



Australian Government

MEM19050 Hand carve engraving work

Release: 1

MEM19050 Hand carve engraving work

Modification History

Release 1. Supersedes and is equivalent to MEM19050A Hand carve engraving work.

Application

This unit of competency defines the skills and knowledge required to engrave or carve in relief onto a variety of jewellery or object surfaces to meet design specifications. It includes seal carving and relief carving.

This unit applies to individuals involved in jewellery manufacture in a small or large-scale production context. They use and adapt technical skills and knowledge to produce work that meets pre-determined design and production requirements.

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

Band: B

Unit Weight: 4

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

Competency Field

Jewellery

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
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 personal protective equipment (PPE) in accordance with SOPs 1.4 Interpret specifications or design to determine carving requirements

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Determine requirements for drawing modification or resizing in order to fit metal surface
2. Transfer and mark out design	2.1 Confirm surface will respond to carving technique based on metal properties 2.2 Apply techniques to reduce or enlarge the design to a given size 2.3 Transfer drawing detail onto metal surface 2.4 Mark out carving layouts and patterns using predetermined reference or datum points
3. Apply carving techniques	3.1 Select and use tools, equipment, materials and consumables appropriate to job requirements in accordance with manufacturer specifications and SOPs 3.2 Determine need for specialist carving tools and design and produce tools to complete work 3.3 Perform carving in accordance with design specifications 3.4 Perform work in a manner that minimises waste and complies with environmental requirements
4. Finish work	4.1 Ensure work meets client requirements and quality standards 4.2 Clean item and prepare for presentation to client 4.3 Complete documentation in accordance with workplace procedures 4.4 Clean up and maintain production environment and equipment in accordance with SOPs

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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.	
Specifications include one or more of the following:	• drawings • job sheets • work instructions.
Materials include one or more of the following:	• gold, silver and platinum • precious or semi-precious stones • coral and shells • copper and copper alloys • enamel, glass and ceramic.
Equipment includes one or more of the following:	• square graver • flat graver • lozenge graver • half round gravers • engravers pad • scorpers • plasticine • metal ruler • eye loupe.
Tool maintenance includes one or more of the following:	• graver shape • cutting angles • points • cutting edges • polished faces.
Carving work includes the following:	• seal carving • relief carving.
Surfaces include one or more of the following:	• concave surfaces • convex surfaces • half hoop rings.
Environmental requirements include one or more of the following:	• liquid waste • solid waste • emissions (gas, fume, vapour, smoke, fugitive emissions or dust) • excessive noise • excessive energy and water use.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19050A Hand carve engraving work.

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 MEM19050 Hand carve engraving work

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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 and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- determining customer requirements including those related to repair or restoration
- identifying the engraving sequence and determining suitability of item and materials for carving work criteria on at least two occasions
- using datum lines and points and marking out and transferring design onto metal surfaces for carving criteria on at least two occasions
- selecting and using appropriate tools and equipment to complete work by hand according to job requirements
- machining, sharpening and maintaining tools in accordance with SOPs.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

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)
- materials suitable to be hand carve engraved
- carving work and types of surfaces
- techniques used for carving
- characteristics and responses of metals and common materials used in jewellery
- engraving terminology
- methods used to determine customer requirements
- sources of task-related information
- securing methods and limitations
- different gravers, scorers and other tools and equipment and their applications
- techniques for producing and maintaining cutting edges
- equipment used for maintaining gravers and tool maintenance
- required industry standards
- hand engraving techniques
- environmental considerations when hand engraving.

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Assessment Conditions

- Assessors must:
 - have vocational competency in hand carving engraving work 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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