



Australian Government

MEM03004 Perform electronic/electrical assembly (production)

Release: 1

MEM03004 Perform electronic/electrical assembly (production)

Modification History

Release 1. Supersedes and is equivalent to MEM03004B Perform electronic/electrical assembly (production)

Application

This unit of competency defines the skills and knowledge required to identify and assemble electronic/electrical components and to test the assembled components for conformance to job sheets/specifications. It includes the use of automatic wave soldering machines.

Where the selection and use soldering skills is required unit MEM05001 Perform manual soldering/desoldering - electrical/electronic components and unit MEM05002 Perform high reliability soldering and desoldering, should also be selected as appropriate.

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

Where the selection and use of manual handling is required unit MEM11011 Undertake manual handling should also be selected.

Where the selection and use of measurement skills is required unit MEM12002 Perform electrical/electronic measurement should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 8

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Assembly

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, sketches, job sheets or work instructions |
| | | | |
| 2 | Select assembly equipment | 2.1 | Select assembly equipment and use in accordance with instructions or job sheets to SOPs |
| | | 2.2 | Use equipment in a safe manner according to SOPs |
| | | | |
| 3 | Identify electronic/electrical components | 3.1 | Identify common name, appearance, and colour of electronic and electrical components |
| | | 3.2 | Identify polarity indicators on components |
| | | | |
| 4 | Assemble components | 4.1 | Select correct components by code/colour or other identification methods |
| | | 4.2 | Prepare components/devices for soldering or other termination methods |
| | | 4.3 | Connect cables to a variety of plug and socket combinations, as required |
| | | 4.4 | Handle and store components safely using appropriate anti-static handling procedures and techniques in accordance with procedures |
| | | 4.5 | Produce assembly following correct sequence of operations |

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.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM03004B Perform electronic/electrical assembly (production)

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM03004 Perform electronic/electrical assembly (production)

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting appropriate tools, components/devices and cables and equipment for required assembly tasks
- identifying and selecting correct electronic/electrical components
- preparing components/devices for soldering and other termination methods using appropriate techniques according to SOPs
- connecting cables to a variety of plug and socket combinations
- using appropriate anti-static handling procedures and techniques to handle and store components safely
- following correct sequence of operations to produce assembling, including testing and checking to ensure compliance with specifications.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- Correct application of assembly tools and equipment and hazards associated with misuse
- polarity indicators on common electronic and electrical components and the consequences of connecting them incorrectly
- preparation and termination methods for components/devices including soldering and non-soldering techniques
- connection requirements of a variety of plugs and sockets
- anti-static procedures and techniques and the safe handling and storage requirements of electrical and electronic components
- potential damage that can occur by not following the correct sequence of operations
- specifications against which the assembly is to be checked/tested using appropriate procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing electronic/electrical assembly (production) at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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