



Australian Government

TLIC0029 Operate a battery electric heavy vehicle

Release: 1

TLIC0029 Operate a battery electric heavy vehicle

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to operate a battery electric heavy vehicle safely in compliance with relevant state/territory road and traffic authority licence requirements and regulations, including road rules for heavy vehicle.

It includes maintaining systematic and efficient control of all vehicle functions, monitoring traffic and road conditions, managing vehicle condition and performance, and effectively managing hazardous situations.

Driving electric heavy vehicle is performed with limited or minimum supervision, and with duty of care responsibility for self and others in achieving the prescribed outcomes.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

C – Vehicle Operation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Drive battery electric heavy vehicle

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Pre-start operational checks are undertaken in accordance with workplace procedures and original equipment manufacturer instructions

- 1.2 Electric heavy vehicle is steered, manoeuvred, positioned and stopped in accordance with traffic regulations and original equipment manufacturer instructions
 - 1.3 Drive system is managed to ensure efficiency and performance, and to minimise vehicle component or transmission damage
 - 1.4 Drive system operation is maintained within original equipment manufacturer specified torque range and temperature through effective gear selection and drive mode
 - 1.5 Electric heavy vehicle braking system is operated to ensure effective vehicle control under all conditions
 - 1.6 Regenerative braking system is used to ensure maximum range and capability
 - 1.7 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving
 - 1.8 Electric heavy vehicle is driven in reverse, maintaining visibility and achieving accurate positioning
 - 1.9 Electric heavy vehicle is parked, secured and, if required, connected to charging device in accordance with original equipment manufacturer specifications, traffic regulations and workplace procedures
 - 1.10 Driver fatigue, vehicle capacity and mass management requirements are described in accordance with relevant regulatory and workplace requirements
 - 1.11 Unforeseen or abnormal circumstances affecting planned running schedule are communicated to relevant personnel and appropriate workplace procedures are followed
- 2 **Monitor traffic and road conditions**
 - 2.1 Most efficient route of travel is taken by monitoring and anticipating traffic flows and conditions, road standards and other factors likely to cause delays or route deviations
 - 2.2 Traffic and road conditions are constantly monitored and acted on to enable safe operation and to ensure no injury to people or damage to property, equipment loads and facilities

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| | 2.3 | Autonomous system functionality is explained in accordance with original equipment manufacturer specifications |
| 3 | Monitor and maintain vehicle performance | |
| | 3.1 | Vehicle performance is maintained through pre-operational inspections and vehicle checks |
| | 3.2 | Performance and efficiency of vehicle operation is monitored during use |
| | 3.3 | Defective or irregular performance or malfunctions are reported in accordance with workplace procedures |
| | 3.4 | Records are maintained in accordance with workplace procedures |
| | 3.5 | Connecting vehicle to recharging station is undertaken in accordance with workplace procedures and original equipment manufacturer instructions |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit is a new unit. No equivalent unit.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIC0029 Operate a battery electric heavy vehicle

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying precautions and required actions to minimise, control or eliminate identified hazards
- carrying out electric vehicle and battery pre-operational checks in accordance with workplace procedures and original equipment manufacturer instructions
- checking warning systems for operational effectiveness
- completing relevant documentation
- connecting and disconnecting electric heavy vehicle to and from charging device
- demonstrating low risk driving behaviours
- explaining difference between types of electric heavy vehicle warnings and faults
- monitoring and anticipating traffic hazards and taking appropriate actions
- monitoring performance of battery electric heavy vehicle and its equipment, and taking appropriate actions, as required
- operating, checking and adapting to differences in electrical equipment in accordance with workplace procedures
- reading and interpreting relevant instructions, procedures, information and signs
- reporting and/or rectifying identified problems, faults or malfunctions promptly in accordance with regulatory and workplace procedures requirements
- using regenerative braking system to ensure maximum range and capability.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- battery electric heavy vehicle components and vehicle terminology including controls, instruments and indicators, and their use
- causes and effects of fatigue on drivers including fatigue management strategies and on-road techniques
- differences between types of warnings and types of faults
- drive system management and safe driving strategies
- driving hazards and related defensive driving techniques
- efficient electric heavy vehicle driving techniques

- electric heavy vehicle handling procedures
- emergency management plan
- factors that may cause traffic delays and diversions, and related actions that can be taken
- heavy vehicle capacity and mass management requirements
- pre-operational checks to be carried out on electric heavy vehicle and related actions
- principles of electric heavy vehicle braking systems operation
- state/territory road and traffic authority road rules, regulations, permits and licence requirements
- torque characterises including the impact that it can have on smooth vehicle operation
- using regenerative braking system to ensure maximum range and capability
- work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations including procedures to be followed in case of an emergency, abnormal event or limp mode
- workplace electric heavy vehicle driving and operational instructions.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Electric heavy vehicle simulator is not suitable for final practical assessment of this unit.

Resources for assessment must include access to:

- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment, personal protective equipment (PPE) and appropriate electric heavy vehicle currently used in industry.

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