



Australian Government

Department of Education, Employment and Workplace Relations

TLIB2097A Install and maintain guard rails

Release: 1

TLIB2097A Install and maintain guard rails

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to install and maintain guard rails in accordance with safeworking and regulatory requirements and workplace procedures. It includes determining job requirements, installing guard rails, and completing all required documentation. Licensing or certification requirements are not applicable to this unit.

Application of the Unit

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Persons achieving competence in this unit will need to fulfil the applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines.

Work is performed under minimal supervision, generally within a team environment. It involves the application of routine operational principles and procedures to the installation and maintenance of guard rails as part of workplace activities across a variety of operational contexts within the Australian rail system.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Determine job requirements	<p>1.1 Worksite is identified</p> <p>1.2 Obstructions are cleared from gangways/flangeways to ensure safe passage of trains</p> <p>1.3 Installation, replacement or repair method is selected to meet work requirements in accordance with worksite standards and procedures</p> <p>1.4 Plant, equipment and materials are prepared for work</p>
2 Install guard rail	<p>2.1 Existing rail is removed, if required, to enable fitting of new rail</p> <p>2.2 New or replacement guard rail is installed to standards using suitable equipment and fastening system to restore functionality of guard rail</p> <p>2.3 Final job is checked for compliance to standards to enable services to be restored safely</p>
3 Complete documentation	<p>3.1 Documentation on work undertaken is completed in accordance with workplace requirements</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant safety, OH&S and environmental procedures and regulations
- Workplace procedures for the installation and maintenance of guard rails
- Problems that may occur during the installation and maintenance of guard rails, and action that can be taken to report or resolve the problems
- Hazards that may exist when carrying out the installation and maintenance of guard rails, and ways of controlling the risks involved
- Principles of guard rail function
- Guard rail installation and maintenance techniques and processes
- Technical manuals and instructions which relate to the installation and maintenance of guard rails
- Standards applicable to use of guard rails
- Emergency procedures

Required skills:

- Read and interpret instructions, procedures, information and signs relevant to the installation and maintenance of guard rails
- Interpret and follow operational instructions
- Complete documentation related to the installation and maintenance of guard rails
- Operate communication systems to required protocol
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when carrying out the installation and maintenance of guard rails in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to materials or equipment
- Select appropriate material for guard rails
- Install and remove guard rails
- Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement
- Assessment must include exercises which demonstrate competent performance of the following in a range of situations:
 - installing or maintaining the guard rails on

EVIDENCE GUIDE

- underbridges, level crossings in open track
- ensuring completed work meets track geometry requirements
- Context of and specific resources for assessment**
- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
 - Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Operations may be conducted:
- by day or night
 - in all weather conditions
- Work may involve:
- exposure to chemicals, and dangerous or hazardous substances
 - movements of equipment, goods and vehicles

RANGE STATEMENT

- Guard rails include:
- guard rails installed on level crossings and sharp curves to prevent derailment
 - guard rails installed on underbridges and near vulnerable structures to limit lateral movement of derailed wagons
- Types of guard rail may vary according to:
- rail mass
 - rail type
 - bearer type
 - location of guard rail (between the running rails or outside the running rails)
- Tools may include:
- rail tongs
 - mechanical lifting and handling devices
 - hand tools
 - small plant
 - on-track equipment (e.g. dog puller)
- Materials may include:
- fastening components
 - new or part worn rail for guard rails
 - special steel section guard rails
 - splay rails
 - specially fabricated 'vee'
- Liaison may include:
- internal or external personnel from other work areas (e.g. train controllers, electricians)
- Work may involve:
- exposure to chemicals, dangerous or hazardous substances
 - movements of equipment, materials and vehicles
- Communication equipment systems may include:
- two-way radios
 - telephones/mobile phones
 - agreed audible or hand signal
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Depending on work context, safety and personal protective equipment may include:
- high visibility clothing
 - hearing protection
 - gloves
 - sunscreen
 - sunglasses
 - safety glasses
 - insect repellent
 - safety headwear
 - safety footwear
 - portable radios/mobile phones

RANGE STATEMENT

Information/documents may include:

- hand lamps
- flags
- safety devices
- operational instructions, policies and workplace procedures
- local authority regulations and procedures
- notices, records and requests
- work orders
- technical instructions
- manufacturers or workplace equipment instructions and operation manuals
- emergency procedure manuals
- two-way radio/mobile phone operation procedures
- QA plans, data and document control
- conditions of service, legislation and industrial agreements including workplace agreements and awards
- legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes and/or guidelines
- relevant state/territory regulations, codes of practice and safeworking system requirements
- relevant Australian Standards and related requirements, including AS 4292
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation

Applicable regulations and legislation may include:

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

B - Equipment Checking and Maintenance