



Australian Government

Department of Education, Employment and Workplace Relations

TLIC3033A Drive an electric tram to operational requirements

Release: 1

TLIC3033A Drive an electric tram to operational requirements

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive an electric tram to operational requirements in accordance with relevant regulations and workplace practices. It includes operating the tram efficiently and effectively; driving the tram; completing the journey; and responding effectively to external factors and emergencies. This unit replaces part of the previous unit TDTC2101A Drive tram Licensing, legislative, regulatory or certification requirements are 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 state and territory together with any nationally approved compliance codes and/or guidelines, as well as relevant road rules and tramway regulatory requirements of the states/territories concerned.

Work is performed under minimal supervision, generally within a team environment. It involves the application of routine operational principles and procedures to drive an electric tram as part of workplace activities across a variety of operational contexts.

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
1 Operate tram efficiently and effectively	<p>1.1 Electric tram is operated in accordance with the relevant codes of practice, workplace procedures and instructions</p> <p>1.2 Electric tram is operated safely in accordance with traffic regulations</p> <p>1.3 Electric tram is operated with due care of the vehicle</p> <p>1.4 Movements are within limits of vehicle and road dimensions and in line with specifications</p> <p>1.5 Movements are smooth and controlled</p> <p>1.6 Performance of the electric tram is monitored to maintain optimum running condition and identify faults, defects and efficiencies in accordance with organisation's requirements</p>
2 Drive tram	<p>2.1 Traffic flows are anticipated and appropriate defensive action is taken to maintain the efficiency of tram operation</p> <p>2.2 Electric tram is constantly monitored for any malfunctions or factors which may affect tram performance</p>
3 Complete tram journey	<p>3.1 Tram documentation is received, interpreted and followed</p> <p>3.2 Electric tram is operated and manoeuvred in accordance with tram documentation and procedures</p> <p>3.3 Events and circumstances affecting planned running schedule are communicated to relevant personnel en route</p> <p>3.4 Tram control and other instructions are received, interpreted and applied to ensure safe and effective control of the tram</p> <p>3.5 Communications are maintained with tram controllers during the tram journey in accordance with the relevant organisational requirements</p> <p>3.6 Instructions concerning tram operation are given to relevant personnel to ensure safe and efficient running</p>
4 Respond effectively to external operating factors	<p>4.1 Instructions are verified, when required, interpreted and followed, in accordance with relevant regulatory requirements and organisational policies and procedures, to ensure that actions taken are appropriate and safe</p> <p>4.2 Fixed traffic and hand signals and verbal movement commands are interpreted and followed, in accordance with regulatory requirements and organisational policies and procedures, to ensure that actions taken are appropriate and safe</p> <p>4.3 Hazardous situations are recognised and appropriate action is taken to minimise risk to personnel and equipment</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 legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines
- Relevant state/territory roads and traffic authority and tramway operating procedures
- Where relevant, road rules of the relevant state/territory roads and traffic authority
- Relevant OH&S and environmental procedures and regulations
- Relevant driver identification procedures, licences and authorities required to drive an electric tram
- Electric tram controls, instruments and indicators and their purpose, location and use including controls to start, accelerate, decelerate and stop the tram
- Electric tram operating characteristics, capabilities and limitations
- Procedures for operating and monitoring the electric tram
- Procedures for adjusting controls to maximise efficient and safe running
- Braking and safety system procedures
- Speed limits for the tram
- Operational instructions
- Procedures for managing safety incidents and hazardous situations that may arise when operating and monitoring an electric tram
- Functions of sand as used on an electric tram and the procedures for checking and refilling sand levels and carrying out sand system testing processes on an electric tram
- Electric tram knowledge may include monitoring devices, braking and drive equipment, ancillary systems and signalling systems
- Track, road and route knowledge may include: tram routes, tramway limitations, speed limitations, curves and gradients and location of any signals, indicators and points
- Procedures for identifying equipment defects and assessing for appropriate action
- Typical defects that can occur on an electric tram and related action that should be taken
- Principles of defensive driving
- Procedures to be followed in the event of an emergency when operating an electric tram
- Procedures for operating any electronic communications equipment with required protocol
- Fatigue management knowledge and techniques including: causes and effects of fatigue; strategies to manage fatigue; factors which increase fatigue-related accidents; and lifestyles which promote the effective long term-management of fatigue

