



**Australian Government**

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

# **TLIB3108A Test operation of electric passenger train braking system**

**Release: 1**

## **TLIB3108A Test operation of electric passenger train braking system**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to test the operation of an electric train braking system in accordance with workplace procedures and the requirements of relevant safeworking regulations and codes of practice. It includes preparing for train brake inspection and testing, inspecting and testing train brake operation, dealing with identified faults, and recording the results of a brake test in accordance with workplace requirements. Licensing or certification requirements are not applicable to this unit.

### **Application of the Unit**

#### **Application of the Unit**

Persons achieving competence in this unit will need to fulfil the applicable legislated rail safety requirements including acts and regulations from the applicable state and territory, together with any nationally approved compliance codes and/or guidelines.

Work is generally performed without supervision and within a team environment. It involves the application of operational principles, regulations, safeworking codes, protocols and procedures to the testing of electric train braking systems as part of workplace activities across a variety of operational contexts within the Australian rail industry.

### **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 Prepare for train brake inspection and testing</b>	<p>1.1 OH&amp;S legislation, codes of practice, policies and procedures are identified and followed</p> <p>1.2 Train is isolated or secured in accordance with workplace procedures to make the work area safe for the inspection and testing</p> <p>1.3 The brake system is checked to ensure it is ready for inspection and testing</p>
<b>2 Test train brake operation (no inspection)</b>	<p>2.1 Brake tests are conducted to ensure compliance to required standards</p> <p>2.2 Where required, modified brake tests are conducted in accordance with workplace procedures to meet required standard</p> <p>2.3 Continuity tests are conducted to conform with workplace procedures to ensure train braking system meets functional specifications</p> <p>2.4 Brakes are applied and released on train and their function confirmed</p> <p>2.5 Faults are identified and appropriate corrective action is taken to ensure operational safety</p>
<b>3 Deal with identified faults</b>	<p>3.1 Identified faults are reported, rectified or isolated according to workplace procedures</p> <p>3.2 Confirmation/verification to continue is determined as per workplace procedures</p> <p>3.3 If required, detachment/uncoupling arrangements are made in accordance with operational requirements</p>
<b>4 Record brake test faults or defects</b>	<p>4.1 Faults or defects found during brake tests are recorded and/or reported as per workplace procedures</p>

## 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 minimum standards and approved compliance codes and/or guidelines
- Relevant OH&S and environmental procedures and regulations including codes of practice for manual handling

## **REQUIRED KNOWLEDGE AND SKILLS**

- Brake systems, their components and their operation
- Types of brake tests and their purpose
- Diagnostic techniques
- Communication protocols
- Documentation requirements relating to brake testing
- Procedures to be followed in the event of an emergency

### **Required skills:**

- Communicate effectively with others when testing train braking system
- Read and interpret instructions, procedures, information and signs relevant to the testing of train braking system
- Interpret and follow operational instructions and prioritise work
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when testing train braking system
- Promptly report and/or rectify any identified problems, faults or malfunctions when testing train braking system in accordance with regulatory requirements and workplace procedures
- Apply rail safety practices and regulations
- 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 equipment
- Assess brake system defects
- Operate and adapt to differences in brakes and related 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

## EVIDENCE GUIDE

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:
  - conducting pre-safety tasks prior to brake test
  - conducting all relevant brake tests
  - identifying possible faults and appropriate reporting and rectification/isolation procedures

### **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
  - 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.

- Operations may be conducted :
- in all weather conditions
  - by day or night
- Movement status of rolling stock to be tested may include:
- arriving
  - departing
  - stationary
- Tests may include:
- brake leakage test
  - power against brake test
  - air continuity test
  - modified brake test
  - train brake tests
- Safety and protective equipment may include:
- high visibility clothing
  - gloves
  - sunscreen
  - sunglasses
  - safety glasses
  - insect repellent
  - safety headwear
  - safety footwear
  - portable radios
  - hand lamps
  - flags
  - safety devices
  - hearing protection
- Relevant personnel may include:
- train controller/signaller
  - train examiners
  - maintenance personnel
  - train crews
  - yard and other operational personnel
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may be known as:
- company procedures
  - enterprise procedures
  - organisational procedures
  - established procedures
- Information/documents may include:
- workplace procedures and instructions and job specification
  - brake instruction documentation
  - safeworking documentation

**RANGE STATEMENT**

Applicable regulations and legislation may include:

- brake test certification
- equipment operations manuals
- conditions of service, legislation and industrial agreements including workplace agreements and awards
- applicable state/territory legislated rail safety requirements including acts and regulations together with any nationally approved compliance codes and/or guidelines
- relevant state/territory OH&S legislation
- relevant state/territory environmental protection legislation
- relevant Australian Standards

**Unit Sector(s)**

Not Applicable

**Competency Field**

**Competency Field**

B - Equipment Checking and Maintenance