



Australian Government

Department of Education, Employment and Workplace Relations

TLIS2028A Install and replace transoms

Release: 1

TLIS2028A Install and replace transoms

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to install and replace transoms on underbridges in accordance with safeworking and regulatory requirements and workplace procedures. It includes preparing for work, installing/replacing transoms, and completing 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 or replacement of transoms 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 Prepare for work	<p>1.1 Worksite is identified</p> <p>1.2 Installation, replacement or repair method is selected to meet work requirements in accordance with workplace procedures</p> <p>1.3 Plant, equipment and other materials are prepared for work</p> <p>1.4 Transoms are prepared to requirements of job using correct methods, including dressing and protective coatings</p>
2 Install/replace transoms	<p>2.1 Where necessary unserviceable transoms are extracted using manual or mechanical methods in accordance with workplace procedures</p> <p>2.2 New transom is installed using manual or mechanical methods in accordance with workplace standards and procedures</p> <p>2.3 Transom is suitably supported by appropriate methods in accordance with workplace standards and procedures</p> <p>2.4 Transom bolts are replaced or tightened as required</p> <p>2.5 Work is completed to meet track geometry requirements in accordance with workplace standards and procedures</p> <p>2.6 Work is checked for compliance to acceptance standards for spacing, skew and geometry</p>
3 Complete documentation	<p>3.1 Required documentation is completed in accordance with workplace policies and procedures</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 replacement of transoms
- Problems that may occur during the installation and replacement of transoms, and action that can be taken to report or resolve the problems
- Hazards that may exist during the installation and replacement of transoms, and ways of controlling the risks involved
- Types of tools and equipment that may be used in installing and replacing railway transoms, and their applications
- Contents of relevant workplace technical manuals and instructions

REQUIRED KNOWLEDGE AND SKILLS

- Timber protective treatments
- Basic track structure and geometry requirements
- Transom condition and placement acceptance standards
- Emergency procedures
- Local authority procedures, if applicable

Required skills:

- Communicate effectively with others when installing and replacing transoms
- Follow operational instructions and work sequences when installing and replacing transoms
- Read and interpret instructions, procedures, route information and signs relevant to the installation and replacement of transoms
- Interpret and follow operational instructions and follow scheduled work processes when installing and replacing transoms
- Complete documentation related to the installation and replacement of transoms
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when installing and replacing transoms
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when using tools and equipment while installing and replacing transoms in accordance with regulatory requirements and workplace procedures
- Implement prepared contingency plans for unexpected events when installing and replacing transoms
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule
- 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 goods or equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment
- Identify, select and use relevant tools and equipment

Evidence Guide

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:
 - preparing for work by selecting appropriate methods, materials and equipment for a variety of situations
 - installing or replacing a number of transoms
 - completing documentation to required workplace standards

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

EVIDENCE GUIDE

- 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.

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| Operations may be conducted: | <ul style="list-style-type: none"> • by day or night • in all weather conditions |
| Work may be conducted in: | <ul style="list-style-type: none"> • restricted spaces • exposed conditions • controlled or open environments |
| Work may involve: | <ul style="list-style-type: none"> • exposure to chemicals, and dangerous or hazardous substances • movements of equipment, materials and vehicles |
| Installation and replacement methods may include: | <ul style="list-style-type: none"> • constructing new bridges • partial replacement in existing track • full replacement in existing track |
| Repair methods may include: | <ul style="list-style-type: none"> • boring new holes in timber transoms • replacing broken or damaged transoms |
| Transom types may include: | <ul style="list-style-type: none"> • timber • synthetic • composite |
| Tools and equipment may include: | <ul style="list-style-type: none"> • mechanical handling/lifting equipment • bars, sleeper tongs • adze • planer • square and string line • jacks • manual tools • small power tools • oxy cutting equipment • scaffolding |
| Materials may include: | <ul style="list-style-type: none"> • bolts and fasteners • zinc/polyester strip • resilient pads • paint/timber preservatives |

RANGE STATEMENT

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| Transom spacing and dimensions may vary according to: | <ul style="list-style-type: none"> • bridge configuration • traffic task |
| Removal and insertion may be: | <ul style="list-style-type: none"> • mechanical • manual |
| Liaison may include: | <ul style="list-style-type: none"> • internal/external personnel from other work areas (e.g. train controllers) • road authorities • local councils • landowners |
| Communication systems may include: | <ul style="list-style-type: none"> • two-way radios • radio headsets • telephones/mobile phones • agreed audible or hand signals |
| Safety and personal protective equipment may include: | <ul style="list-style-type: none"> • high visibility clothing • hearing protection • gloves • sunscreen • sunglasses • safety glasses • dust mask • insect repellent • safety headwear • safety footwear • portable radios/mobile phones • hand lamps • flags • safety devices |
| Depending on the type of organisation concerned and the local terminology used, workplace procedures may include: | <ul style="list-style-type: none"> • company procedures • enterprise procedures • organisational procedures • established procedures |
| Information/documents may include: | <ul style="list-style-type: none"> • operational instructions, policies and workplace procedures • local authority regulations and procedures • works orders • technical instructions, plans and specifications • manufacturers or workplace equipment operation manuals and specifications • emergency procedure manuals |

RANGE STATEMENT

- 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
- Information may be provided:
- electronically
 - in writing, via forms/documents/plans
 - orally, via face-to-face communications
 - trackside signals
- Applicable regulations and legislation may include:
- legislated rail safety requirements including applicable acts and regulations from each 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

Unit Sector(s)

Not Applicable

Competency Field

Competency Field S - Construction and Installation