



Australian Government

Assessment Requirements for MEM18108 Troubleshoot analog and digital electronic equipment

Release: 2

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Modification History

Release 2. Prerequisite units updated

Release 1. New unit

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, SOPs and safe work practices
- identifying and interpreting circuit diagrams, specifications, schematics, maintenance records, drawings, supplier catalogues and obtaining relevant data with respect to troubleshooting analog/digital electronic equipment
- locating, reading/recording and diagnosing built-in fault indicators and obtaining error code interpretation documents and run test functions and recording faults and/or equipment status indicated by built-in functions/display
- applying diagnostic techniques in fault-finding electronic equipment down to sub-assembly and/or plug-in card level
- isolating and removing faulty item and selecting replacement item from appropriate sources
- adjusting/tuning and calibrating in accordance with specifications
- verifying repaired electronic equipment for compliance to specifications
- completing all documentation 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 PPE
- function(s) and operational specifications of the electronic equipment/sub-assembly and electrical principles associated with electronic sub-assemblies
- implications of electro-static discharge (ESD) upon the electronic equipment
- procedures for running built-in test functions and recording identified faults
- equipment and techniques to be used to test the electronic equipment, including the use of specialised test equipment
- diagnostic techniques, including:
 - visual inspection
 - signal injection
 - half-split rule and component isolation

- procedures for running built-in test functions and recording faults identified
- errors indicated by built-in devices
- procedures for isolating electronic equipment/sub-assemblies
- tools and techniques to be used to remove/replace components from/into electronic equipment
- procedures and techniques for adjusting/tuning and calibrating electronic equipment/sub-assemblies
- test procedures and specifications for returning repaired equipment/sub-assemblies to service.

Assessment Conditions

Assessors must:

- have vocational competency in troubleshooting analog and digital electronic equipment 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* and comply with the *National Vocational Education and Training Regulator Act 2011* or equivalent legislation covering VET regulation in a non-referring State 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 that 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 manufacturer 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>