



Australian Government

Department of Education, Employment and Workplace Relations

TLIS2034A Install and repair rail fastening systems

Release: 1

TLIS2034A Install and repair rail fastening systems

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to install and repair rail fastening systems in accordance with safeworking and regulatory requirements and workplace procedures. It includes identifying the work requirements, installing the fastening system, repairing the fastening system, and completing all required documentation. Licensing or certification requirements may be applicable to this unit.

Application of the Unit

Application of the Unit

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 some supervision, generally within a team environment. It involves the application of routine operational principles and procedures to install and repair rail fastening systems as part of workplace activities across a variety of operational contexts within the Australian rail system.

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.

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 Identify requirements	1.1 Worksite is identified to confirm work requirements 1.2 Appropriate fastening system is chosen to suit job requirements 1.3 Appropriate tools and equipment are selected for job to facilitate the effective replacement/repair of components
2 Install fastening system	2.1 Selected fastening systems are installed using appropriate equipment to required standards
3 Repair fastening system	3.1 Fastening systems are repaired using appropriate methods to the required standard, to maintain integrity of rail fastening systems
4 Complete documentation	4.1 Documentation is completed in line with workplace requirements

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 repair of rail fastening systems
- Problems that may occur during the installation and repair of rail fastening systems, and action that can be taken to report or resolve the problems
- Hazards that may exist during the installation and repair of rail fastening systems, and ways of controlling the risks involved
- Relevant rail fastening and anchoring equipment and methods
- Characteristics and relevant information on rail fastening systems
- Information in relevant workplace technical manuals and instructions
- Characteristics of plant and equipment, hardware and components used in work activities
- Hazardous situations and related personal protection measures
- Relevant recording and documentation procedures

Required skills:

- Communicate effectively with others when installing and repairing rail fastening systems
- Read and interpret technical plans, specifications, instructions and manuals relevant to the installation and repair of rail fastening systems

Required skills:

- Interpret and follow operational instructions when installing and repairing rail fastening systems
- Complete documentation related to the installation and repair of rail fastening systems
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when installing and repairing rail fastening systems
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when installing and repairing rail fastening systems in accordance with regulatory requirements and workplace procedures
- 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 equipment
- Select and use required personal protective equipment
- Select and use relevant equipment and tools

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 rail fastening systems on track using static and resilient fastenings used in the relevant rail corridors
 - repairing a section of anchored track
 - ensuring completed track complies with track standards for the relevant rail corridor

EVIDENCE GUIDE

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 be conducted in:

- restricted spaces
- exposed conditions
- controlled or open environments

Work may involve:

- exposure to chemicals, and dangerous or hazardous substances
- movements of equipment, goods and vehicles

RANGE STATEMENT

Rail fastening and anchoring systems include:

- sleeper fastenings
- dogspikes, lockspikes, dogscrews, lockscrews, holding down bolts, screwspikes
- resilient fastening
- special fastenings in points and crossings
- rail anchors

Equipment may include:

- manual tools
- small power tools

Liaison may include:

- internal or external personnel from other work areas (e.g. train controllers, other work groups)

Communications systems may include:

- two-way radios
- radio headsets
- telephones/mobile phones
- agreed audible or hand signals

Information may be provided:

- electronically
- in writing, via forms/documents/plans
- orally, via face-to-face communications

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 phone
- hand lamps
- flags
- safety devices

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information/documents may include:

- operational instructions, policies and workplace procedures
- work orders
- technical instructions
- the appropriate track standards for the rail operating system

RANGE STATEMENT

Applicable procedures and codes may include:

- 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 Australian Standards and related requirements, including AS 4292
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field S - Construction and Installation