



Australian Government

TLIS3005 Install mechanical infrastructure for signalling

Release: 1

TLIS3005 Install mechanical infrastructure for signalling

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to install mechanical infrastructure for signalling in accordance with safeworking and regulatory requirements, and workplace procedures.

It includes assembling components, installing the equipment and components to specifications, and testing and adjusting the equipment to workplace requirements.

People achieving competence in this unit will need to fulfil the applicable state/territory legislated rail safety requirements and to comply with relevant codes of practice and/or guidelines.

Work is performed under minimal supervision, generally within a team environment. It involves the application of routine operational principles and procedures when installing mechanical infrastructure for signalling, as part of workplace activities across a variety of operational contexts within the Australian rail system.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

S – Construction and Installation

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Assemble components

- 1.1 Components are identified and selected correctly to comply with specifications
- 1.2 Hazards are identified, risks are assessed and control measures are implemented
- 1.3 Components are pre-assembled and positioned for installation and to identify any manufacturing fitting requirements
- 1.4 Components/linkages are modified to allow for complete installation in accordance with job specifications

2 Install equipment and components

- 2.1 Components are fabricated to ensure compliance with job specifications
- 2.2 Equipment/component layouts are checked to ensure positioning job specifications
- 2.3 Hole/fastening positions are marked and drilled to allow for installation
- 2.4 Equipment/components are assembled and secured in the correct sequence
- 2.5 Interlinking components are attached and secured
- 2.6 Operational power source is connected by appropriate personnel as required to allow for operational testing

3 Test and adjust equipment

- 3.1 Required authorisation for testing is confirmed to ensure safe train operations may continue
- 3.2 Correct test equipment/procedures are identified
- 3.3 Appropriate tests are correctly carried out in conjunction with other personnel to ensure operational compliance
- 3.4 Required adjustments are carried out in conjunction with other personnel as required to ensure correct operational compliance
- 3.5 Operational readiness is confirmed and required documentation/certification is correctly completed to allow for commissioning
- 3.6 Equipment is locked and secured to ensure against unauthorised interference

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIS3005A Install mechanical infrastructure for signalling.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIS3005 Install mechanical infrastructure for signalling

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- adapting to differences in equipment in accordance with operating procedures
- adjusting and testing equipment for correct operation in accordance with manufacturer instructions and workplace procedures
- applying relevant workplace procedures
- assembling interlinking components
- checking and confirming compliance with operational specifications
- identifying job hazards and taking required action to minimise, control or eliminate identified hazards
- installing equipment and components in accordance with manufacturer instructions and workplace procedures
- interpreting and following operational instructions and prioritising work
- measuring, aligning and assembling pre-made components
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- reading and interpreting relevant designs, instructions, procedures, information, technical data and drawings
- reporting and/or rectifying identified problems, faults or malfunctions, in accordance with workplace procedures
- testing and adjusting mechanical equipment in accordance with manufacturer instructions and workplace procedures
- using appropriate fabrication techniques
- using hand and power tools, portable electric generators and air compressors in accordance with manufacturer instructions and workplace procedures
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- applicable state/territory legislated rail safety requirements, relevant codes of practice and/or guidelines
- fault diagnosis, fault rectification and problem solving
- fault finding and testing procedures
- hazards that may exist when installing mechanical infrastructure for signalling, and ways of controlling the risks involved
- mechanical infrastructure components and characteristics
- mechanical signal adjusting techniques
- principles of signalling
- problems that may occur when installing mechanical infrastructure for signalling, and action that can be taken to report or resolve these problems
- relevant Rail Infrastructure Manager workplace policies and procedures for installing mechanical infrastructure for signalling
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- relevant recording and documentation procedures
- safety data sheets (SDSs)/material safety data sheets (MSDSs) and/or manufacturer instructions and workplace procedures
- track layout
- workplace rail industry standards and procedures for installing mechanical infrastructure for signalling.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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Assessment must occur in workplace operational situations or, where this is not available, in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, SDSs/MSDSs, regulations, rail industry standards, codes of practice and operation manuals.

Links

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