



Australian Government

UEEEL0027 Carry out low voltage electrical field testing and report findings

Release: 1

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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 carry out low voltage (LV) electrical field testing and report findings.

It includes preparing, inspecting and testing of electrical field systems, documenting and reporting test results.

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, may be 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

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work

UEEEL0003 Arrange circuits, control and protection for general electrical installations

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0039 Verify compliance and functionality of low voltage general electrical installations

UEEEL0023 Terminate cables, cords and accessories for low voltage circuits

UEEEL0018 Select wiring systems and cables for low voltage general electrical installations

UEEEL0005 Develop and connect electrical control circuits

- UEEEL0019 Solve problems in direct current (d.c.) machines
- UEEEL0021 Solve problems in electromagnetic devices
- UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits
- UEEEL0008 Evaluate and modify low voltage heating equipment and controls
- UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment, and controls
- UEEEL0010 Evaluate and modify low voltage socket outlets circuits
- UEEEL0024 Solve problems in alternating current (a.c.) rotating machines
- UEEEL0025 Test and connect transformers
- UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories and
- UEECD0043 Solve problems in direct current circuits
- or
- UEECD0044 Solve problems in multiple path circuits
- UEECD0046 Solve problems in single path circuits

Competency Field

Electrical

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to carry out electrical field inspection and testing

PERFORMANCE CRITERIA

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

- 1.1** WHS/OHS requirements and workplace procedures for a given work area are identified, obtained and applied
- 1.2** WHS/OHS risk control measures and workplace procedures in preparation for the work are followed
- 1.3** Scope of work to be undertaken is determined from reports and/or discussions with appropriate person/s

- 1.4 Advice is sought from the work supervisor to ensure work activity is coordinated effectively with others
 - 1.5 Tools, equipment and testing devices required to locate faults are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2 Carry out electrical field inspection and testing**
 - 2.1 WHS/OHS risk control measures and workplace procedures for carrying out work are followed
 - 2.2 Need to inspect, test and measure live electrical work is determined in accordance with WHS/OHS requirements and workplace procedures
 - 2.3 Circuits/machines/plant are isolated in accordance WHS/OHS requirements and workplace procedures
 - 2.4 Safety hazards from fault/s and/or breakdown are documented and risk control measures implemented in consultation with appropriate person/s
 - 2.5 Field testing and measuring techniques of electrical systems, circuits, and apparatus are conducted in accordance with workplace procedures
 - 2.6 Circuit/apparatus/components are dismantled as required to facilitate testing and parts stored for protection against loss or damage
 - 2.7 Tests are determined from report and appropriate testing/measuring instruments selected in accordance with manufacturer instructions and relevant industry standards
 - 2.8 Unplanned events are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
 - 2.9 Testing activities are carried out without damage to apparatus, circuits, environment or services using sustainable energy practices
- 3 Complete electrical field testing and report findings**
 - 3.1 WHS/OHS work completion risk control measures and workplace procedures are followed
 - 3.2 Apparatus is reassembled after testing as required and work area is cleaned and made safe in accordance with workplace procedures

- 3.3** Test findings and recommendation for actions are reported 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.

Carrying out and reporting findings of electrical field tests must include the following:

- locating faults
- examining operating parameters
- accessing compliance with regulations
- evaluating quality compliance

Unit Mapping Information

This unit replaces and is equivalent to UEENEEG132A Carry out low voltage electrical field testing and report findings.

Links

Companion Volume implementation guides are found in VETNet - -

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