



**Australian Government**

# **Assessment Requirements for UETDRRT014 Test and verify rail traction installations**

**Release: 1**

# Assessment Requirements for UETDRRT014 Test and verify rail traction installations

## 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 one occasion 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)
- inspecting rail traction installations for compliance to design standards using at least one (1) of the following types of inspection equipment:
  - infra-red camera
  - camera
  - binoculars
  - drone
  - laser measuring equipment
  - portable pantograph
  - laser gauge
- testing and verifying against design standards to rectify non-compliances on at least three (3) of the following components and hardware:
  - insulators
  - clamps
  - conductor spacers/knuckles
  - structural components
  - auto tensioning devices
  - switches
- testing and verifying against design standards to rectify non-compliances on at least one (1) of the following types of rail traction conductors:
  - copper
  - aluminium
  - steel
  - aluminium/steel reinforced

- rigid rail
- testing and verifying the rail traction bonding against design standards
- working safely aloft using at least one (1) of the following types of mobile plant and height equipment:
  - elevated work platform (EWP)
  - portable platform
  - ladder
- using the following types of testing and earth/bond equipment:
  - volt metre alternating current (a.c.) or direct current (d.c.)
  - earthing conductors/short circuiting conductor
  - insulation resistance tester
- recording test results in accordance with workplace requirements
- 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
- safe use of plant, tools and equipment
- application, purpose and types of permits
- requirements for testing rail traction installation for maintenance and construction for safe operational use, including:
  - test results that show a rail traction installation is safe for connection to the supply
  - periodic inspection results and tests that show construction site wiring and equipment is safe to use
  - periodic inspection results and tests that show the rail traction installations electrical equipment are safe to use
- testing techniques, including:
  - rail traction system phasing, phase rotation, polarity and network standards
  - electrical rail traction network voltage levels as per network supply standards
  - potential rail traction network for neutral conductors
  - insulation resistance
  - earthing system/rail traction cables and components
- testing and verifying procedures for rail traction installations, including:
  - testing and recording defects

- verifying against design standards
- electrical compliance
- documentation of testing of quality assurance
- energised tests and commissioning, as required, to verify rail traction installations
- 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 and PPE currently used in industry for testing and verifying rail traction installations
- applicable documentation, including workplace requirements, relevant design and maintenance standards, 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>