



Australian Government

**Assessment Requirements for MEM19022
Perform precision micro-mechanism
diagnosis and servicing**

Release: 1

Assessment Requirements for MEM19022 Perform precision micro-mechanism diagnosis and servicing

Modification History

Release 1. Supersedes and is equivalent to MEM19022B Perform precision micro-mechanism diagnosis and servicing

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
- eliminating or minimising effects of internal and external influences and adjusting timing of micro-mechanisms
- making detailed observations using high magnification optics
- testing functioning of components to high tolerances, including functioning of escapement and oscillating system
- using appropriate tools and equipment for detailed observation diagnosis and servicing
- removing and replacing assembly and subassembly components and other precision components
- making adjustments to minimise error of performance
- repairing and adjusting chronograph mechanisms, including tensioning chronograph wheel and minute wheel, to ensure correct operation of seconds, minute and hour recording systems
- observing and adjusting depth of engagement and operating sequence of functioning elements
- applying lubricant, as required
- re-finishing and matching components to existing components to ensure correct functioning, including alignment of hands with dials
- fitting and adjusting new and repaired components to function within existing system
- determining influences in design, internal and external influences on rating variation.

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)
- physical limitations and condition of system and control factors influencing isochronism
- inherent influences in design, internal and external influences on rating variation
- adjustment procedures and techniques

- detailed inspection and analysis techniques for diagnosing precision micro-mechanisms
- acceptable tolerances, clearances and limits for precision components
- components suitable for precision outcomes
- effects of adjustment on performance and operation
- criteria for correct adjustment of balance spring and regulating system
- types of chronograph mechanisms and their functioning
- adjustment procedures for chronograph operation, including minute and hour recording systems.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing precision micro-mechanism diagnosis and servicing 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>