



Australian Government

TLIS3037 Install and repair rail earthworks

Release: 2

TLIS3037 Install and repair rail earthworks

Modification History

Release 2. This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to install and repair rail earthworks in accordance with safeworking and regulatory requirements, and organisational procedures.

It includes determining job requirements, undertaking trenching, establishing track formation and minor trackside earthworks, and completing documentation in accordance with specifications.

People 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 and guidelines.

Work is performed under some supervision, generally in a team environment. It involves the application of routine operational principles and procedures when installing and repairing rail earthworks, as part of organisational activities across a variety of operational contexts within the Australian rail system.

Rail earthworks may include:

- accessing roads
- reconstructing track formation and capping
- rehabilitating waterways, including shaping channels and/or scour protection
- shaping shoulders (cesses)
- sub-surface drainage
- trackside or across track trenching (less than 1.5 m depth).

Operators of mechanised equipment must have undertaken training and, where appropriate, hold the relevant licence, permit or certificate and be recognised as competent for the class of machinery being used.

Pre-requisite Unit

Not applicable

Competency Field

S – Construction and Installation

Unit Sector

Rail sector.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Determine job requirements

PERFORMANCE CRITERIA

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

1.1 Worksite is identified

1.2 Hazards are identified, risks are assessed and control measures are implemented

1.3 Underground services are identified as required and marked to protect services from excavation

1.4 Work method is selected to meet job requirements

1.5 Resources are organised to meet the scope of the job and selected work methods

2 Undertake trenching

2.1 Worksite is prepared for trenching

2.2 Excavation is undertaken along or across track to accommodate services in accordance with design and organisational procedures

2.3 Suitable materials and methods are used to backfill trench in accordance with design and organisational procedures

3 Establish track formation

3.1 Excavation is undertaken to establish base for formation in accordance with design

3.2 Excavated material is removed from worksite

3.3 Suitable materials and methods are used to construct new track formation in accordance with design and organisational procedures

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| 4 Establish and maintain minor trackside earthworks | 4.1 | Trackside earthworks are constructed or repaired using appropriate equipment in accordance with workplace procedures |
| | 4.2 | Grading and/or compaction are carried out using appropriate equipment, and care is taken to maintain correct drainage and to protect the environment, trackside installations, fences and underground cabling |
| 5 Complete documentation | 5.1 | Required documentation procedures and processes are confirmed |
| | 5.2 | Documentation is filled in legibly and proofread |
| | 5.3 | Documentation is processed 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.

Unit Mapping Information

This unit replaces and is equivalent to TLIS3037B Install and repair rail earthworks.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIS3037 Install and repair rail earthworks

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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 one occasion and include:

- applying relevant workplace procedures
- determining environmental protection requirements as required
- interpreting and following operational instructions and prioritising work
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- reading and interpreting relevant plans
- repairing minor trackside earthworks including grading and compaction
- reporting and rectifying within limits of own role, identified problems, faults and malfunctions
- selecting and using relevant tools and equipment
- selecting appropriate safe work methods
- working systematically with required attention to detail without injury to self or others, or damage to equipment.

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:

- causes of defects, such as erosion and water scouring
- characteristics of relevant plant and equipment, hardware and components used in earthwork activities
- environmental protection requirements relating to installing and repairing rail earthworks
- functions and design principles of track formation and earthworks
- hazardous situations and related personal protection measures
- hazards that may exist when installing and repairing rail earthworks, and ways of controlling

the risks involved

- information in relevant workplace technical manuals and instructions
- problems that may occur when installing and repairing rail earthworks, and actions that can be taken to report or resolve these problems
- relevant recording and documentation procedures
- relevant rail safety, work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- required rail network standards for materials and the methods involved in installing and repairing rail earthworks
- workplace procedures for installing and repairing rail earthworks.

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.

Practical assessment must occur in an appropriate range of situations in the rail corridor workplace.

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 simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including workplace procedures, regulations, rail network standards, codes of practice and operation manuals.

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