Australian Government

Department of Education, Employment and Workplace Relations

MEM03004B Perform electronic/electrical assembly (production)

Release: 1

MEM03004B Perform electronic/electrical assembly (production)

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers identifying and assembling electronic/electrical components and testing assembled components for conformance to job sheets/specifications.

Application of the Unit

Application of the unit	This unit applies to assembly of electronic/electrical components or equipment to predetermined specifications and following predetermined procedures. This unit covers the use of automatic wave soldering machines. If soldering skills are required, then Unit MEM05001B (Perform manual soldering/desoldering - electrical/electronic components) or Unit MEM05002B (Perform high reliability soldering and desoldering) should be selected. If measurement skills are required, then Unit MEM12002B (Perform electrical/electronic measurement) should also be selected. Where the selection and use of tools is required as part of the assembly process, see Units MEM18001C (Use hand tools) and MEM18002B (Use power tools/hand held operations) as appropriate. **Band**: **A** **Unit Weight**: **8**

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Read and understand job sheets.	1.1. Job sheets and instructions are understood and followed correctly.
2. Select assembly equipment	2.1. Assembly equipment is selected and used in accordance with instructions or job sheets to standard operating procedures. 2.2. Equipment is used in a safe manner.
3. Identify electronic/electrical components	3.1. Common name, appearance, colour of electronic and electrical components are identified. 3.2. Polarity indicators are identified on components.
4. Assemble components	4.1. Correct components are selected by code/colour or other identification methods. 4.2. Components/devices are prepared for soldering or other termination methods. 4.3. Cables are connected to a variety of plug and socket combinations as required. 4.4. Components are safely handled and stored using appropriate anti-static handling procedures and techniques in accordance with standard operating procedures. 4.5. Assembly is produced following correct sequence of operations.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
Look for evidence that confirms skills in: • reading, interpreting and following assembly job sheets, instructions and standard operating procedures • selecting appropriate tools and equipment • using tools and equipment • selecting electronic and electrical components by name, colour and appearance • preparing components/devices for soldering and termination • connecting cables to plugs/sockets

REQUIRED SKILLS AND KNOWLEDGE
• handling and storing components safely • applying anti-static handling procedures and techniques • checking work for conformance to specification • completing production records and reports • following oral instructions • using hand and power tools dedicated to the assembly process • identifying components by name, appearance and colour • entering routine and familiar information onto proforma and standard workplace forms
Required knowledge
Look for evidence that confirms knowledge of: • assembly equipment and its application • hazards associated with the misuse of tools and equipment • polarity indicators on common electronic and electrical components • consequences of connecting electronic and electrical components with incorrect polarity • termination methods • preparation requirements for components/devices to be soldered • preparation requirements for components/devices to be terminated using non-soldering techniques • connection requirements of a variety of plugs and sockets • anti-static procedures and techniques • safe handling and storage requirements of electrical and electronic components • consequences of not following the correct sequence of operations • specifications against which the assembly is to be checked/tested • test/check procedures • data recording requirements

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	A person who demonstrates competency in this unit must be able to perform electrical/electronic assembly (production).
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and to be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate. This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with electronic/electrical assembly (production) or other units requiring the exercise of the skills and knowledge covered by this unit.
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for	

EVIDENCE GUIDE	
assessment	

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	

Unit Sector(s)

Unit sector	

Co-requisite units

Co-requisite units		

Competency field

Competency field	Assembly