



Australian Government

Department of Education, Employment and Workplace Relations

MEM07009B Perform precision jig boring operations

Release: 1

MEM07009B Perform precision jig boring operations

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers performing precision jig boring operations using a range of jig boring and milling machines.
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Application of the Unit

Application of the unit	<p>This unit applies to operations where a range of jig boring and milling machines, tools and accessories are used to achieve a high level of precision in finished products.</p> <p>Band: A</p> <p>Unit Weight: 4</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM07005C	Perform general machining
	MEM07007C	Perform milling operations
	MEM09002B	Interpret technical drawing
	MEM12003B	Perform precision mechanical measurement
	MEM12023A	Perform engineering measurements

Prerequisite units		
	MEM18001C	Use hand tools

Employability Skills Information

Employability skills	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. Observe safety precautions	1.1. Correct safety procedures are observed and protective clothing and safety glasses are worn.
2. Determine job requirements	2.1. Drawings are interpreted and sequence of operations is determined.
3. Select appropriate tools and accessories	3.1. Tools and accessories are selected in accordance with standard operating procedures to meet job specifications.
4. Mount job	4.1. Job is set up using instruments such as dial test indicators and digital read out equipment.
5. Perform jig boring	5.1. Holes are bored relative to coordinate position and to specification. 5.2. Rotary or tilting rotary table is used as required.
6. Check components for conformance to specification	6.1. Components are checked for conformance to specification using appropriate techniques, tools and equipment.

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 information on written job instructions, specifications, procedures, charts, lists, drawings and other applicable reference documents
- preparing operational work plan
- planning and sequencing operations
- selecting tools and accessories
- checking for conformance to specifications
- using precision measurement equipment
- checking and clarifying task related information
- performing numerical operations and calculations within the scope of this unit

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

Look for evidence that confirms knowledge of:

- reasons for selecting the chosen sequence of operations
- the application of rotary and tilting rotary tables to jig boring operations
- checks for conformance to specifications
- appropriate techniques, tools and equipment to measure machined components
- hazards and control measures associated with jig boring operations, including housekeeping
- use and application of personal protective equipment
- safe work practices and procedures

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 precision jig boring operations. 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 performing precision jig boring operations 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.

Tools and accessories

Cutting tools, tool attachments, charts and nomograms, rotary or tilting rotary table etc.

Appropriate techniques

Measuring techniques, comparison methods

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

Co-requisite units		

Competency field

Competency field	Machine and process operations
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