



Australian Government

Assessment Requirements for MEM18066 Diagnose and repair microprocessor-based equipment

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM18066B Diagnose and repair microprocessor-based equipment

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 equipment specifications, manuals, circuit and schematic diagrams, maintenance records and supplier catalogues and obtaining relevant data with respect to diagnosing and repairing microprocessor-based equipment
- locating, reading/recording and diagnosing built-in 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
- reproducing fault symptoms in the microprocessor-based equipment and verifying faults using appropriate test equipment and fault-finding to locate and isolate faulty component or fault cause
- checking microprocessor-based equipment, electronic equipment/sub-assemblies, components, connections and terminations for conformance to specifications
- removing and replacing faulty components and/or microprocessor from the electronic equipment/sub-assemblies
- checking and testing equipment using appropriate test equipment and fault-finding techniques for conformance with specifications
- adjusting/tuning, calibrating and testing the repaired microprocessor-based equipment to specifications
- returning the repaired equipment and components 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
- microprocessor systems, architecture, circuits and dedicated chips
- function(s) of the microprocessor-based equipment
- electronic principles utilised in the operation of the microprocessor-based equipment

- procedures for:
 - running built-in test functions
 - verifying faults in microprocessor-based equipment
 - testing faulty microprocessor-based equipment
 - testing microprocessor-based equipment performance
 - removing/refitting/repairing/replacing faulty components from microprocessor-based equipment and tools and techniques to be used
- errors indicated by built-in devices
- symptoms of the fault in the microprocessor-based equipment and purpose of reproducing fault symptoms
- test equipment and fault-finding techniques necessary to confirm microprocessor-based equipment faults
- test equipment and techniques to be used to test the faulty microprocessor-based equipment and probable causes of component failure
- reasons for identifying the faulty component for repair or replacement
- operational specifications of the microprocessor-based equipment
- test equipment and fault-finding techniques necessary to check the microprocessor-based equipment performance.

Assessment Conditions

- Assessors must:
 - have vocational competency in diagnosing and repairing microprocessor-based 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* 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>

