



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **TLIB2034A Maintain poles and associated hardware**

**Release: 1**

## **TLIB2034A Maintain poles and associated hardware**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to maintain poles and associated hardware in accordance with safeworking and regulatory requirements and workplace procedures, including planning for the maintenance of poles and associated hardware, preparing the worksite, conducting the maintenance of poles and associated hardware, and completing all of the work requirements. Licensing, legislative, regulatory or certification requirements are 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 maintenance of poles and associated hardware 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Plan for maintenance of poles and associated hardware</b> | <ul style="list-style-type: none"><li>1.1 Works order is received/accessed, analysed and confirmed, if necessary by site inspection</li><li>1.2 Resources required for the job are identified and scheduled</li><li>1.3 Replacement or additional poles, associated hardware and plant/equipment are transported to the worksite</li><li>1.4 Liaison and communication issues are resolved</li></ul>                                                                                                                                                                                               |
| <b>2 Prepare the worksite</b>                                  | <ul style="list-style-type: none"><li>2.1 Personnel participating in task, including plant operators and contractors, are fully briefed</li><li>2.2 Road signs, barriers and warning devices are positioned, and worksite protection is provided</li><li>2.3 Safeworking practices are observed on or about the running line/track</li><li>2.4 Replacement or additional poles and associated hardware are placed in planned assembly and/or pre-lift location</li><li>2.5 Excavation/foundation is inspected and confirmed as being in accordance with the works order or specification</li></ul> |
| <b>3 Conduct maintenance of poles and associated hardware</b>  | <ul style="list-style-type: none"><li>3.1 Actual maintenance requirement is confirmed by site inspection</li><li>3.2 Pole and associated hardware to be maintained is stabilised if necessary</li><li>3.3 Maintenance of pole and associated hardware is carried out in accordance with the work order and workplace standing requirements</li></ul>                                                                                                                                                                                                                                               |
| <b>4 Complete the work</b>                                     | <ul style="list-style-type: none"><li>4.1 Worksite is rehabilitated, and work is completed in an agreed time and with minimum waste</li><li>4.2 System data and pole records are updated according to workplace procedures</li></ul>                                                                                                                                                                                                                                                                                                                                                               |

## 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 including OH&S instructions related to pole erection, site safety and rescue techniques

## REQUIRED KNOWLEDGE AND SKILLS

- Workplace procedures for the maintenance of poles and associated hardware
- Hazards that may exist when maintaining poles and associated hardware and ways of controlling the risks involved
- Mechanical principles related to structures
- Pole maintenance techniques and processes
- Characteristics, capabilities, uses, limitations and location standards of the types of poles
- Switching or de-energising procedures during maintenance operations
- Workplace technical manuals and instructions which relate to the assembly, erection and lift/transfer of poles and association hardware
- Pole treatment chemicals and HAZCHEM requirements
- Soil types and stabilisation processes
- Responsibilities in relation to other authorities, clients and land-owners
- Regulations for rigging, traffic control and guidance signals
- Documentation and records systems related to pole management
- Procedures for identifying and using support plant and equipment

### Required skills:

- Communicate effectively with others when maintaining poles and associated hardware
- Read and interpret instructions, procedures, information and signs relevant to the maintenance of poles and associated hardware
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to work activities
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when maintaining poles and associated hardware
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when maintaining poles and associated hardware in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events
- 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

**Required skills:**

- Adapt to differences in tools and equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Perform basic welding and oxy cutting
- Guide, by convention and signals, operators of plant/equipment during lift/transfer operations
- Work at heights or in confined spaces
- Operate minor plant and equipment
- Use hand tools
- Rig/sling loads for lifting

**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

**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

## EVIDENCE GUIDE

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | operation manuals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Method of assessment</b> | <ul style="list-style-type: none"> <li>• Assessment of this unit must be undertaken by a registered training organisation</li> <li>• As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests</li> <li>• Practical assessment must occur:               <ul style="list-style-type: none"> <li>• through activities in an appropriately simulated environment at the registered training organisation, and/or</li> <li>• in an appropriate range of situations in the workplace</li> </ul> </li> </ul> |

