



Australian Government

TLIB3058 Maintain aerial signal/telecommunications lines and cables

Release: 1

TLIB3058 Maintain aerial signal/telecommunications lines and cables

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 maintain aerial signal/telecommunications lines and cables in accordance with safeworking and regulatory requirements, and workplace procedures.

It includes inspecting and servicing line and cable routes, diagnosing identified line and cable faults, and repairing line and cable faults to the standards specified to ensure system integrity.

Work is performed under minimal supervision, generally within a team environment.

It involves the application of routine operational principles and procedures when maintaining aerial signal/telecommunications lines and cables, as part of workplace activities across a variety of operational contexts within the Australian rail system.

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.

Operators of mechanised equipment must have undertaken training and, where appropriate, hold the relevant licence, permit or certificate and be recognised as competent for the class of machinery being used.

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 Inspect and service line and cable routes

- 1.1 Routes are inspected and recorded, and arrangements are made for the removal of any obstructions, damage or infringing vegetation to provide free access to cables/aerials
- 1.2 Hazards are identified, risks are assessed and risk control measures are implemented
- 1.3 Routes are physically inspected to determine breaks, misalignments, damage and insulation wear requiring repair
- 1.4 Poles are inspected for deterioration and a safety assessment is made

2 Diagnose line and cable faults

- 2.1 Permission to test isolated equipment is confirmed prior to work being undertaken
- 2.2 Probable location of fault is identified from visual inspection and circuit tests are conducted to isolate fault area
- 2.3 Nature of fault is identified from further tests and corrective action required is identified to enable appropriate arrangements for resources and for work to be performed
- 2.4 Disconnection/insulation procedures are applied to enable maintenance work to be performed in isolation to systems where lines are in close proximity to high voltage services

3 Repair line and cable faults

- 3.1 Worksite is made safe in accordance with organisational safety requirements to enable repair work to be safely undertaken
- 3.2 Aerial lines/cables are repaired to operational and technical requirements using appropriate jointing or replacement/repair procedures
- 3.3 Repaired/replaced line/cable is tested to specified standards to ensure conformity to operational and technical requirements
- 3.4 Appropriate personnel are notified of completed repairs/replacement and appropriate documentation is completed and processed in accordance with organisational requirements and returned to appropriate organisation/department as required

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 TLIB3058A Maintain aerial signal/telecommunications lines and cables.

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 TLIB3058 Maintain aerial signal/telecommunications lines and cables

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 rail industry standards, codes of practice, guidelines and workplace procedures
- carrying out line/cable/conductor jointing and termination
- communicating effectively with others when maintaining aerial signal/telecommunications lines and cables
- diagnosing and repairing aerial cable faults
- 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
- inspecting aerial signal/telecommunications line routes and poles
- installing aerial signal/telecommunications lines and cables to rail industry standards, rules, codes of practice and guidelines
- 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, technical data and drawings
- reporting and/or rectifying identified problems, faults or malfunctions, in accordance with regulatory requirements and workplace procedures
- selecting and using hand tools, power tools and equipment
- using relevant test equipment and aerial cable testing techniques
- 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 legislated rail safety and rail industry standards requirements
- clearance and separation procedures from other services for aerial signal/telecommunications lines and cables
- common aerial cable system faults
- documentation and record keeping requirements
- electrical theory and principles relevant to aerial cables
- fault diagnosis/problem solving
- hazards that may exist when maintaining aerial signal/telecommunications lines and cables, and ways of controlling the risks involved
- line/cable technical specifications
- problems that may occur when maintaining aerial signal/telecommunications lines and cables, and action that can be taken to report or resolve these problems
- relevant work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- separation and installation rail industry standards requirements for aerial signal/telecommunications lines and cables
- static clearance (electrical) as defined by rail industry standards and organisational procedures
- technical requirements for installing and maintaining aerial signal/telecommunications lines and cables
- techniques for operating support equipment
- test equipment and procedures
- workplace procedures for maintaining aerial signal/telecommunications lines and cables.

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 rail 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, regulations, rail industry standards, codes of practice and operation manuals.
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Links

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