



Australian Government

UEENEEJ151A Service small electrical appliances and power tools

Release: 3

UEENEEJ151A Service small electrical appliances and power tools

Modification History

Not Applicable.

Unit Descriptor

Unit Descriptor

1)

1.1) Descriptor

This unit covers maintaining the effective and efficient operation of small electrical appliances and hand power tools. It encompasses working safely, applying knowledge of small appliances and power tools, following service manuals, testing appliance function, locating and rectifying faults and defective components and completing the necessary service documentation.

Application of the Unit

Application of the Unit 4)

This unit may apply to persons entering work in electrotechnology and may be used in school based vocational programs.

Licensing/Regulatory Information

1.2) License to practice

The skills and knowledge described in this unit do not require a license to practice in the workplace provided equipment is not connected to installation wiring at voltage above 50 V a.c. or 120 V d.c. However, practice in this unit is subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Note:

1. Compliance with permits may be required in various jurisdictions and typically relates to the operation of plant, machinery and equipment such as elevating work platforms, powder operated fixing tools, power operated tools, vehicles, road signage and traffic control, lifting equipment. Permits may also be required for some work environments such as confined spaces, working aloft, near live electrical devices, site rehabilitation.
2. Compliance may be required in various jurisdictions relating to currency in First Aid, confined space, lifting and risk safety measures.

Pre-Requisites

Prerequisite Unit(s) 2)

2.1) Competencies

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in d.c. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

Prerequisite Unit(s)**2)**

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage a.c. circuits

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

or

UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

and

UEENEEJ153A Find and rectify faults motors and associated controls in refrigeration and air conditioning systems

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEJ103A Establish the basic operating conditions of vapour compression systems

UEENEEJ108A Recover, pressure test, evacuate, charge and leak test refrigerants

UEENEEJ194A Solve problems in low voltage refrigeration circuits

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE003B Solve problems in extra-low voltage single path circuits

Employability Skills Information

Employability Skills

3)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a unit Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1	Prepare to service small electrical appliances and power tools	1.1	OHS procedures for a given work area are identified, obtained and understood through established routines and procedures.
		1.2	Established OHS risk control measures and procedures are followed in preparation for the work.
		1.3	The nature of the repair is obtained from documentation or from work supervisor to establish the scope of work to be undertaken.
		1.4	Advice is sought from the work supervisor to ensure the work is coordinated effectively with others.
		1.5	Sources of materials that may be required for the work are accessed in accordance with established routines and procedures.
		1.6	Tools, apparatus and testing devices needed to carry out

ELEMENT	PERFORMANCE CRITERIA
2 Service small electrical appliances and power tools	the work are obtained and checked for correct operation and safety.
	2.1 Established OHS risk control measures and procedures for carrying out the work are followed.
	2.2 The need to test or measure live is determined in strict accordance with OHS requirements and when necessary conducted within established safety procedures.
	2.3 Circuits/apparatus are checked as being isolated where necessary in strict accordance OHS requirements and procedures.
	2.4 Apparatus is dismantled in accordance with manufacturer's guide and supervisor's instructions.
	2.5 Component parts are tagged during the dismantling to help ensure correct and efficient reassembly and stored to protect them against loss or damage.
	2.6 Repairs are affected efficiently without damage to other components, apparatus or circuits.
	2.7 Apparatus is assembled in an appropriate sequence with all parts placed, secured and connected in accordance with manufacturer's guide or industry practice.
	2.8 Procedures for referring non-routine events to immediate supervisor for directions are followed.
3 Complete and report service work activities.	2.9 Repairs are carried out efficiently without waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.
	3.1 OHS work completion risk control measures and procedures are followed.
	3.2 Repaired apparatus is prepared and forwarded to appropriate person(s) for testing.
	3.3 Work area is cleaned and made safe in accordance with established procedures.
	3.4 Work supervisor is notified of the completion of the repair work in accordance with established procedures.

ELEMENT PERFORMANCE CRITERIA**Required Skills and Knowledge****REQUIRED SKILLS AND KNOWLEDGE**

7) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and servicing small appliances and power tools.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-EJ151A**Small electrical appliances and hand power tools**

Evidence shall show an understanding of small electrical appliances and hand power tools, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects

T1 Types, applications, operating principles and characteristics

T2 Motors and drive mechanisms

T3 Control and over current protection methods and devices

T4 Typical hand power tool faults encompassing:

- Motor faults
- Power supply faults

Note. Examples include open circuit or tripped circuit in cord connected tools and battery charging and discharging problems in battery operated tools.

- Control faults
- Mechanical faults

Evidence Guide**EVIDENCE GUIDE**

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement

EVIDENCE GUIDE

and the Assessment Guidelines for this Training Package. .

The Evidence Guide forms an integral part of this Unit. It must be used in conjunction with all parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. In some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work influence decisions about how/how much the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

Critical aspects of evidence required to demonstrate competency in this unit

9.2)

Before the critical aspects of evidence are considered all prerequisites must be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated performance criteria

EVIDENCE GUIDE

shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines - UEE07'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range statement
 - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
 - Demonstrate an appropriate level of skills enabling employment
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
 - Service small appliances and power tools as described in 8) and including:
 - A Following manufactures service instructions for access to components
 - B Removing at least three different types of components specified in the work instructions
 - C Replacing components to manufacturers' requirements.
 - D Terminating internal wiring correctly.
 - E Reassembling the apparatus correctly
 - F Testing apparatus operation
 - G Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions

EVIDENCE GUIDE

incorporated in the holistic assessment with the above listed items.

Note:

Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

Context of and specific resources for assessment

9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

Evidence should show demonstrated competency in servicing small appliances and power tools.

Method of assessment

9.4)

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires assessment in a structured environment which is intended primarily for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

Concurrent assessment and relationship with other units

9.5)

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

EVIDENCE GUIDE

UEENEEG006A Solve problems in single and three phase low voltage machines
or

UEENEEJ153A Find and rectify faults in motors and associated controls in refrigeration and air conditioning systems

The critical aspects of occupational health and safety covered in Unit UEENEEJ101A and other discipline specific occupational health and safety unit(s) shall be reassessed in relation to this unit.

Range Statement

RANGE STATEMENT

8) This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit must be demonstrated in relation to servicing at least two different small appliances and two different power tools. These include the following:

- Small appliances: Toasters, garbage disposal units, food mixer/processors, small heating appliances (e.g. hair dryers), range hoods, etc.
- Hand Power Tools: Drills (pistol, hammer, cordless, screw driver), circular saws, mitre saws, routers, sanders, grinders, planers, cut off machines, heat guns, etc.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Unit Sector(s)

Not Applicable

Competency Field

2.2) Literacy and numeracy skills

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading	3	Writing	3	Numeracy	3
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2.2) Literacy and numeracy skills

Competency Field 5)

Refrigeration and Air Conditioning