



Australian Government

UEERL0006 Attach HV flexible cables and plugs

Release: 1

UEERL0006 Attach HV flexible cables and plugs

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 attach flexible cords, cables and plugs, including trailing and feeder cables, to high voltage (HV) electrical equipment connected to a supply exceeding 1,000 volts (V) alternating current (a.c.) or 1,500 volts (V) direct current (d.c.).

It includes working safely; identifying plug configurations; selecting and using inspecting, testing and measuring devices; terminating and connecting HV flexible cables, plugs and conductors; safety testing and reporting.

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 V a.c. or 120 V 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

UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 volt supply

UEERL0002 Attach cords, cables and plugs to electrical equipment for connection to 1,000 V a.c. or 1500 V d.c. supply

Competency Field

Restricted Licensing

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan to attach flexible cables and plugs

PERFORMANCE CRITERIA

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

1.1 Work is planned, sequenced and prepared in accordance with WHS/OHS requirements and workplace procedures

1.2 Condition and ratings of cables and plugs are determined from relevant industry standards and work instructions from relevant person/s

1.3 Flexible cables and plugs are selected in accordance with relevant industry standards and workplace procedure for condition and rating

1.4 Materials necessary to complete work are obtained in accordance with workplace procedures and checked against work instruction

1.5 Tools, equipment and testing devices needed to carry out work are obtained in accordance with workplace procedures and checked for correct operation and safety

2 Attach flexible cables and plugs

2.1 WHS/OHS policies and procedures are followed

2.2 Flexible cables and plugs are prepared without damage to insulation and conductors and in accordance with relevant industry standards

2.3 Equipment is earthed in accordance with relevant industry standards and confirmed de-energised

2.4 Visual inspection and checks of the electrical equipment and associated wiring are conducted in accordance with workplace procedures to detect any abnormal damage or fault

2.5 Approval is obtained in accordance with workplace procedures from relevant person/s before any contingencies are implemented

2.6 Insulated equipment is inspected and maintained in accordance with relevant industry standards and workplace procedures

	2.7	Conductors are connected to terminals ensuring the required polarity is in accordance with relevant industry standards
3 Inspect and test equipment for operation and safety	3.1	HV electrical installation and operation of cables and plugs connected to equipment are inspected and tested in accordance with relevant industry standards, work instructions and workplace procedures
	3.2	Approval is obtained from relevant person/s to confirm completion of work is in accordance with workplace procedures before supply is connected
	3.3	Status reports are completed in accordance with established 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.

Flexible cables and plugs for connecting equipment intended to operate at HV must not include:

- where high fault currents are possible
- on complex electrical work
- competencies associated with fixed wiring

Unit Mapping Information

This unit replaces and is equivalent to UEENEEP023A HV Flexible Cables and Plugs.

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 UEERL0006 Attach HV flexible cables and plugs

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 industry standards
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- applying quality, workplace procedures and instructions
- attaching flexible cables and plugs to electrical equipment connected to high voltage (HV) electrical equipment
- attaching, replacing and repairing flexible cables and plugs connected to HV electrical equipment
- connecting flexible cables and plugs to multi-phase appliances
- dealing with unplanned events in accordance with problem-solving techniques and workplace procedures
- inspecting and testing flexible cables, plugs and electrical equipment connected to HV electrical equipment for operation and safety
- planning and preparing to attach flexible cables and plugs connected to HV electrical equipment
- providing status reports.

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:

- flexible cords/cables and plugs to suit given HV applications, including:
 - flexible cables and plugs to suit given HV applications
 - types of multi-phase plug HV for a specific load and ingress protection (IP) rating requirements
- safety of a HV electrical apparatus (including basic principles of its operation non-mathematical and control) of an appliance for connection to the supply, including:
 - appropriate test equipment to check that apparatus is safe

- procedures to be followed to ensure the correct use of test equipment
- basic principles of operation and control of apparatus supplied by the flexible cables and plugs
- test results that show apparatus is unsafe
- connection of flexible cables and plugs to multi-phase appliances, including:
 - preparation of flexible cables for connection to HV apparatus
 - connection of flexible cables to HV apparatus
 - connection of a HV plug to a flexible cable
- safety of flexible cable and plug assembly, including:
 - plug and cord testing procedures
 - safe operation of apparatus supplied by HV cable and plug assembly
- connection of flexible cables and plugs to multi-phase appliances
- flexible cords/cables and plugs to suit given HV applications
- problem-solving techniques
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies, procedures and instructions
- safety of flexible cable and plug assembly
- types of multi-phase plug HV for specific load and IP rating requirements.

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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable 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 simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to attaching flexible cables and plugs to a variety of electrical equipment connected to a HV supply
- applicable documentation, including workplace procedures, equipment specifications,

regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

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