



Australian Government

Assessment Requirements for MEM18017 Modify mechanical systems and equipment

Release: 2

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Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM18017 Modify mechanical systems and equipment (Release 1).

Release 1. Supersedes and is equivalent to MEM18017C Modify mechanical systems and 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
- determining modification requirements by obtaining and analysing relevant maintenance reports, production data, specifications, drawings, circuits and conditioning monitoring data and developing corrective action plan in accordance with SOPs
- inspecting plant/equipment for correct location, alignment, operation, performance and conformance to specifications and identifying modification options to overcome parts failure and design faults
- developing modification/s to plant and equipment which lead to desired changes in performance in conjunction with, and approved by, appropriate authority
- recording approved modifications in accordance with procedures and preparing and authorising drawings of the modified components and/or sub-assemblies
- operating and monitoring performance of modified plant/equipment to ensure compliance with the required performance specifications
- recording/reporting efficiency/effectiveness of the modifications undertaken and recommending further modifications, where required.

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)
- desired changes in performance of the plant/equipment
- specifications of the plant/equipment and its performance requirements
- procedures for:
 - inspecting the plant/equipment against specifications
 - documenting the proposed modifications to the plant/equipment

- modifying and authorising changes to drawings of components and/or sub-assemblies, and plant/equipment
- recording modifications undertaken
- checking the operation of the modified plant/equipment against required performance specifications
- reporting/recording the effectiveness/efficiency of the modifications
- effect of defective components, sub-assemblies and design faults on the performance of plant/equipment
- reasons and action to be taken to achieve the desired changes in performance
- authority from whom approval to undertake the proposed modifications is to be obtained
- typical part failure modes and the causes and action to be taken to correct part failures and design faults
- options for modifying the plant/equipment for given part failures and/or design faults
- replacement parts from manufacturers'/suppliers' catalogues for given components and/or sub-assemblies
- tests to be undertaken to check the performance of the modified plant/equipment
- engineering design and drawing skills associated with modifying mechanical systems and equipment
- numerical operations, geometry and calculations/formulae.

Assessment Conditions

- Assessors must:
 - have vocational competency in modifying mechanical systems and 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.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including 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>

