



Australian Government

MEM18087 Service and repair domestic and light commercial refrigeration and air conditioning equipment

Release: 1

MEM18087 Service and repair domestic and light commercial refrigeration and air conditioning equipment

Modification History

Release 1. Supersedes and is equivalent to MEM18087B Service and repair domestic and light commercial refrigeration and air conditioning equipment

Application

This unit of competency defines the skills and knowledge required to service domestic and light commercial refrigeration and air conditioning equipment and components.

It applies to retrofitting existing domestic and light commercial refrigeration and air conditioning equipment with alternative refrigerants; reconditioning components; returning to service; testing equipment; and completing service reports for administrative action.

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
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12002	Perform electrical/electronic measurement
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
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

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.

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|---|--|--|
| 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 | Undertake preventive maintenance checks/adjustments | 2.1 Carry out visual inspection and testing with appropriate test equipment according to refrigeration/air conditioning principles, procedures and safety requirements |
| | | 2.2 Perform preventative maintenance tasks according to manufacturers' specifications using refrigeration/air conditioning techniques/practices |
| 3 | Undertake fault-finding | 3.1 Identify equipment components |
| | | 3.2 Interpret the characteristics and operation of each component |
| | | 3.3 Inspect and test the operational function of each component and assess correct operation against specification |
| 4 | Repair/replace faulty components | 4.1 Localise faulty components and confirm malfunction |
| | | 4.2 Remove the refrigerant from the system safely and contain in accordance with procedures and regulatory requirements, where appropriate |
| | | 4.3 Dismantle faulty components and repair/replace to |

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manufacturers' specifications, as required

4.4 Select replacement parts from manufacturers' catalogues

5 **Return to service refrigeration/ air conditioning equipment**

5.1 Reassemble components and test for correct operation and assess against specification

5.2 Verify correct operation of the equipment

5.3 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.

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

- service manifolds
- pressure gauges
- vacuum gauges
- multimeter
- ampmeter
- insulation resistance tester
- vacuum pump

Preventative maintenance tasks include one (1) or more of the following:

- check/adjust fan belts
- check/clean filters
- check/clean heat exchangers (evaporator and condenser)
- overhaul of major system components

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- cleaning of major system components
- testing operation of all control and safety devices
- testing refrigeration charge
- testing operational current
- testing insulation resistance of relevant electrical components

Governing and guidance documentation includes the following:

- noise and environmental regulations
- applicable Commonwealth, state and territory regulations and legislation
- air conditioning residential best practice guidelines (AIRAH)
- AIRAH flammable refrigerant fact sheets and guide

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>