



Australian Government

**Assessment Requirements for
UETDRRT28 Maintain overhead traction
components and equipment**

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.

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 work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- using at least two (2) of the following types of equipment:
 - fuse switches
 - dropout fuses
 - section insulators
 - switches/isolators
 - links
 - fuses
 - surge diverters
 - transformers
- using at least five (5) of the following types of components:
 - cantilever hardware
 - head span
 - neutral sections
 - pull offs
 - registration fittings
 - steady span
 - tension regulators
 - cross spans
 - tramway support network
 - pendulum
- using at least two (2) of the following types of fittings:
 - preformed fittings
 - compression fittings

- wedge fittings
- bolted splices
- using at least three (3) of the following types of connecting components:
 - feeders
 - dissimilar conductors
 - lugs
 - bolted clamp
 - drapes/potential jumper
 - droppers
- obtaining equipment, tools and personal protective equipment (PPE) required for maintaining overhead traction components and equipment that includes at least two (2) of the following types of tools and equipment:
 - voltage detectors
 - micrometer/gauge
 - tension wrench
 - dynamometer
 - specialised tools
- dealing with unplanned events on at least one (1) occasion.

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:

- types and purpose of overhead traction equipment, including:
 - switches/isolators, fuse switches, links, section insulators, and fuses
- types and purpose of overhead components, including:
 - cantilever hardware, droppers, bay components, portal hardware, head span hardware, section insulators, neutral sections, registration fittings, steady span, tension regulators and cross spans
- types of conductors used for overheads wiring, such as hard-drawn, computer-aided drafting (CAD), and tin-bearing copper, aluminium, steel and other alloyed conductors
- types of traction wire support structures, such as portals, cantilevers, drop pieces, head spans, cross spans and pull-offs
- types and purpose of ancillary equipment, including:
 - surge arresters, booster and auxiliary transformers)
- methods for replacing conductors, including the use of:
 - preformed fittings
 - compression fittings
 - wedged fittings
 - bolted splices
 - lugs

- bolted clamps
- methods for replacing components, such as:
 - feeders
 - droppers
 - dissimilar conductors
 - jumpers
 - surge arresters
- use of plant and equipment for maintenance work, such as:
 - elevated work platforms (EWP)
 - ladders
 - works trains
 - rail-mounted overhead wiring equipment/vehicles
 - road/rail height access machinery/vehicles
 - voltage detectors
 - micrometer/gauges
 - tension wrenches
 - dynamometers
 - other specialised tools
- maintenance of overhead traction equipment and components, 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 traction equipment and component, including:
 - types and causes
 - determination of appropriate corrective actions
- repair and replace procedures for specific overhead traction equipment and components.

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:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and PPE currently used in industry maintaining overhead traction components and equipment
- applicable documentation, including workplace procedures, relevant industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>