



Australian Government

Assessment Requirements for UETDRRT011 Maintain traction overhead wiring systems

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

Performance Evidence

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

- applying relevant legislation, regulations, standards, codes of practice and organisational workplace requirements, including:
 - work health and safety (WHS)/occupational health and safety (OHS)
- identifying hazards, assessing risks, identifying, applying and monitoring control measures
- obtaining, inspecting and using relevant personal protective equipment (PPE)
- maintaining at least four (4) of the following types of system equipment and fittings:
 - support structure
 - span
 - section insulator
 - neutral section
 - droppers
 - support equipment
 - tension regulators
 - stay/guy wire
 - tramway support network
- maintaining at least two (2) of the following types of traction conductors and cables:
 - contact/trolley*
 - catenary
 - feeder
 - midpoint anchor
 - earth conductor
 - return conductor
 - drape/potential jumper
 - (*must do)
- operating from at least one (1) of the following types of mobile plant and height equipment:
 - elevated work platform (EWP)

- ladder
- mobile platform
- using at least two (2) of the following equipment and tools required for overhead rail traction wiring systems:
 - tensioning equipment*
 - specialised tools
 - electrical testing equipment
 - geometry profiling equipment
 - (*must do)
- dealing with an unplanned event on at least one (1) occasion
- completing relevant work records, reports and documentation

Knowledge Evidence

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

- relevant legislation, regulations standards, codes of practice and organisational workplace requirements, including:
 - WHS/OHS
- hazard, risk assessment and risk control requirements, including potential hazards
- types and application of PPE
- application, purpose and types of permits
- safe use of plant, tools and equipment
- traction overhead wiring systems maintenance documents
- methods for running wire systems or conductors
- electrical wiring system components, including:
 - earth wires
 - feeder wire
 - catenary wire
 - contact/trolley wire
 - return conductor
 - insulators
 - surge arresters
 - cantilevers
 - droppers
 - tensioning equipment
 - current collectors
 - tram support network
 - tram fittings
 - low clearance components

- types of electrical traction systems, including:
 - auto-tensioning
 - spring loaded tension
 - balance weight anchor (BWA)
 - fixed tension
- relationship of the components, apparatus and conductors to the operation of the traction system
- effective current collection and wire interface
- effective registration in the traction power system
- methods of profiling overhead traction wire, including:
 - factors that impact on current collectors to achieve smooth current collector transitions and interfaces
- dynamic and static forces, including:
 - types that effect traction systems
 - techniques to minimise adverse effects
- maintenance of overhead traction wiring systems, including:
 - types of equipment and components
 - types and function of tools and equipment
 - maintenance/repair procedures
 - inspection and recording procedures
- diagnosis and correction of simple faults in specific overhead wiring systems, including:
 - types and causes
 - determination of appropriate corrective actions
 - repair and replace procedures for overhead wiring systems
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident.

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 conditions involving realistic and authentic activities that replicate operational 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:

- relevant and appropriate materials, tools, facilities, equipment, plant and PPE currently used in industry for maintaining traction overhead wiring systems
- applicable documentation, including workplace requirements, maintenance documents, 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=229bace1-b7bc-4653-9300-dffb13ecfad7>