



Australian Government

TLIC2076A Establish and operate braking system on medium/heavy self-propelled on-track equipment

Release: 1

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Modification History

Release 1 - New unit of competency

Unit Descriptor

This unit involves the skills and knowledge required to establish, test and operate the braking system on a medium/heavy self-propelled on-track maintenance vehicle and dealing with brake system faults and failures.

Medium or heavy on-track equipment generally weighs more than 10 tonnes and is permanently railed.

Licensing, regulatory or certification requirements are not applicable to this unit.

Application of the Unit

This unit is intended for those persons who will drive medium/heavy self-propelled on-track equipment to ensure the braking system is suitable for operation prior to the on-track equipment being driven and to identify any faults when in transit. Depending on the type of test being used this activity may require the assistance of a second person.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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 track maintenance vehicle braking system | <ul style="list-style-type: none">1.1 Brake system and type to be used are identified1.2 Where required, correct coupling of vehicle braking system is established and/or confirmed in accordance with organisational procedures1.3 Where fitted, air brake system is charged to required pressures in accordance with organisational procedures |
| 2 Test, operate and monitor track maintenance vehicle braking system | <ul style="list-style-type: none">2.1 Relevant brake system tests are conducted in accordance with organisational procedures2.2 Vehicle brakes are applied and released under normal operational conditions in accordance with correct handling and organisational procedures2.3 Vehicle brakes are applied and released under emergency conditions in accordance with correct handling and organisational procedures2.4 Vehicle brake system is monitored in accordance with organisational and/or operational requirements |
| 3 Identify and rectify track maintenance vehicle braking system faults in transit | <ul style="list-style-type: none">3.1 Braking system faults while in transit are identified3.2 If possible, suitable location to bring vehicle to a stand is identified in accordance with vehicle handling and organisational procedures3.3 Vehicle brake system fault is located and rectified or isolated in accordance with manufacturer and/or organisational procedures3.4 When applicable, relevant brake system tests are conducted in accordance with organisational procedures |

Required Skills and Knowledge

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

Required knowledge:

- Appropriate sections of legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes and/or guidelines
- Brake systems, their components and their operation
- Relevant occupational health and safety (OH&S) and environmental procedures and regulations
- 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
- Assess brake system defects
- Interpret and follow operational instructions and prioritise work
- Modify activities depending on operational contingencies, risk situations and environments
- 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 operating a train braking system
- Report any identified problems, faults or malfunctions when operating a train braking system in accordance with regulatory requirements and workplace procedures
- Select and use required personal protective equipment conforming to industry and OH&S 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:
 - the required 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:
 - identify correct procedure for testing braking system
 - correctly conduct brake test
 - operate brake when driving on-track vehicle
 - identify possible brake faults that may occur

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

- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur on a track maintenance vehicle:
 - 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.

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| Brake system types may include: | <ul style="list-style-type: none">• air brake• electronically controlled pneumatic braking (ECP) |
| Brake system tests may include: | <ul style="list-style-type: none">• brake leakage test• air continuity test• train brake test• penalty brake test• hose and pipe components repair or replacement |
| Brake system faults may include: | <ul style="list-style-type: none">• minor leakage• excessive leakage• burst hose pipe/hose bag• brake equipment fault/failure• worn brake component• external tampering |
| Safety and protective equipment may include: | <ul style="list-style-type: none">• high visibility clothing• gloves• safety eyewear• safety headwear• safety footwear• portable radios/mobile phones• hearing protection |
| Information/documents may include: | <ul style="list-style-type: none">• workplace procedures and instructions, and job specification• manufacturer specifications and standards• brake inspection and testing documentation |
| Applicable regulations and legislation may include: | <ul style="list-style-type: none">• 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 |

Unit Sector(s)

Not applicable.

Competency Field

C – Vehicle Operation