solenoid valves

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**of the following:**

**Test equipment includes one (1) or more of the following:**

- refrigeration gauges
- thermometers
- multimeter
- vacuum pump
- leak detector
- associated hand tools
- specialised hand tools

**Performance includes:**

- pressures, temperatures and relationships

## Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18096A Maintain, repair/replace and adjust refrigerant flow controls and associated equipment

## Links

Companion Volume implementation guides are found in VETNet -  
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>