



Australian Government

**Assessment Requirements for MEM18056
Diagnose and repair analog equipment and
components**

Release: 1

Assessment Requirements for MEM18056 Diagnose and repair analog equipment and components

Modification History

Release 1. Supersedes and is equivalent to MEM18056B Diagnose and repair analog equipment and components

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 obtain relevant data with respect to diagnosing and repairing analog equipment and components
- checking electronic equipment/sub-assemblies, components, connections and terminations for compliance to specifications
- locating, reading/recording and diagnosing built-in fault indicators and obtaining error code interpretation documents and running test functions and recording faults and/or equipment status indicated by built-in test functions/displays
- checking and testing sub-assembly using appropriate test equipment for compliance with specifications
- reproducing fault symptoms in the electronic equipment and verifying faults using appropriate test equipment and fault-finding techniques to locate and isolate faulty component or fault cause
- removing and replacing faulty components from the electronic equipment
- adjusting/tuning, calibrating and testing the repaired electronic equipment/sub-assemblies to specifications
- returning the repaired electronic equipment/sub-assembly to service 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
- analog electronics, including amplifiers, oscillators, power suppliers and filters
- function(s) of the electronic equipment/sub-assembly
- symptoms of the fault in the electronic equipment/sub-assembly

- purpose of reproducing electronic equipment/sub-assembly fault symptoms
- equipment and techniques to be used to test the faulty sub-assemblies/component
- probable causes of component failure
- procedures for:
 - running built-in test functions
 - verifying faults in electronic equipment/sub-assemblies
 - isolating electronic equipment/sub-assemblies
 - removing sub-assemblies from electronic equipment
 - testing faulty sub-assemblies and removing faulty components from electronic equipment
 - fitting repaired/replaced components into sub-assemblies and fitting repaired sub-assemblies into electronic equipment
 - testing electronic equipment/sub-assembly performance
- errors indicated by built-in devices
- test equipment and fault-finding techniques necessary to confirm electronic equipment/sub-assembly faults
- tools and techniques to be used to remove/refit/repair/replace the faulty sub-assemblies/component from the electronic equipment
- operational specifications of the sub-assembly and electronic equipment/component
- test equipment and techniques necessary to check electronic equipment/sub-assembly performance.

Assessment Conditions

- Assessors must:
 - have vocational competency in diagnosing and repairing analog equipment and components 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>