



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **MEM03002B Perform precision assembly**

**Release: 1**

## MEM03002B Perform precision assembly

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers assembling and testing complex engineering components and mechanical assemblies in a production, manufacturing environment.
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to assembly operations that are essentially manual in nature and require the application of accepted engineering principles and practices. Assembly activities typically involve build-to-order work and/or low volume and/or complex assemblies and/or long assembly time frames. This is a production-oriented competency. Work may involve manual adjustments to achieve correct specification.</p> <p>Where varying levels of measurement competencies are required, refer to Units MEM12023A (Perform engineering measurements).</p> <p>This unit should not be selected when Unit MEM18055B (Dismantle, replace and assemble engineering components) has also been selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p>
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### Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

<b>Prerequisite units</b>		
<b>Path 1</b>	MEM18001C	Use hand tools

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## 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.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Read and understand job sheets	1.1. Job sheet or equivalent instructions are interpreted correctly. 1.2. All components/sub-assemblies are checked against job sheet, assembly list or equivalent instructions. 1.3. Fitting requirements and sequential assembly planning are carried out where applicable.
2. Select and use assembly tools and equipment	2.1. Tools, equipment and components/sub-assemblies are selected to meet job requirements.
3. Assemble engineering components	3.1. Defective or faulty components/sub-assemblies are identified and processed according to standard operating procedure. 3.2. Components/sub-assemblies are correctly prepared for assembly. 3.3. Techniques and principles appropriate to the job requirements are applied in assembly activity. 3.4. Records/inputs are accurately maintained or processed. 3.5. Components of assembly are fitted to ensure correct positioning and conformance with specifications. 3.6. Assembly is tested to ensure that components interface/interact according to operational specifications.
4. Adjust mechanical assemblies	4.1. Final adjustments are performed on assembly to ensure alignment with operational specifications. 4.2. Faulty assemblies are identified for rework by operator or, where the fault is outside the scope of the workstation, processed according to standard operating procedure. 4.3. The assembly is correctly marked/tagged/identified.
5. Protect assembly from damage	5.1. Components and/or assembly are handled and stored according to standard operating procedures and in a manner least likely to cause damage.

## Required Skills and Knowledge

### 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 and interpreting routine information on written job instructions, specifications and standard operating procedures. This may include drawings
- preparing a sequential assembly plan
- selecting and sourcing appropriate tools, components and sub-assemblies
- using tools appropriately
- following job instructions
- identifying faulty components
- following oral instruction
- entering routine and familiar information onto proformas and standard workplace forms

**Required knowledge**

Look for evidence that confirms knowledge of:

- fitting requirements
- uses of relevant tools and equipment
- sequence in which the tasks are to be performed
- sources of the component/sub-assemblies
- required action for tests and checks
- required action for non-conformance
- damage to components and/or assemblies through the use of inappropriate handling and/or unsafe storage procedures
- relevant record keeping requirements
- use and application of personal protective equipment
- safe work practices and procedures
- hazards and control measures associated with precision assembly

## 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 assemble and test complex engineering components and mechanical assemblies. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

#### 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 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 precision assembly 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.

**EVIDENCE GUIDE****Guidance information for  
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.

<b>Components/sub-assemblies</b>	Includes parts that make up the sub-assembly and components
<b>Technique</b>	Assembly methods and correct use of hand tools
<b>Records/inputs</b>	Production schedules, job sheets, checklists
<b>Tested</b>	Tests and checks to specification of assembled product
<b>Adjustments</b>	Clearances, mesh, tension, level, alignment etc. using predetermined standards of quality and safety

**Unit Sector(s)****Unit sector****Co-requisite units****Co-requisite units**

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	Assembly
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