



**Australian Government**

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

# **TLIB3019A Test train braking system**

**Release: 1**

## **TLIB3019A Test train braking system**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to test a train braking system in accordance with workplace procedures and the requirements of relevant safeworking regulations and codes of practice. It includes planning and preparing for, 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 each applicable state and territory together with any nationally approved compliance codes and/or guidelines.

Work is performed without supervision, generally within a team environment. It involves the application of operational principles, regulations, safeworking codes, protocols and procedures to the testing of a train braking system 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 Plan and prepare for train brake inspection and testing</b>	1.1 Brake test documentation, rolling stock data and other relevant reports are read to confirm required action 1.2 If required, appropriate tools and equipment are obtained and checked prior to inspection 1.3 OH&S legislation, codes of practice, policies and procedures are identified and followed 1.4 Train is isolated or secured in accordance with workplace procedures to make the work area safe for the inspection
<b>2 Inspect and test train brake operation</b>	2.1 Brake leakage test is conducted to ensure compliance with required standards 2.2 Modified brake tests are conducted to ensure compliance with required standards 2.3 Air continuity test is conducted to ensure train braking system meets functional specifications 2.4 Brakes are applied and released to ensure train braking system meets functional specifications 2.5 Hoses and pipe components are inspected for defects requiring repair or replacement 2.6 Defects and faults are identified and rolling stock is carded
<b>3 Deal with identified faults</b>	3.1 Plans and/or procedures for replacement or repair of identified defective components are implemented in accordance with workplace procedures and manufacturers specifications 3.2 Confirmation/verification of minor repairs or replacements is obtained 3.3 Defective rolling stock not fit to run is identified and detachment arrangements are made in compliance with workplace procedures
<b>4 Record test results</b>	4.1 Brake test records are completed to reflect inspection results in accordance with workplace policies and procedures 4.2 Records are circulated and filed in accordance with workplace policies and procedures

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

## REQUIRED KNOWLEDGE AND SKILLS

### Required knowledge:

- Legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes and/or guidelines
- Relevant OH&S and environmental procedures and regulations including codes of practice for manual handling
- Brake systems, their components and their operation
- Types of brake tests and their purpose
- Tools and equipment applications
- Diagnostic techniques
- Communication protocols
- Documentation requirements relating to brake testing
- Procedures for completing relevant documentation

### Required skills:

- Communicate effectively with others when testing a train braking system
- Read and interpret instructions, procedures, information and signs relevant to the testing of a train braking system
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the testing of a train braking system
- Work collaboratively with others when testing a train braking system
- Promptly report any identified problems, faults or malfunctions when testing a train braking system in accordance with regulatory requirements and workplace procedures
- Apply rail safety practices and regulations
- 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
- 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 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 inspections and testing of brake operations on all relevant types of passenger train, freight train or railcar
  - identifying defects and faults in train braking systems
  - implementing workplace procedures to deal with identified defects and faults
  - completing records of test results in accordance with workplace 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

## EVIDENCE GUIDE

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 conducted by day or night in:

- all weather conditions
- the full range of light conditions
- typical running temperatures of trains

Locations for tests may include:

- heavy traffic
- high volume city freight terminals
- passenger yards or sidings
- station platforms
- remote regional yard and siding locations

Movement status of rolling stock to be tested may include:

- arriving
- departing
- stationary

Load status of train during brake testing may be:

- loaded or unloaded

Tests may include:

- brake leakage test
- air continuity test
- modified brake test
- train brake test
- hose and pipe components repair or replacement

Safety and protective equipment may include:

- high visibility clothing
- end of train markers
- gloves
- sunscreen
- sunglasses
- safety glasses
- insect repellent

## RANGE STATEMENT

- safety headwear
  - safety footwear
  - portable radios/mobile phones
  - hand lamps
  - flags
  - safety devices
  - hearing protection
  - company procedures
  - enterprise procedures
  - organisational procedures
  - established procedures
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- workplace procedures and instructions and job specification
  - manufacturers specifications and standards
  - brake inspection and testing documentation
  - safeworking documentation
  - brake test certification
  - equipment operations manuals
  - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Information/documents may include:
- legislated rail safety requirements including acts and regulations from each applicable state and territory 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
- Applicable regulations and legislation may include:

## Unit Sector(s)

Not Applicable

## Competency Field

**Competency Field**

B - Equipment Checking and Maintenance