



Australian Government

Department of Education, Employment and Workplace Relations

TLIB3100A Visually inspect track infrastructure

Release: 1

TLIB3100A Visually inspect track infrastructure

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to visually inspect track infrastructure in accordance with safeworking and regulatory requirements and workplace procedure. It includes patrolling the track and right of way infrastructure, and recording and documenting identified defects in accordance with workplace requirements. Licensing or certification requirements are not 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 minimal supervision, generally within a team environment. It involves the application of routine operational principles and procedures to the visual inspection of the railway track infrastructure 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 Patrol track infrastructure	<ul style="list-style-type: none">1.1 Appropriate inspection method is employed to conduct visual examinations of track and right of way for the identification of defects1.2 Visual examinations are performed in accordance with workplace procedures and in line with inspection schedules1.3 Variations from allowable tolerances, defects and deficiencies likely to affect train safety are identified to enable appropriate action to be taken on the repairs required1.4 Unsatisfactory conditions are assessed in terms of seriousness and priority
2 Record and document defects	<ul style="list-style-type: none">2.1 Appropriate action is taken to safeguard operation of the rail system2.2 Inspection schedule or work report data is completed in accordance with workplace procedures2.3 Defects and deficiencies are reported to enable repairs to be effected in a timely manner

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 visual inspection of track and right of way
- Problems that may occur during the visual inspection of track and right of way, and action that can be taken to report or resolve the problems
- Hazards that may exist when visually inspecting track and right of way, and ways of controlling the risks involved
- Contents of relevant technical specifications and manuals
- Track and right of way standards
- Different types of track and right of way defects
- Defect deterioration under differing operating conditions
- Visible rail defect types
- Techniques for prioritising defect rectification
- Fault identification and analysis techniques

REQUIRED KNOWLEDGE AND SKILLS

- Emergency procedures
- Details of local authority procedures

Required skills:

- Communicate effectively with others when visually inspecting track and right of way
- Read and interpret instructions, procedures, information and signs relevant to the visual inspection of track and right of way
- Identify different types of track and right of way defects
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the visual inspection of track and right of way
- Record and report results of visual inspection of track and right of way in required format
- Operate communication equipment to required protocol
- Promptly report and/or rectify any identified problems, faults or malfunctions when visually inspecting track and right of way in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events during the visual inspection of track and right of way
- 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 tools and equipment

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.

EVIDENCE GUIDE

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:
 - patrolling the track and right of way infrastructure
 - recording and documenting identified defects to 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
 - 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 or 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, goods and vehicles |
| Track and right of way infrastructure may include: | <ul style="list-style-type: none">• track geometry• track components• turnouts• formation• drainage• earthworks• clearances• trackside signs• fencing |
| Patrol methods may include: | <ul style="list-style-type: none">• walking• engine• road/rail vehicle• track vehicle |
| Patrol inspections may include: | <ul style="list-style-type: none">• scheduled patrol• patrol in abnormal weather (heat, cold, wet etc.)• special patrols as directed |
| Faults may include: | <ul style="list-style-type: none">• track geometry defects (top, twist, line, gauge)• pumping or unstable track• obstructions to train movements• obstructions to the wheel path of the train• defective or broken rails, joints, breakaways, and loose or foul joints, fishbolts and fishplates• failures of sleepers, transoms and fastenings• breaches of fencing and ineffective safety barriers• missing or incorrect speed signs• track formation, cutting or embankment failure• failed or ineffective drainage• ballast deficiencies and foul ballast• crossing and switch failures |
| Tools may include: | <ul style="list-style-type: none">• hand tools |

RANGE STATEMENT

Depending on the type and seriousness of identified defects, appropriate action may include:

- small plant
- stop trains
- speed restrictions
- immediate repair action
- report for programmed repair action
- monitor for further deterioration

Liaison may include:

- internal or external personnel from other work areas

Communication equipment may include:

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

Information may be provided:

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

Safety and personal protective equipment may include:

- high visibility clothing
- hearing protection
- gloves
- sunscreen
- sunglasses
- safety glasses
- dust mask
- insect repellent
- safety headwear
- safety footwear
- portable radio/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:

- maintenance notices, records and requests
- local authority regulations and procedures
- work orders
- technical instructions
- QA plans, data and document control
- local instructions
- manufacturers or workplace equipment operation manuals
- operational instructions, policies and workplace

RANGE STATEMENT

Applicable regulations and legislation may include:	<p>procedures</p> <ul style="list-style-type: none">• emergency procedure manuals• two-way radio/mobile phone operation procedures• emergency procedures manual• 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
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Unit Sector(s)

Not Applicable

Competency Field

Competency Field	B - Equipment Checking and Maintenance
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