



Australian Government

Assessment Requirements for MEM18104 Dismantle, replace and assemble electrical components and 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 occasions and include:

- Following work instructions, SOPs and safe work practices
- identifying and interpreting circuits, drawings and specifications relevant to the work to be undertaken
- preparing component/equipment for dismantling
- ensuring all handheld power tools are tested and tagged to the requirements of AS/NZS 3760:2010 In-service safety inspection and testing of electrical equipment
- dismantling component/equipment using appropriate techniques, tools and equipment
- marking component/equipment parts appropriately to aid in reassembly
- checking components visually and dimensionally for conformance to specifications
- selecting and confirming replacement parts to specifications from supplier catalogues
- preparing and assembling component/equipment using appropriate techniques and procedures
- undertaking shaft and coupling alignment, where appropriate
- applying lubricants, packing and/or sealing materials, where appropriate, in accordance with the job specifications
- inspecting and checking the final assembly for conformance with operational specifications and returning to use
- documenting all necessary remedial action and reasons why they were carried out 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
- mechanical drawing interpretation, including:
 - application of AS 1100.101-1992 Technical drawing – General principles, in accordance with SOPs
 - conventions used in technical drawings, including relationship between the views contained in the drawing, objects represented, units of measurement, and dimensions of the key features and symbols used

- correct interpretation of instructions contained in drawings
- materials from which drawing objects are made and their features and manufacturing/assembly requirements
- power tools, including:
 - application of different power tools, including electric or pneumatic/hydraulic drills, grinders, jigsaws, nibblers, cutting saws, sanders, planers, routers, pedestal drills and grinders
 - clamping/securing methods, including multigrips, vices, jigs, fixtures and clamps
 - adjustments/alignments to a range of power tools
 - common faults and/or defects in power tools
 - procedures for marking unsafe or faulty power tools for repair
 - routine maintenance requirements and cleaning of a range of power tools, including lubricating, tightening, simple tool repairs and adjustments using engineering principles, tools, equipment and procedures to statutory and regulatory requirements
 - tool sharpening techniques for a range of power tools
 - storage location and procedures of a range of power tools
 - safety precautions when using power tools
- precautions to be observed when drilling materials containing asbestos, including the following:
 - undertaking a risk assessment prior to commencement of work
 - a non-powered hand drill or low speed battery-powered drill or drilling equipment fitted with local exhaust ventilation (LEV) dust control hood wherever possible
 - safe working procedures, including applicable PPE
- portable tool safety and tagging system in accordance with the requirements of AS/NZS 3760:2010 In-service safety inspection and testing of electrical equipment
- correct procedures for storage of hand and power tools
- types of seals, bearings, fans and pulleys commonly found in electrical equipment
- non-rotating DC equipment and components, including construction, operation and application of:
 - solenoids, relays and contactors
 - linear actuators
 - Hall effect devices
 - magnetic sensing devices
 - magnetostriction equipment
- dismantling and assembly techniques, including:
 - marking component/equipment parts to aid in reassemble
 - selecting appropriate hand and power tools used in dismantling and assembling electrical components
 - procedures for safe handling and storage of dismantled components.

Assessment Conditions

Assessors must:

- have vocational competency in dismantling, replacing and assembling electrical components 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* 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>