



Australian Government

UEERS0025 Maintain active level crossing equipment

Release: 1

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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 UEERS0005 Install and maintain active level crossing equipment.

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 3.4 added.
- Performance and Knowledge Evidence updated for clarity.

Application

This unit involves the skills and knowledge required to maintain active level crossing equipment on rail networks for road and pedestrian crossings.

It includes maintaining and recertifying and testing active level crossing equipment.

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

UEERS0033 Maintain train detection 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 active level crossing 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, drawings and regulatory 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** Appropriate safe procedures for road vehicles, pedestrians and rail vehicles using the crossing during the maintenance activity are confirmed to be in place
- 1.8** Authorisation to take temporarily out of service or disable systems is obtained in accordance with workplace procedures

2 Maintain active level crossing 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** Equipment function is determined from relevant technical manuals and operating instructions to identify

accessible operating requirements

- 2.4 Equipment and components are cleaned, lubricated and adjusted to specified standard
- 2.5 Equipment/component abnormalities are identified and appropriate remedial actions taken to ensure equipment conforms and performs to technical specifications
- 2.6 Maintenance is performed efficiently, without waste of materials, damage to apparatus, the surrounding environment or services using sustainable energy practices
- 2.7 Equipment faults/damage are identified using efficient fault-finding and diagnostic techniques, including fault indicators, error codes and maintenance records
- 2.8 Maintenance are performed using appropriate tools, inspection and test equipment to ensure signalling equipment operates to required technical and operational standards
- 2.9 Faulty, worn, damaged or insecure components are replaced, repaired or secured in accordance with manufacturer specifications and workplace requirements
- 2.10 Methods for dealing with unplanned situations are determined on the basis of safety and specified work outcomes
- 2.11 Fault-finding and repairs are carried out efficiently, without waste of materials, damage to apparatus, the surrounding environment or services using sustainable energy practices
- 2.12 Equipment is inspected, tested and adjusted using appropriate test equipment and workplace procedures to ensure it operates within the specified technical standards
- 2.13 Level crossing lamp alignments are carried out as part of testing and adjusting workplace procedures, as required

3 Complete active level crossing equipment maintenance

- 3.1 WHS/OHS work completion risk control measures and workplace procedures are followed
- 3.2 Confirmation that system is functional and that no

alarms are present or indicated

- 3.3 Equipment is taken out of service/brought back into use, as required, and documentation is completed in accordance with workplace procedures
- 3.4 On-track safe working requirements are removed in accordance with workplace procedures and safety management system
- 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 and faulty components are tagged, recorded and dispatched for repair/replacement

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 UEERS0005 Install and maintain active level crossing equipment.

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 UEERS0025 Maintain active level crossing equipment

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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:

- identifying and implementing:
 - required workplace procedures and practices
 - relevant WHS/OHS requirements, including identifying risks and applying control measures
 - rail safe working practices and relevant industry standards, codes and rail safety regulations
 - environmental protection procedures and requirements and sustainable energy principles and practices
- interpreting specifications correctly
- preparing to maintain active level crossing equipment for roads and pedestrians
- identifying tools and equipment required for maintenance and using them correctly
- recertifying electrically-operated level crossing equipment to operational requirements
- using appropriate fault-finding techniques
- maintaining electrically-operated level crossing equipment to operational requirements
- maintaining active level crossing equipment
- organising work to minimise road and rail traffic disruptions
- completing relevant technical reports, records and documentation
- dealing with unplanned events.

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:

- active level crossing equipment maintenance including:
 - rail signalling and active level crossing equipment
 - equipment and their components encompassing:
 - visual and audible warnings
 - barriers
 - control systems
 - alarm monitoring
 - operating principles and parameters encompassing:
 - controls
 - remote alarm monitoring
 - failure modes
 - emergency operation
 - interpreting circuits diagrams to evaluate correct operation and relationship to other signalling circuits
 - correct operation in accordance with control and locking tables
 - servicing procedures encompassing:
 - maintenance documentation
 - coordination/planning sequence
 - operational test procedures
 - scheduled/preventative maintenance
 - unscheduled/corrective maintenance
 - certification of active level crossing equipment
 - certifying procedures applicable for compliance with rail operator and/or enterprise standards
- WHS/OHS requirements including:
 - relevant job safety assessments or risk mitigation processes
 - legislated requirements
 - rail safe systems of working
 - safety management system
 - safe working practices
- relevant standards (scope of AS7658 Level Crossings), codes and regulations
- relevant manufacturer specifications and manuals
- relevant workplace policies and procedures, including rail transport operator safety management system.

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 active level crossing equipment
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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