



Australian Government

MEM19017 Fabricate jewellery items

Release: 1

MEM19017 Fabricate jewellery items

Modification History

Release 1. Supersedes and is equivalent to MEM19017B Fabricate jewellery items

Application

This unit of competency defines the skills and knowledge required to use fabrication techniques to construct jewellery components, single and multiple-piece items.

Where electroplating skills are required to be used unit MEM08003 Perform electroplating operations should also be selected.

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

Band: A

Unit Weight: 6

Pre-requisite Unit

MEM05006	Perform brazing and/or silver soldering
MEM06007	Perform basic incidental heat/quenching, tempering and annealing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Competency Field

Jewellery and horological

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, drawings, job sheets or work instructions
2	Prepare for fabrication	2.1	Assess item design characteristics, dimensions, construction, composition and finish to select appropriate preparation and fabrication techniques
		2.2	Prioritise and plan work to meet designated timeframes and specific fabrication requirements
		2.3	Select and obtain components, materials and consumables in accordance with SOPs
		2.4	Prepare metals to required quality and dimensions
		2.5	Select tools and equipment appropriate to job requirements and check for operational effectiveness
3	Fabricate and finish jewellery item	3.1	Perform fabrication activities using safe operating practices in accordance with SOPs
		3.2	Check item to ensure construction conforms to required specifications, quality, procedures
		3.3	Conduct surface finishing to required specifications
		3.4	Conduct embellishing and polishing to required specifications
4	Complete work	4.1	Package and present finished item and store according to SOPs
		4.2	Complete and process documentation

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

- 4.3 Collect and reclaim excess materials, clean work area, tools and equipment and store 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, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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

- single-piece items
- multiple-piece items
- clips
- catches
- pins

Materials and consumables include one (1) or more of the following:

- precious metals
- non-precious metals
- solders
- fluxes
- drills
- blades
- polishing compounds
- cleaning materials
- finishing materials

Preparation techniques include one (1) or more of the following:

- alloy
- cutting
- drawing down
- rolling

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Fabrication techniques include one (1) or more of the following:

- cutting
- folding
- bending
- curving
- dapping
- drawing
- rolling
- doming
- annealing
- melting
- granulation
- brazing
- silver soldering
- riveting

Finishing activities include one (1) or more of the following:

- filing
- emery finishing
- high polish
- satin polish
- sandblasting
- brushing
- burring
- reticulation
- burnishing

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19017B Fabricate jewellery items

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 MEM19017 Fabricate jewellery items

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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
- identifying and interpreting specifications, drawings, job sheets or work instructions to fabricate jewellery items
- selecting appropriate preparation and fabrication techniques and tools
- selecting and preparing materials for fabrication
- fabricating jewellery items in accordance with SOPs and specification requirements
- finishing jewellery items in conformance with specifications
- completing workplace documentation and cleaning work space
- identifying and rectifying problems/errors.

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)
- metals and materials for fabricating a range of jewellery items and designs
- common jewellery design features, constructions and finishes
- metal preparation and fabrication techniques to suit different design requirements
- factors affecting the selection of preparation and fabrication methods
- materials and consumables for given jewellery fabrication jobs
- properties and characteristics of applicable metals
- ratios to create required grade, quality and composition of metals
- melting temperatures and preparation methods for melting applicable metals
- types of ingot moulds and their characteristics and applications
- methods, applications, equipment types and operational requirements for rolling and drawing metals
- process for annealing metals to prevent work hardening
- procedures for checking serviceability of applicable tools and equipment
- tools, techniques and materials for embellishing and polishing

- procedures for storage and packaging, presentation of finished items and security measures for protection of jewellery items
- procedures for identification and rectification of problems/errors.

Assessment Conditions

- Assessors must:
 - have vocational competency in fabricating jewellery items 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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