



Australian Government

MEM07009 Perform precision jig boring operations

Release: 2

MEM07009 Perform precision jig boring operations

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM07009 Perform precision jig boring operations (Release 1).

Release 1. Supersedes and is equivalent to MEM07009B Perform precision jig boring operations.

Application

This unit of competency defines the skills and knowledge required to perform precision jig boring operations using a range of jig boring and milling machines.

It applies to operations where a range of jig boring and milling machine tools and accessories are used to achieve a high level of precision in finished products.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM07005	Perform general machining
MEM07007	Perform milling operations
MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12003	Perform precision mechanical measurement
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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	Prepare to undertake work	2.1	Determine sequence of operations
		2.2	Select tools and accessories to meet job specifications
		2.3	Set up job using appropriate measuring instruments
3	Perform jig boring	3.1	Bore holes relative to coordinate position and to specification
		3.2	Use rotary or tilting rotary table, as required
4	Check components	4.1	Check components for compliance with specifications
		4.2	Rectify non-compliant product in accordance with SOPs

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, accessibility of the item, and local industry and regional contexts) are included.

Tools and accessories include one (1) or more of the following:

- cutting tools
- tool attachments
- harts and nomograms
- rotary table
- tilting rotary table

Instruments include one (1) or more of the following:

- dial test indicators
- digital read out equipment

Appropriate techniques include the following:

- measuring techniques and comparison methods

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM07009 Perform precision jig boring operations (Release 1).

Release 1. Supersedes and is equivalent to MEM07009B Perform precision jig boring operations.

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 MEM07009 Perform precision jig boring operations

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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
- planning a job, including identifying job requirements from drawings, instructions or specifications and sequence of operations
- identifying any required tooling, measuring equipment and accessories
- selecting and mounting required material for jig boring operations
- performing jig boring to specifications
- checking machined components for conformance to specifications and making required adjustments to machining parameters
- rectifying non-compliant product.

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)
- reasons for selecting the chosen sequence of operations
- application of rotary and tilting rotary tables to jig boring operations
- checks to be conducted for conformance to specifications
- appropriate techniques, tools and equipment to measure machined components
- tools, techniques and equipment for checking components for conformance to specifications and rectifying non-compliant components.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing precision jig boring operations 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.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including 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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