



Australian Government

TLIC4071A Establish and operate train braking system

Release 1

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Modification History

Release 1. This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to identify, establish and operate a train braking system after it has been marshalled and deals with brake system faults and failures. Licensing or certification requirements are not applicable to this unit.

Application of the Unit

This unit covers activities carried out in a rail yard or on a main line.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Nil

Employability Skills Information

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

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|--|-----|--|
| 1 Identify and establish train braking system | 1.1 | Brake system and type to be used are identified |
| | 1.2 | Confirmation is made that motive power unit is appropriate for braking system to be used |

- 1.3 Correct coupling of braking system to motive power unit is established and/or confirmed in accordance with organisational policies and requirements
- 1.4 Air brake system is charged to required pressures in accordance with manufacturer requirements and tolerances
- 2 Operate and monitor train braking system**
 - 2.1 Relevant brake system tests are conducted in accordance with organisational policies and requirements
 - 2.2 Train brakes are applied and released under normal operational conditions in accordance with correct train handling and organisational policies and procedures
 - 2.3 Train brake system is monitored in accordance with organisational and/or operational requirements
- 3 Identify and rectify train braking system faults in during operation**
 - 3.1 Train braking system faults are identified during operation
 - 3.2 Safe location to bring train to a stand is identified in accordance with train handling and organisational policies and procedures
 - 3.3 Train brake system fault is located and rectified or isolated in accordance with manufacturer and/or organisational procedures
 - 3.4 Relevant brake system tests are conducted in accordance with organisational policies and requirements
 - 3.5 Train is operated in accordance with organisational procedures

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Applying train brakes under emergency conditions in accordance with correct train handling and organisational policies and procedures
- Brake systems, their components and their operation
- Capabilities and characteristics of train braking systems
- Diagnostic techniques
- Pneumatic systems and their operations
- Releasing train brakes after emergency application in accordance with organisational policies and procedures
- Relevant information/documents such as:
 - brake inspection and testing documentation
 - brake test certification
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
 - equipment operations manuals
 - manufacturer specifications and standards
 - organisational procedures and instructions and job specifications
 - safeworking documentation
- Relevant Australian Standards
- Relevant environmental protection legislation, regulations, codes, policies and procedures
- Relevant legislated rail safety requirements including state and territory acts and regulations, and nationally approved compliance codes and/or guidelines
- Relevant work health and safety (WHS)/occupational health and safety (OHS) legislation, regulations, codes of practice, policies and procedures
- Tools and equipment applications
- Types of brake tests and their purpose

Required skills:

- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Apply rail safety practices and regulations
- Assess brake system defects
- Interpret and follow operational instructions and prioritise work
- Interpret capabilities of train braking systems
- Modify activities depending on operational contingencies, risk situations and environments

- Modify driving according to brake capabilities and characteristics
- Operate and adapt to differences in brakes and related equipment in accordance with standard operating procedures
- Read and interpret instructions, procedures, information and signs relevant to the operation of a train braking system
- Report any identified problems, faults or malfunctions when operating a train braking system in accordance with regulatory requirements and organisational procedures
- Select and use required personal protective equipment conforming to industry and WHS/OHS standards
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

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:

- required knowledge and skills
- relevant legislation and organisational procedures
- other relevant aspects of the range statement.

Context of and specific resources for assessment

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
- 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 organisational procedures, regulations, codes of practice and operation manuals.

Method of assessment

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

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Brake system types may include:
- air brake
 - dual air/vacuum brake
 - electronically controlled pneumatic (ECP) braking
 - vacuum
- Brake system tests may include:
- air continuity test
 - brake leakage test
 - hose and pipe components repair or replacement
 - modified brake test
 - train brake test
- Brake system faults may include:
- brake equipment fault/failure
 - burst hose pipe/hose bag
 - collapsed vacuum hose
 - excessive leakage
 - external tampering
 - minor leakage
 - train separation
- Safety and protective equipment may include:
- communication equipment
 - end of train markers
 - flags
 - gloves
 - hand lamps
 - hearing protection
 - high visibility clothing
 - insect repellent
 - safety:
 - devices
 - footwear
 - glasses
 - headwear
 - sunscreen
- Organisational procedures may include:
- company procedures
 - enterprise procedures
 - established procedures
 - workplace procedures

Unit Sector(s)

Not applicable.

Competency Fields

C – Vehicle Operation