



**Australian Government**

# **Assessment Requirements for MEM21021 Restore clockwork mechanisms**

**Release: 1**

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## Modification History

Release 1. Supersedes and is equivalent to MEM21021A Restore clockwork mechanisms

## 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 missing damaged or worn parts
- liaising with customer, identifying restoration costs and planning and conducting repairs to maintain originality of timepiece
- servicing and repairing power equalisation devices, including dismantling, assembling and setting up fusee systems
- using appropriate tools and equipment for restoration work
- preparing and using working drawings and templates to manufacture components by hand
- applying appropriate heat treatment process and refinish manufacture process to achieve desired result and verifying correct function of manufactured components
- repairing gears, wheels and arbors and test run with matched component
- recording and documenting repairs.

## 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)
- clock design and manufacture
- design and drawing of replacement parts
- techniques for manufacturing replacement parts
- gear forms (cycloidal and involute)
- gear terminology (pitch and root diameter)
- types and uses of files, including shapes and cuts
- jeweller saws and blades
- metal types and applications to clock components
- power equalisation devices and their function
- finishing and polishing techniques and media.

## Assessment Conditions

- Assessors must:
  - have vocational competency in restoring clockwork mechanisms 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.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>