



Australian Government

UEERS0026 Maintain communications based signalling equipment

Release: 1

UEERS0026 Maintain communications based signalling equipment

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 maintain communications based signalling (CBS) equipment.

It includes working safely, completing equipment prechecks, maintenance and post service tasks related to communications based signalling equipment.

It covers maintenance of trackside equipment as part of communications based signalling systems.

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.

Persons achieving this competence will then need to complete equipment specific training for the relevant CBS equipment and related tools.

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

Pre-requisite Unit

UEERS0020 Apply rail signalling principles

Competency Field

Rail Signalling

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to maintain communications based signalling equipment

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified and applied
- 1.2** Hazards are identified, WHS/OHS risks are assessed, and control measures and workplace procedures implemented in preparation for work
- 1.3** Scope of maintenance is determined from maintenance schedules, job specifications, workplace requirements
- 1.4** Appropriate rail safe working person/s is consulted to ensure work is coordinated effectively with others to minimise rail traffic disruption
- 1.5** Materials needed for the maintenance work are obtained in accordance with workplace procedures and checked against job specifications
- 1.6** Tools, equipment and testing devices needed for maintenance work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.7** Equipment prechecks are completed in accordance with workplace procedures
- 1.8** Authorisation to take temporarily out of service is obtained in accordance with workplace procedures

2 Maintain communications based signalling equipment

- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out work are followed
- 2.2** On-track safe working requirements are identified and applied in accordance with workplace procedures and safety management system
- 2.3** Connection points are located and connection established in accordance with workplace procedures
- 2.4** Pre-service tasks and tests are completed in accordance with workplace procedures
- 2.5** Equipment faults/damage are identified using efficient fault-finding and diagnostic techniques, including fault

- indicators, error codes and maintenance records
- 2.6** Equipment/component abnormalities are identified, and appropriate remedial actions taken to ensure equipment conforms and performs to technical specifications
- 2.7** Maintenance is conducted in accordance with schedule and workplace procedures without waste of materials, damage to apparatus, the surrounding environment or services using sustainable energy practices
- 2.8** Methods for dealing with unplanned situations are determined on the basis of safety and specified work outcomes
- 3 Complete communications based signalling equipment maintenance**
- 3.1** WHS/OHS work completion risk control measures and workplace procedures are followed
- 3.2** Post-service tasks are completed in accordance with workplace procedures
- 3.3** Confirmation that system is functional and that no alarms are present or indicated
- 3.4** Equipment is taken out of service/brought back into use, as required, and documentation is completed in accordance with workplace procedures
- 3.5** Work records and documentation are completed to ensure accurate maintenance records are maintained
- 3.6** Worksite/equipment is reinstated in accordance with organisation requirements

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.

Unit Mapping Information

This is a new unit

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 UEERS0026 Maintain communications based signalling equipment

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 and performance criteria on at least two separate occasions and include:

- following relevant codes of practice, work health and safety (WHS)/occupational health and safety (OHS) sustainable energy principles and practices and environmental protection procedures and requirements
- applying rail safe working practices and relevant industry standards, codes and rail safety regulations
- interpreting standards and procedures correctly
- completing pre-service tasks correctly
- establishing connection to equipment
- completing maintenance on communications based signalling equipment in accordance with schedule and operational requirements
- using appropriate diagnostic and fault-finding techniques
- organising work to minimise road and rail traffic disruptions
- using tools correctly
- completing relevant technical reports, records 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:

- architecture of the communications based signalling equipment
- identifying the communications path between trackside and trainborne systems
- identifying the means of enforcement of train authorities
- identifying the train location equipment
- identifying the train authority management system
- degraded mode of operation of the trackside system and total system
- cyber security relevant to the system
- communications based signalling equipment maintenance WHS/OHS legislated requirements, safe working practices and relevant standards, codes and regulations

- relevant job safety assessments or risk mitigation processes
- safety management system
- relevant manufacturer specifications.

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 suitable simulated 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 other 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 maintaining communications based signalling equipment
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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