



**Australian Government**

# **UEERS0017 Repair rail signalling power and control cables**

**Release: 1**

# UEERS0017 Repair rail signalling power and control cables

## 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 repair of signalling power cables and multi-core signalling control cables up to 50 cores.

It includes following workplace procedures, selecting and using appropriate cable joining methods, testing continuity and insulation resistance of repaired cable cores, and reporting repair activities.

Persons achieving competence in this unit will need to fulfil the applicable state/territory legislated rail safety requirements and to comply with relevant codes of practice, rules and/or guidelines.

No other licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

UEERS0001 Assemble and wire internal electrical rail signalling equipment

## Competency Field

Rail Signalling

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare to repair rail signalling cables**

### PERFORMANCE CRITERIA

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

#### **1.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures**

for work area are identified, obtained and applied

- 1.2 Hazards are identified, risks assessed, and control measures and workplace procedures implemented
- 1.3 Safety hazards that have not previously been identified are noted on the job safety assessments and existing risk control measures implemented
- 1.4 Access times and safe work methods are confirmed to comply with customer requirements and relevant rail safety legislation
- 1.5 Appropriate person/s is consulted to ensure work is coordinated effectively with others on the worksite
- 1.6 Extent and nature of the fault or damage to the rail signalling cable is confirmed with appropriate person/s in accordance with workplace procedures
- 1.7 Cable joining kit is obtained in accordance with workplace procedures and components checked with manufacturer specifications
- 1.8 Cable diagrams necessary to effect repairs are obtained, read and interpreted
- 1.9 Tools and cable testing devices for cable repair are obtained in accordance with workplace procedures and checked for correct operation and safety

## **2 Repair damaged rail signalling cables**

- 2.1 Work area is made safe, damaged rail signalling cable is isolated for repair and WHS/OHS risk control measures and workplace procedures for carrying out the repair/s are followed
- 2.2 Corresponding ends of broken cable core are identified by core marking and confirmed by continuity test in accordance with workplace procedures
- 2.3 Cable joining kit is used to repair damaged cable following manufacturer specifications and workplace procedures
- 2.4 Repair to damaged cable is tested for cable core continuity insulation between cable cores and cores to earth in accordance with workplace procedures
- 2.5 Cause of failed cable test is located and rectified in

- accordance with workplace procedures
- 2.6** Existing work methods for dealing with unplanned situations are dealt with safely in a manner that minimises risk to personnel and equipment and with the approval of an authorised person/s
- 2.7** Cable repair is completed without waste of materials or damage to apparatus, the surrounding environment or services using sustainable energy practices
- 3 Complete rail signalling cable repairs**
- 3.1** WHS/OHS work completion risk control measures and workplace procedures are followed
- 3.2** Work area is cleaned and made safe in accordance with workplace procedures
- 3.3** Cable repair work, test results and relevant reports are documented and appropriate person/s notified in accordance with workplace 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.

Performing signalling cable repairs must include the following:

- repairing at least one signalling power cable relevant to a particular rail transport operator
- repairing at least one signalling multi-core control cable, six cores or greater, relevant to a particular rail transport operator
- repairing signalling cables using at least one approved jointing kit

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEN121A Repair rail signalling power and control cables.

## **Links**

Companion Volume implementation guides are found in VETNet - -

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