



Australian Government

MEM20022 Modify and repair security equipment and systems

Release: 1

MEM20022 Modify and repair security equipment and systems

Modification History

Release 1. New unit.

Replaces CPPSEC3049A Modify and repair security equipment and system.

Application

This unit of competency defines the skills and knowledge required to conduct minor modifications and repairs on a range of security equipment and systems. It requires the ability to diagnose and rectify common basic faults and refer more complex faults for specialist attention. This unit applies to extra-low voltage environments.

This unit may form part of the licensing requirements for personnel responsible for maintaining security equipment and systems in those states and territories where these are regulated activities.

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM11011 Undertake manual handling

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM18001 Use hand tools

MEM18002 Use power tools/hand held operations

Competency Field

Locksmithing

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify maintenance and repair requirements	1.1 Follow standard operating procedures (SOPs) and comply with work health and safety (WHS) requirements at all times 1.2 Review job requirements and clarify with appropriate personnel in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	accordance with organisational requirements 1.3 Obtain system and component specifications and other relevant information 1.4 Identify security equipment and system to be modified or repaired 1.5 Select tools and equipment required for the task 1.6 Identify legislation applicable to the work requirements
2. Perform maintenance	2.1 Access security equipment and system identified for maintenance with minimal disruption to services and others in the work area 2.2 Assess security equipment and system for operational effectiveness against normal operating criteria 2.3 Diagnose faults in security equipment and system 2.4 Undertake repairs or modifications in accordance with manufacturer's specifications 2.5 Identify complex faults and repair requirements and report for specialist attention 2.6 Carry out routine servicing of security equipment and system in accordance with manufacturer specifications 2.7 Reassemble and test security equipment and system components for correct operation in accordance with approved procedures
3. Complete maintenance activities	3.1 Restore work area in accordance with SOPs 3.2 Clean, maintain and store tools and equipment in accordance with SOPs 3.3 Collect, treat and dispose of or recycle waste from service and repair activities in accordance with SOPs 3.4 Document and report malfunctions, faults, wear or damage to tools or equipment in accordance with SOPs 3.5 Notify relevant personnel of work completion in accordance with SOPs 3.6 Complete required documentation in accordance with SOPs

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Legislative requirements include one or more of the following:	• federal and state/territory legislation related to the workplace • Australian Communications and Media Authority (ACMA) cabling standards • Australian building codes and regulations • award and enterprise agreements • licensing arrangements and certification requirements • privacy requirements • relevant industry codes of practice • trade practices.
Organisational requirements include one or more of the following:	• code of conduct or ethics • communication and reporting procedures • complaint and dispute resolution procedures • emergency and evacuation procedures • work health and safety (WHS) policies, procedures and programs • own role, responsibility and authority • privacy and confidentiality of information • resource parameters and procedures • storage and disposal of information • documentation.
Maintenance requirements include one or more of the following:	• cleaning • minor modifications and adjustments • minor repairs, either on or off-site • servicing.
Work instructions include one or more of the following:	• access to site and specific site requirements • equipment, tools and material requirements • personal protective equipment (PPE) requirements • reporting requirements • security equipment and system information • security equipment and system location information • specific client requirements

	- timeframes - work schedules - work tasks and procedures.
Relevant personnel include one or more of the following:	- clients - colleagues - engineers and technicians - equipment and systems manufacturers - security consultants - security personnel - site managers or project managers - supervisor.
Security equipment and systems include one or more of the following:	- access control systems - audible and visual warning devices - cameras and monitors - commercial and residential alarm systems - detection devices - electric and mechanical fire safety and fire locking systems - electronic locks and locking systems - intercoms and control panels - security doors and door controls.
Modifications include one or more of the following:	- change in system capabilities and functions - locations, placement and positions - monitoring requirements.
Tools and equipment include one or more of the following:	- cable testing equipment - communications equipment - computer and software - fixing tools - hand tools - ladder - multimeter - PPE - power tools.
Materials include one or more of the following:	- cable - fixings - grease - patch materials - screws - sealants - wiring - solder.
Risks and hazards include	chemical hazards

one or more of the following:	• exposed electrical wiring • asbestos • building debris • dust • glass fibre • live power • natural and other gas build-up • noise • vermin • water • manual handling • non-compliance with building codes and regulations.
Work health and safety (WHS) requirements include one or more of the following:	• emergency procedures • following confined spaces procedures • implementation of safety policies and procedures • risk and hazard recognition • safety training • working with electrical wiring and cables • working with tools and equipment.
PPE includes one or more of the following:	• breathing apparatus • masks • gloves • head protection • hearing protection • knee pads • safety boots • eye protection • face protection • high-visibility clothing.
Work health and safety (WHS) equipment includes one or more of the following:	• fire extinguisher • first aid kit • warning signs and tapes • witches hats.
Access includes one or more of the following:	• disablement of system • modem access • phone line access • removal of housing • use of access code • use of access token • use of keys.
Disruptions include one or	• access

more of the following:	• business operations • noise • security • time • use of equipment.
Required documentation includes one or more of the following:	• faulty or malfunctioning tools and equipment report • materials used, parts and components replaced report • operational checks conducted • recommended repairs or disposal of equipment • repairs, adjustments or servicing undertaken • security equipment and system faults and diagnosis • testing and inspection results • written and electronic reports.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM20022 Modify and repair security equipment and systems

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and complying with applicable legislative requirements including licensing
- identifying site access and site-specific requirements
- identifying and diagnosing faults and malfunctions on at least two occasions
- recognising routine and complex faults and malfunctions in security equipment and systems
- organising materials, tools and equipment requirements
- carrying out maintenance, modifications and repairs on security equipment and systems on at least two occasions
- using appropriate tools and equipment including hand and power tools
- returning security equipment and systems to service
- testing and confirming operational effectiveness of security equipment and systems on at least two occasions
- completing all documentation in accordance with SOPs.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

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)
- applicable legislative requirements including licensing and client confidentiality
- cable identification, termination and connection procedures
- earthing systems arrangements and requirements
- electrical concepts
- emergency procedures
- fault-finding techniques
- maintenance procedures relevant to security equipment and systems

- procedures for accessing and storing tools, equipment and materials
- procedures for reporting malfunctioning or faulty tools and equipment
- reporting and documentation requirements
- requirements for commissioning of security equipment and systems
- requirements for compliance with Australian building codes and regulations and current cabling standards
- risks and hazards associated with maintenance procedures
- security equipment and system configurations and methods of programming
- security equipment and system repair techniques
- technical terminology
- types of faults associated with security equipment and systems
- types, functions and features of security equipment and systems
- waste disposal procedures.
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Assessment Conditions

- Assessors must:
 - have vocational competency in modifying and repairing security equipment and systems 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 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 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.
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