



Australian Government

UEERL0005 Locate and rectify faults in low voltage (LV) electrical equipment using set procedures

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 locate and rectify faults in low voltage (LV) electrical equipment.

It includes following workplace procedures to inspect and test electrical equipment, identify and rectify faults and complete reporting. This must be incidental to a primary or regular function of the workplace. The Range of Conditions describes exclusions for this unit of competency.

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.).

The skills and knowledge described in this unit may require a license to practice in the workplace where plant and equipment operate at voltage above 50 V a.c. or 120 V d.c. However 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 regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Additional and/or other conditions may also apply under State and Territory legislation and regulations related to licencing, electrical work and work health and safety (WHS)/occupational health and safety (OHS) regulations, which must be confirmed prior to commencing this unit.

In some jurisdictions additional information related to licencing may be required on certification documentation. Further guidance can be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Pre-requisite Unit

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

UEERL0004 Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring

Competency Field

Restricted Licensing

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Prepare to identify faults

- 1.1 Work is planned to ensure WHS/OHS policies and workplace procedures are applied
- 1.2 Tools, electrical equipment and testing devices required for work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.3 Relevant person/s is consulted to ensure the work is coordinated with others
- 1.4 Electrical characteristics of electrical equipment and electrical supply are determined and recorded in accordance with workplace procedures
- 1.5 Electrical equipment and associated circuits are identified for isolation purposes in accordance with workplace procedures

2 Locate faults in the electrical equipment

- 2.1 Electrical equipment and associated circuits are isolated in accordance with workplace procedures
- 2.2 WHS/OHS workplace policies and procedures are followed
- 2.3 Visual inspection and checks of the electrical equipment and components are carried out to detect any abnormality, damage or fault in accordance with workplace procedures
- 2.4 Wiring diagrams are checked and possible fault causes identified based on the wiring diagrams
- 2.5 Faults are confirmed and components to be replaced or adjusted are determined and details recorded in accordance with workplace procedures
- 2.6 Electrical equipment is dismantled and/or removed, as required, and components stored to protect them against

- loss or damage in accordance with workplace procedures
- 2.7** Quality checks of work are undertaken in accordance with workplace procedures
- 3 Rectify faults**
- 3.1** Materials and resources required to complete work are obtained in accordance with workplace procedures and job requirements
- 3.2** Adjustments are made to electrical equipment for operation and parameters in accordance with manufacturers requirements, workplace procedures and relevant industry standards
- 3.3** Faults are rectified in accordance with workplace procedures
- 3.4** Approval for contingencies is obtained from appropriate person/s before implementation in accordance with workplace procedures
- 3.5** Tests on the electrical equipment are performed in accordance with industry procedures to ensure safe return to service and operation of equipment
- 3.6** Report/s, documentation and compliance certifications are completed in accordance with workplace, industry and regulatory requirements

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.

Locating and rectifying faults in LV electrical equipment must include at least one single phase and one multi-phase item of equipment of any of the following, and must be selected to align with the candidates' primary trade or

- air conditioning/refrigeration equipment
- instrumentation equipment
- electronic equipment
- electrical equipment
- neon signs

work function:

- composite equipment
- control devices
- water heaters
- motors
- gas appliances
- electrical work associated with fixed wiring, circuits at a switchboard or to general electrical equipment, including:
 - switches, socket outlets, circuit protective devices etc); or
 - installation of or alteration to any part of the fixed electrical wiring system (defined as electrical installation work)
- in hazardous areas or on electrical equipment that is part of an explosion-protection technique
- where high fault currents are possible
- which are luminaries

MUST NOT INCLUDE locating and rectifying faults in electrical equipment intended to operate from fixed wired supply up to 1,000 V a.c. or 1,500 V d.c. and not listed above. This includes:

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet - -

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