



Australian Government

TLIB3048 Carry out off-site repair, overhaul and assembly of mechanical signalling equipment

Release: 1

TLIB3048 Carry out off-site repair, overhaul and assembly of mechanical signalling equipment

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 carry out off-site repair, overhaul and assembly of mechanical signalling equipment in accordance with safeworking and regulatory requirements, and workplace procedures.

It includes assessing equipment condition, replacing out-of-specification components, producing components as required, assembling components, and testing and adjusting equipment to ensure overall system integrity.

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 to the off-site repair, overhaul and assembly of mechanical signalling equipment, 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

B – Equipment Checking and Maintenance

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Assess equipment condition

- 1.1 Equipment condition is established through tagged repair sheets from the field and initial examination
- 1.2 Condition of all out-of-tolerance equipment and components is correctly identified and recorded through detailed inspection and testing
- 1.3 Type and extent of required repairs are evaluated to determine viability of repair operations and to estimate time requirements
- 1.4 Components requiring disposal are identified and replacement components are arranged to allow work to commence

2 Replace components

- 2.1 Equipment is dismantled to the extent required to carry out previously identified repairs
- 2.2 Components requiring replacement are stored for later repair/disposed of in line with organisational requirements
- 2.3 Components are replaced/repaired/returned to operational condition in line with technical specifications and standard workshop practices

3 Produce components

- 3.1 Components are produced to comply with the defined job requirements and technical specifications
- 3.2 Appropriate manufacturing/workshop techniques are applied to ensure required quality components are produced

4 Assemble components

- 4.1 Assembly methods and sequencing are planned to ensure efficient operations
- 4.2 Components are laid out for assembly in accordance with planned processes
- 4.3 Assembly of all components, sub-assemblies and equipment is correctly carried out in accordance with planned operations, and job and technical specifications
- 4.4 Securing methods and operations are carried out in accordance with job and technical specifications

5 Test and adjust

- 5.1 Equipment functions are tested to ensure conformance to

equipment

drawings and specifications

- 5.2 Assembly and joining/securing processes and outcomes are checked and tested as required to match the job and technical specifications
- 5.3 Adjustments are made to ensure all equipment operations meet the technical specifications
- 5.4 Operational/functional compliance to the job and technical specifications is confirmed and certified
- 5.5 Required documentation is correctly completed and forwarded to appropriate personnel to confirm the equipment is certified for use

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 TLIB3048A Carry out off-site repair, overhaul and assembly of mechanical signalling equipment.

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 TLIB3048 Carry out off-site repair, overhaul and assembly of mechanical signalling equipment

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:

- applying relevant workplace procedures
- carrying out appropriate repairs in accordance with workplace requirements
- carrying out visual inspection and checking in accordance with workplace procedures
- checking/confirming compliance with operational specifications
- identifying faults in accordance with organisational procedures
- identifying job hazards and taking required action to minimise, control or eliminate identified hazards
- implementing contingency plans
- interpreting and following operational instructions and prioritising work
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with operating procedures
- reading and interpreting relevant instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions, in accordance with regulatory requirements and workplace procedures
- using chemical cleaning agents, solvents and lubricants in accordance with safety data sheets (SDSs)/material safety data sheets (MSDSs) and/or manufacturer instructions and organisational 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:

- documentation and record keeping requirements
- chemical cleaning agents, solvents and lubricants, SDSs/MSDSs and manufacturer instructions
- fault detection techniques
- fundamentals of signalling and operations of mechanical signalling equipment
- hazards that may exist when off-site repairing, overhauling and assembling mechanical signalling equipment, and ways of controlling the risks involved
- problems that may occur when off-site repairing, overhauling and assembling mechanical signalling equipment, and action that can be taken to report or resolve these problems
- relevant mechanical signalling equipment components and technical specifications
- relevant rail safety, work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- workplace procedures for off-site repairing, overhauling and assembling mechanical signalling equipment.

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, rail industry standards, SDSs/MSDSs, regulations, codes of practice and operation manuals.
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