



Australian Government

UEERA0043 Find and rectify faults in appliance control systems and devices

Release: 1

UEERA0043 Find and rectify faults in appliance control systems and devices

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to find and repair electrical faults in appliance control systems and devices.

It includes working safely, using fault-finding procedures, conducting appliance control systems and devices repairs, and completing required service documentation.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, is required.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Refrigeration and air-conditioning

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to find faults in appliance control system and devices

- 1.1** WHS/OHS hazards, risk control methods, relevant standards, codes and legislation are obtained and applied in accordance with workplace procedures
- 1.2** Extent of work to be completed is planned from fault and breakdown reports and/or discussions with supervisor/appropriate person/s in accordance with workplace procedures
- 1.3** Advice is sought, as required, from the supervisor to ensure work is coordinated with others
- 1.4** Sources of materials required for work are accessed in accordance with workplace procedures
- 1.5** Tools, equipment and testing devices to locate faults are obtained in accordance with workplace procedures and checked for operational safety

2 Find and repair electrical faults in appliance control system and devices

- 2.1** Need to test or measure live electrical work is determined in accordance with workplace procedures and WHS/OHS requirements
- 2.2** Appliance is checked and isolated in accordance with workplace procedures and WHS/OHS requirements
- 2.3** Safety hazards resulting from fault or breakdown are identified and documented, and risk control measures are implemented in accordance with workplace procedures and in consultation with appropriate person/s
- 2.4** Fault finding, using measured and calculated values of circuit/control parameters, is undertaken in accordance with workplace procedures
- 2.5** Appliance is dismantled, where necessary, and parts safely stored to protect them against loss or damage
- 2.6** Suspected faulty control device component or circuit is rechecked and fault status is confirmed
- 2.7** Replacement parts are obtained in accordance with workplace procedures
- 2.8** Effectiveness of repair work is tested in accordance with workplace procedures

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| | 2.9 | Apparatus is reassembled, given a final test and prepared for return to service in accordance with workplace procedures |
| | 2.10 | Unexpected situations are resolved in accordance with workplace procedures, safety guidelines and with the approval of authorised person/supervisor |
| | 2.11 | Fault-finding and repair activities are completed without damage to apparatus, circuits, the surrounding environment and/or services using relevant sustainable energy practices in accordance with workplace procedures |
| 3 Complete and report fault-finding and repair activities | 3.1 | Reusable faulty or worn components are tagged and despatched for repair in accordance with workplace procedures |
| | 3.2 | Maintenance and repair work are documented in accordance with workplace procedures |

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Finding and rectifying faults in appliance control systems and devices must include at least the following:

- two different types of appliances
- four of the following faults:
 - open circuit
 - short circuit
 - incorrect connections
 - insulation failure
 - unsafe condition
 - motor component failure
 - control circuit component failure
 - related mechanical failure

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ154A Find and rectify faults in appliance control systems and devices.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEERA0043 Find and rectify faults in appliance control systems and devices

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - applying risk control measures
 - identifying hazards
 - utilising safe working practices
- completing and reporting fault-finding and repair activities
- finding and rectifying faults in appliance control systems and devices, including:
 - completing documentation
 - dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
 - finding faults
 - planning extent of work from fault/breakdown reports and discussions with supervisor/appropriate person/s
 - rectifying faults
 - using approved methodical fault-finding techniques
- preparing to find and rectify faults in appliance control systems and devices
- using manufacturer specifications.

Knowledge Evidence

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

- finding and rectifying faults in appliance control systems and devices, including:
 - appliance characteristics and control parameters
 - appliance integrated communications components and their function
 - control systems and components, including appliance controls and electrical and/or electronic controls

- control terminology
- operation and application of electrical, electronic and mechanical appliance diagnostic tools, including types and construction
- system responses to parameter changes
- types of control
- relevant legislation, industry standards, codes of practice and regulations
- relevant manufacturer specifications
- relevant risk mitigation processes, including:
 - potential hazards
 - risk control measures
 - safe working practices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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