



Australian Government

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

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 disconnect and reconnect electrical equipment connected to low voltage (LV) installation wiring.

It includes preparing electrical equipment for disconnecting and then reconnecting equipment connected to LV installation wiring. It also includes inspecting and testing the reconnected electrical equipment for safe operation, identifying and reporting electrical faults and providing status reports. This must be incidental to a primary or regular function of the workplace.

The unit excludes disconnecting or reconnecting circuits at a switchboard or to general electrical accessories (including switches, socket outlets and circuit protective devices), or installation of or alteration to any part of the fixed electrical wiring system (defined as electrical installation work).

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

Competency Field

Restricted Licensing

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to disconnect electrical equipment

PERFORMANCE CRITERIA

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

- 1.1** Electrical equipment disconnection is planned to ensure WHS/OHS policies and procedures are followed
- 1.2** Relevant person/s is consulted to ensure work is coordinated effectively with others involved at the worksite
- 1.3** Safety hazards which have not previously been identified are documented, risks assessed, and control measures determined and implemented in consultation with relevant person/s and in accordance with workplace procedures
- 1.4** Point of isolation of electrical equipment to be disconnected is determined
- 1.5** Tools, equipment and testing devices needed to carry out electrical work are obtained in accordance with workplace procedures and checked for correct operation and safety

2 Disconnect electrical equipment

- 2.1** WHS/OHS policies and workplace procedures are followed
- 2.2** Electrical equipment is isolated in accordance with relevant electrical installation industry standards and workplace procedures
- 2.3** Isolated equipment is confirmed as de-energised
- 2.4** Conductor connection sequence is recorded and labelled in accordance with workplace procedures

- 2.5 Visual inspection and checks of the electrical equipment and associated wiring are carried out in accordance with workplace procedures to detect any abnormal or obvious damage or fault
 - 2.6 Electrical equipment is disconnected from fixed wiring without damage to other components
 - 2.7 Disconnected conductors/cables are terminated in accordance with relevant industry standards to ensure they are safe and present no potential hazard
 - 2.8 Approval is obtained in accordance with workplace procedures from relevant person/s before any contingencies are implemented
- 3 Prepare to reconnect electrical equipment**
 - 3.1 Reconnection is planned to ensure WHS/OHS policies and workplace procedures are followed
 - 3.2 Relevant person/s is consulted to ensure work is coordinated effectively with others involved in the work site
 - 3.3 Point of isolation of the circuit to which the electrical equipment to be connected is determined
 - 3.4 Replacement electrical equipment is selected on the basis of rating and specifications being the same as that of the original electrical equipment
 - 3.5 Appropriate person/s is consulted in the event that replacement electrical equipment is not available
 - 3.6 Original and/or replacement electrical equipment is inspected and tested to ensure it is safe to connect to the electrical supply and use
 - 3.7 Tools, equipment and testing devices needed to carry out electrical work, are obtained in accordance with workplace procedures and checked for correct operation and safety
- 4 Reconnect electrical equipment**
 - 4.1 WHS/OHS policies and procedures are followed
 - 4.2 Measures are taken to ensure circuit to which electrical equipment is to be connected remains isolated and de-energised in accordance with relevant electrical installation industry standards and workplace procedures

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| | 4.3 | Earth continuity of the equipment is tested to determine whether it is in accordance with relevant industry standards |
| | 4.4 | Insulation resistance of the equipment is tested to confirm that it is in accordance with relevant industry standards |
| | 4.5 | Appropriate person/s is consulted regarding any non-compliant conditions identified during testing |
| | 4.6 | Electrical equipment is connected in accordance with previously recorded conductor connection sequence and relevant industry standards |
| | 4.7 | Connections to the equipment are checked to confirm they are correct |
| | 4.8 | Continuity between exposed conductive parts of the equipment and the main earth or metal switchboard enclosure is confirmed |
| 5 | Test the reconnected electrical equipment for safe operation | |
| | 5.1 | WHS/OHS policies and workplace procedures for the reinstatement of isolated circuits and electrical equipment is followed |
| | 5.2 | Supply is reinstated to equipment and checked in accordance with established procedures and industry requirements |
| | 5.3 | Arrangements are made with relevant person/s to test the operation of the electrical equipment in accordance with workplace procedures |
| | 5.4 | Operational non-conformances are identified and reported in accordance with workplace procedures |
| 6 | Complete compliance documentation | |
| | 6.1 | Equipment status report/s are completed and relevant person/s notified in accordance with task requirements and workplace procedures |
| | 6.2 | Complete compliance documentation in accordance with industry standards 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.

Disconnection and reconnection of electrical equipment must include at least one of the following, and must be selected to align with the candidates' primary trade or work function:

- air conditioning/refrigeration equipment
- instrumentation equipment
- electronic equipment
- electrical equipment
- neon signs
- 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
- in hazardous areas or on electrical equipment that is part of an explosion-protection technique
- where high fault currents are possible
- which are luminaires

MUST NOT INCLUDE:

disconnect/reconnect electrical equipment connected to supplies up to 1,000 volts (V) alternating current (a.c.) or 1,500 V direct current (d.c.) must not include the following:

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>