



Australian Government

**MEM18092 Maintain and repair
commercial and/or industrial refrigeration
and/or air conditioning controls**

Release: 1

MEM18092 Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls

Modification History

Release 1. Supersedes and is equivalent to MEM18092B Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls

Application

This unit of competency defines the skills and knowledge required to repair or replace commercial and/or industrial refrigeration and/or commercial air conditioning controls.

This unit applies to the installation, adjustment, repairs, replacements and overhauls undertaken to site or manufacturers' specifications, using application of principles of domestic refrigeration and/or commercial air conditioning control sequencing.

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

Band: B

Unit Weight: 6

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12002	Perform electrical/electronic measurement
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
MEM18002	Use power tools/hand held operations
MEM18055	Dismantle, replace and assemble engineering components
MEM18086	Test, recover, evacuate and charge refrigeration systems

Plus, one or more of the following, including their prerequisites:

MEM18088	Maintain and repair commercial air conditioning systems and components
MEM18090	Maintain and repair industrial refrigeration systems and components

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	Determine job requirements	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, drawings, job sheets or work instructions
2	Install/replace refrigeration/air conditioning controls	2.1	Identify control circuit components and inspect for compliance to specification
		2.2	Undertake sequential installation according to manufacturers' specifications and procedures
3	Check and adjust refrigeration/air conditioning control sequence and operation	3.1	Check the temperature, quality, pressure and properties of the air delivered by the air conditioning system for conformance to specification
		3.2	Check controls operation against operational specifications using appropriate test equipment and application principles/techniques

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		3.3	Perform adjustments to control sequence to meet/align to operational requirements and specifications
		3.4	Record modifications/alterations and report according to SOPs
		3.5	Check controls operation and return to service to specification
4	Fault find refrigeration/air conditioning control circuits	4.1	Identify and inspect control circuit components
		4.2	Trace control circuit and diagnose action of components to identify and localise faults
		4.3	Test control circuit parts using appropriate test equipment and application principles
		4.4	Assess control circuit parts against operational specification
		4.5	Localise fault condition at the component level, evaluate faulty condition, analyse root cause and plan corrective action
5	Maintain, repair/replace control components	5.1	Apply correct maintenance procedures according to procedures
		5.2	Use appropriate tools, equipment and techniques to test faulty items and repair or replace using sequential installation procedures according to manufacturers' specifications
		5.3	Select replacement items from manufacturers' catalogues
		5.4	Reassemble control components according to specification
6	Check and adjust sequence of refrigeration/air	6.1	Identify sensors and controllers
		6.2	Make necessary adjustments to sequence control circuit and check correct operation to meet operational

Elements describe the essential outcomes.

**conditioning
controls**

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

specification

6.3 Return refrigeration/air conditioning controls to service to specification

6.4 Adopt appropriate follow-up procedures

6.5 Complete service/maintenance report in accordance with SOPs

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.

Control sequencing includes one (1) or more of the following:

- programmable logic controllers (PLCs)
- relay logic control systems
- unitised/modular sensors
- transducers
- timers
- counters
- associated equipment

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

- pressure gauges
- multimeters
- ampmeters
- insulation resistance tester
- cable analyser

Modifications/alteration

- pressure control settings

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.

s include (1) one or more of the following:

- timer settings
- thermostat settings

Corrective action includes one (1) or more of the following:

- replacement
- repair
- adjustment

Maintenance procedures include the following:

- overhaul of major system components
- cleaning of major system components
- testing operation of all control and safety devices

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18092B Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls

Links

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