



Australian Government

UEERS0027 Maintain computer-based interlocking rail systems

Release: 1

UEERS0027 Maintain computer-based interlocking rail systems

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

This unit replaces and is equivalent to UEERS0006 Install and maintain computer based interlocking rail systems.

Modifications this release include:

- Title changed.
- Application updated to reflect title change.
- Element titles and performance criteria amended to reflect title change.
- Performance criteria 1.6, 2.2, 3.2 and 3.3 added.
- Performance and Knowledge Evidence updated for clarity.
- Knowledge Evidence items added.

Application

This unit involves the skills and knowledge required to maintain computer-based interlocking equipment for rail network signalling system.

It includes preparing, maintaining and recertifying computer-based interlocking (CBI) equipment. It also includes completing maintenance of CBI systems and replacing faulty equipment requirements.

Persons achieving competence in this unit will need to fulfil the applicable state/territory legislated rail safety requirements and 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

UEERS0025 Maintain active level crossing equipment

UEERS0030 Maintain power-operated point actuating devices

UEERS0032 Maintain trackside signal and train protection equipment

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 CBI rail equipment

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified, obtained and clarified
- 1.2** Hazards are identified, WHS/OHS risks assessed, and control measures and workplace procedures are implemented in preparation for work
- 1.3** Scope of maintenance work is determined from job specifications, drawings and regulatory requirements
- 1.4** The version of the signalling data and executive software of the CBI is identified by reference to the engineering records
- 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** Authorisation to take temporarily out of service or disable systems is obtained in accordance with workplace procedures

2 Maintain CBI rail system

- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out the 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** Reports or fault logs are identified and accessed

- 2.4** Fault correction activities are prioritised by reviewing the fault reports and previous corrective actions
- 2.5** Records of previously corrective actioned faults are managed
- 2.6** Source of the fault is identified
- 2.7** Corrective action required is determined and implemented
- 2.8** Checking that the CBI has the correct version of the signalling data and software is completed
- 2.9** System is checked for the correct version of signalling data and software if applicable part of the CBI equipment is replaced
- 2.10** Appropriate mechanisms for the safe and efficient rectification of the fault are determined
- 2.11** Methods for dealing with unplanned situations are determined on the basis of safety and specified work outcomes
- 2.12** Rail system monitoring is conducted efficiently, without waste of materials or damage to apparatus, the surrounding environment or services using sustainable energy practices
- 2.13** Replacement equipment is obtained from spare stock as required to comply with identified fault repair requirements
- 2.14** Faulty component/equipment is identified and removed as required in accordance with organisation practices and procedures
- 2.15** Replacement component/equipment is installed and connected to power in accordance with manufacturer specifications
- 2.16** Correct test procedures are identified and implemented to confirm all operations are within specifications
- 2.17** Equipment operations are monitored to ensure system integrity
- 2.18** Signal and voltage levels are monitored, checked and adjusted, as required, in accordance with operational

requirements

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| | 2.19 | Completed records and equipment/operational management information are accurately recorded and maintained to support ongoing monitoring of systems and equipment performance |
| 3 Complete CBI rail system maintenance | 3.1 | WHS/OHS risk control work completion measures and workplace procedures are followed |
| | 3.2 | Confirmation that system is functional and that no alarms are present or indicated |
| | 3.3 | On-track safe working requirements are removed in accordance with workplace procedures and safety management system |
| | 3.4 | Non-conforming equipment is identified and tagged for repair type and extent of fault is identified and recorded, as required |
| | 3.5 | Faulty equipment requiring repair is segregated as required and appropriate records are completed in preparation for despatching to repairer |
| | 3.6 | Spare equipment stocks are reviewed to ensure adequate availability |
| | 3.7 | Priority for repair and/or replacement of equipment is determined in consultation with authorised person by evaluation of stock levels and fault logs |
| | 3.8 | Work completion is documented and appropriate person/s notified of repair and replacement priorities in accordance with workplace procedures and relevant reports produced |

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 unit replaces and is equivalent to UEERS0006 Install and maintain computer based interlocking rail systems.

Links

Companion Volume Implementation Guides are found in VETNet -

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