



Australian Government

Assessment Requirements for MEM18059 Modify electronic systems

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM18059B Modify electronic systems

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 circuit diagrams, specifications, schematics, maintenance records, drawings, supplier catalogues and obtaining relevant data, including relevant maintenance reports and system output information with respect to modifying electronic systems
- obtaining approval for modifications to electronic systems from appropriate authorities and recording the proposed modifications in accordance with SOPs
- carrying out modifications on electronic analog or digital systems
- checking modified electronic system for compliance to specifications utilising appropriate test equipment
- programming computers, including uploading/downloading of proprietary software, where appropriate
- testing and evaluating modified electronic system for compliance to specifications
- amending circuit diagrams, schematics, equipment manuals, specifications affected by the modifications
- recording all modifications in accordance with SOPs.

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)
- implications of electro-static discharge (ESD) upon the electronic equipment
- advanced analog and digital electronics theory
- modifications to be made to the electronic system and reasons for undertaking the modification
- appropriate personnel to consult for technical advice
- probable causes for any detected trends and/or deviations from specification
- appropriate authority to authorise modifications to electronic systems and changes to documentation, circuit drawings and schematics

- procedures to be followed when undertaking and recording modifications to electronic systems
- tools and techniques to be used to modify the electronic system
- procedures for amending documents, circuit drawings and schematics
- procedures for checking the performance of the modified electronic system
- test equipment, techniques and operational specifications to be used to evaluate the modified electronic system
- deviations/variations of test results from operational specifications and probable causes of any deviations/variations from specification
- likely effect of further modifications on electronic system performance.

Assessment Conditions

- Assessors must:
 - have vocational competency in modifying electronic systems 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>