## 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.

|                                                |                                                                                                                                                                                                                                                                   |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operations may be conducted:                   | <ul style="list-style-type: none"> <li>• by day or night</li> <li>• in all relevant weather conditions</li> </ul>                                                                                                                                                 |
| Work may be conducted:                         | <ul style="list-style-type: none"> <li>• in restricted spaces or exposed conditions</li> <li>• in controlled or open environments</li> </ul>                                                                                                                      |
| Work may involve exposure to:                  | <ul style="list-style-type: none"> <li>• chemicals</li> <li>• dangerous or hazardous substances</li> <li>• movements of equipment, materials and vehicles</li> </ul>                                                                                              |
| Pole types may include:                        | <ul style="list-style-type: none"> <li>• wood</li> <li>• concrete</li> <li>• steel</li> <li>• composite</li> </ul>                                                                                                                                                |
| Associated hardware may include:               | <ul style="list-style-type: none"> <li>• insulators</li> <li>• crossarms</li> <li>• stays</li> <li>• earth down leads and bond wires</li> <li>• crossarm braces</li> <li>• pole steps</li> <li>• shackle straps</li> <li>• associated bolts and clamps</li> </ul> |
| Maintenance requirements may be obtained from: | <ul style="list-style-type: none"> <li>• site inspection</li> <li>• works orders</li> </ul>                                                                                                                                                                       |

## RANGE STATEMENT

- Maintenance may include:
  - workplace personnel
  - client requests
  - removal, repair and replacement of poles
  - welding
  - chemical treatment
  - pole staking and rebutting
  - repair and cleaning of associated hardware
  - servicing
  - reinstatement
- Pole stabilisation techniques may include:
  - back-fill consolidation
  - concreting
  - baulking
  - reinforcement nailing
  - approved steel reinforcing
  - temporary and permanent staywires
- Methods of erection may include:
  - crane
  - auger/erector
  - winch A frame
- Works orders may include:
  - drawings
  - plans
  - resource and materials lists
- Resources may include:
  - personnel
  - plant
  - equipment
  - transport
- Liaison may involve:
  - clients
  - authorities
  - landowners
  - personnel
- Communication equipment may include:
  - two-way radio, and/or
  - telephones
- Information may be provided:
  - electronically
  - in writing, via forms/documents
  - orally, via face-to-face communications
- Safety and protective equipment may include:
  - high visibility clothing
  - hearing protection
  - gloves
  - sunscreen
  - sunglasses

## RANGE STATEMENT

|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                   | <ul style="list-style-type: none"> <li>• safety glasses</li> <li>• insect repellent</li> <li>• safety headwear</li> <li>• safety footwear</li> <li>• portable radios</li> <li>• hand lamps</li> <li>• flags</li> <li>• safety devices</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Depending on the type of organisation concerned and the local terminology used, workplace procedures may include: | <ul style="list-style-type: none"> <li>• company procedures</li> <li>• enterprise procedures</li> <li>• organisational procedures</li> <li>• established procedures</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Information/documents may include:                                                                                | <ul style="list-style-type: none"> <li>• applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines</li> <li>• relevant log or record book</li> <li>• maintenance notices, records and requests</li> <li>• local instructions</li> <li>• manufacturers or workplace equipment operation manuals</li> <li>• operational instructions, policies and workplace procedures</li> <li>• emergency procedure manuals</li> <li>• two-way radio operation procedures</li> <li>• emergency procedures manuals</li> <li>• conditions of service, legislation and industrial agreements including workplace agreements and awards</li> </ul> |
| Applicable regulations and legislation may include:                                                               | <ul style="list-style-type: none"> <li>• applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines</li> <li>• relevant Australian Standards and related requirements</li> <li>• relevant state/territory OH&amp;S legislation</li> <li>• relevant state/territory environmental protection legislation</li> </ul>                                                                                                                                                                                                                                                                                                               |

## Unit Sector(s)

Not Applicable

## **Competency Field**

**Competency Field**

B - Equipment Checking and Maintenance