



Australian Government

Department of Education, Employment and Workplace Relations

TLIS4007A Decommission mechanical signalling infrastructure and interlocking equipment from service

Release: 1

TLIS4007A Decommission mechanical signalling infrastructure and interlocking equipment from service

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to decommission mechanical signalling infrastructure equipment and interlocking equipment from service in accordance with safeworking and regulatory requirements and workplace procedures. It includes disconnecting the mechanical/electromechanical equipment and components; modifying, testing and adjusting remaining equipment; and certifying and securing the operational mechanical equipment in accordance with workplace requirements. 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 decommissioning of mechanical signalling infrastructure equipment and interlocking equipment from service 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 Disconnect mechanical/interlocking equipment and components	1.1 Required authorisation is confirmed to ensure safe train operations may continue after mechanical/interlocking equipment components are disconnected 1.2 Mechanical/interlocking equipment and components are prepared to enable ready removal 1.3 Mechanical/interlocking equipment components are removed from operational area, and the area is made safe
2 Modify, test and adjust remaining equipment	2.1 Remaining equipment is modified as necessary to ensure compliance with job specification 2.2 Correct test equipment and procedures are identified 2.3 Appropriate tests are correctly carried out in conjunction with other personnel to ensure operational compliance
3 Certify and secure the operational equipment	3.1 Operational readiness is confirmed and required documentation/certification is correctly completed to allow for commissioning 3.2 Equipment is locked and secured to ensure against unauthorised interference

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

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

Required knowledge:

- Applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines
- Relevant OH&S and environmental procedures and regulations
- Workplace procedures for the decommissioning of mechanical signalling infrastructure equipment and interlocking equipment from service
- Problems that may occur during the decommissioning of mechanical signalling infrastructure equipment and interlocking equipment from service, and action that can be taken to report or resolve the problems
- Hazards that may exist when decommissioning mechanical signalling infrastructure equipment and interlocking equipment from service, and ways of controlling the risks involved
- Principles of signalling
- Limitations and characteristics of mechanically operated signalling equipment
- Fault diagnosis, fault rectification and problem solving
- Repair techniques

REQUIRED KNOWLEDGE AND SKILLS

- Testing and measuring procedures
- Organisational requirements
- Relevant recording and documentation procedures

Required skills:

- Communicate effectively with others when decommissioning mechanical signalling infrastructure equipment and interlocking equipment from service
- Read and interpret instructions, procedures, information, technical data and drawings relevant to the decommissioning of mechanical signalling infrastructure equipment and interlocking equipment from service
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the decommissioning of mechanical signalling infrastructure equipment and interlocking equipment from service
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when decommissioning mechanical signalling infrastructure equipment and interlocking equipment from service
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when decommissioning mechanical signalling infrastructure equipment and interlocking equipment from service in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events that may arise when decommissioning mechanical signalling infrastructure equipment and interlocking equipment from service
- 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
- Use hand and power tools
- Use test equipment and testing techniques
- Apply repair and testing practices and procedures
- Adapt to differences in equipment in accordance with standard operating procedures
- 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:
 - correctly disconnecting mechanical/interlocking equipment
 - correctly modifying, adjusting and testing remaining equipment
 - securing and certifying operational equipment to organisational 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, 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">• 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 exposure to: | <ul style="list-style-type: none">• chemicals• dangerous or hazardous substances• movements of equipment, materials and vehicles |
| Preparation may include: | <ul style="list-style-type: none">• loosening connections• clearing around work area• identifying replacement components/linkages |
| Work may include: | <ul style="list-style-type: none">• cutting• bending• shaping• welding• grinding• drilling• bolting• clamping with ferrous and non-ferrous bar, rod, tube, chain and wire rope |
| Liaison may be required with: | <ul style="list-style-type: none">• internal and external personnel |
| Equipment may be: | <ul style="list-style-type: none">• mechanical• pneumatic• hydraulic• electrical• signage• lamps• brackets• clamplocks• hoods |

RANGE STATEMENT

- switchlocks
- warning lights
- points and points machines
- signal
- masts
- derailleurs
- trainstop
- facing point locks
- chainlocks
- interlocked levers
- non-interlocked levers
- interlocking machine/s
- operating and interlocking cams/locks
- rod leads
- bells
- 'A' frames
- ground frames
- Annett locks
- key locks
- staff locks
- circuit controllers
- point indicators
- foundations

RANGE STATEMENT

Components may include:	• bolts • shims • pins • rods • bars • joints • floor plates • brackets • levers
Tools may include:	• hand tools • power tools • air tools • specialist tools as required by the organisation
Communication equipment may include:	• two-way radios • computers • telephones/mobile phones
Safety and protective equipment may include:	• high visibility clothing • hearing protection • gloves • sunscreen • sunglasses and safety glasses • insect repellent • safety headwear • safety footwear • portable radios • hand lamps and 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 • relevant technical manuals • drawings/sketches • site plans/layouts • equipment/operational management information • technical and engineering instructions • manufacturers or workplace equipment operation manuals and specifications

RANGE STATEMENT

- Applicable regulations, legislation and codes may include:
- emergency procedure manuals
 - two-way radio 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 state/territory OH&S legislation
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field S - Construction and Installation