



Australian Government

Assessment Requirements for MEM12020

Set and operate coordinate measuring machines

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM12020B Set and operate coordinate measuring machines

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 specifications and drawings for selecting appropriate methods for measuring components using coordinate measuring machines (CMMs)
- selecting and setting up and orienting appropriate component/fixture/ clamping device to minimise distortion and maximise measuring access
- selecting and loading part programs and activating in accordance with SOPs
- loading and configuring probes, checking probes angles and adjusting for compliance and re-setting/re-calibrating CMM in accordance with specifications
- manually aligning probes for one off components
- identifying problems/errors in programs and carrying out editing to ensure accurate operation
- checking results against drawings/specifications and interpreting for non-conformance and completing reports.

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)
- principles and methods of coordinate measurement
- principles and interpretation of geometric tolerancing
- task-related information, symbols and terminology
- pre-start checks
- types and functions of various fixtures/clamping devices
- principles and methods of clamping
- efficient set-up/orientation procedure
- procedures to locate and activate part program
- procedures to verify changes/upgrades to part programs
- various probes and their uses and configurations and setting and adjusting probes

- requirements and procedures for re-setting/re-calibrating the CMM
- procedure and reason for taking manual hits
- procedures for editing part programs
- procedure for interpreting results
- procedure for maintaining records and reporting procedures
- techniques, tools and equipment to measure components.

Assessment Conditions

- Assessors must:
 - have vocational competency in setting and operating coordinate measuring machines 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>