Required skills:

Required skills:

- Communicate effectively with others when driving an electric tram to operational requirements
- Operate any electronic communication equipment to required protocol
- Read and interpret instructions, procedures, information and signs relevant to driving an electric tram
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of an electric tram to operational requirements
- Work collaboratively with others as when operating and monitoring an electric tram
- Identify and assess tram defects and deficiencies and take appropriate action to report, isolate, repair or replace any identified defective equipment as per workplace procedures
- Implement contingency plans for unplanned events
- Drive defensively, apply precautions and required action to minimise, control or eliminate hazards that may exist when driving an electric tram to operational requirements
- Recognise problems that may arise when driving an electric tram and take appropriate action
- Check and refill sand boxes where provided and carrying out sand system testing processes on a tram
- Modify activities depending on differing operational contingencies, risk situations and environments
- Adapt to differences in trams, associated trams and ancillary equipment
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Operate an electric tram and monitor its performance to facilitate optimum safe operation
- Apply track and road knowledge when driving an electric tram
- Monitor journey schedule
- Apply fatigue management knowledge and techniques

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

EVIDENCE GUIDE

- | | |
|---|---|
| Context of and specific resources for assessment | <ul style="list-style-type: none"> • relevant legislation and workplace procedures • other relevant aspects of the range statement • Performance is demonstrated consistently over a period of time and in a suitable range of contexts • Resources for assessment include: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • relevant and appropriate materials and equipment, and • applicable documentation including workplace procedures, regulations, codes of practice and operation manuals |
| Method of assessment | <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • through activities in an appropriately simulated environment at the registered training organisation, 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: | <ul style="list-style-type: none"> • by day or night in all relevant weather conditions |
| Electric trams include all electric trams in service within Australian transport systems and may include: | <ul style="list-style-type: none"> • hand-operated or foot pedal control systems or both |

RANGE STATEMENT

Electric tram equipment may include:

- ancillary systems
- automatic control systems
- braking systems
- drive systems
- instrumentation
- manual controls
- communication systems
- warning equipment
- power source
- vigilance systems
- traction systems

Action taken upon the identification of faults, defects or deficiencies may include:

- reporting the problem and carrying out repairs (depending on the level and extent of work required), or isolating the faulty equipment and advising appropriate personnel of the fault and need for repair or replacement

Relevant personnel may include:

- tram crew
- tram controllers
- rostering supervisors and staff
- other tram drivers and crews
- depot coordinators
- supervisors and other operational personnel
- maintenance personnel
- immediate internal or external customers
- internal and external suppliers

Risk minimisation may require differentiating between faults, defects and deficiencies that:

- do not present a hazard and could be attended to under running maintenance or in a normal maintenance schedule
- present a potential hazard and need to be attended to under running maintenance or at the next most practical opportunity
- present an immediate hazard and require immediate attention

Depending on the organisation concerned workplace procedures may be called:

- standard operating procedures
- company procedures
- enterprise procedures
- organisational procedures
- established procedures

Information and documents may include:

- relevant national and state or territory transport regulations and codes of practice
- notices in drivers' notice board/box
- reference cards
- tram driver roster sheet and/or table card

RANGE STATEMENT

- Applicable legislation, regulations and codes may include:
- operational instructions, policies and procedures:
 - emergency procedures manual
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
 - 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 state/territory road rules and tramway codes of practice
 - relevant Australian Standards and related requirements
 - relevant state/territory OH&S legislation
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation