



Australian Government

Department of Education, Employment and Workplace Relations

TLIC4026A Operate and monitor a motive power unit

Release: 1

TLIC4026A Operate and monitor a motive power unit

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate and monitor a motive power unit in accordance with relevant workplace practices, rail regulations and codes of practice. It includes operating the controls of the motive power unit, and monitoring its performance and maintaining its operational condition during a journey. It also includes working collaboratively with other train crew and relevant personnel. 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 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 routine operational principles and procedures to maintain the safety and operation of a motive power unit across a variety of operational contexts in the Australian rail system.

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 motive power unit | <ul style="list-style-type: none">1.1 Motive power unit handling techniques and track and road knowledge are applied to eliminate or minimise risk of injury to personnel or damage to equipment, rolling stock and load1.2 Acceleration and braking techniques are applied safely within track and road and weather conditions1.3 Movement of motive power unit between sections ensures that all rolling stock is positioned safely in accordance with relevant codes of practice, safeworking systems, and related requirements |
| 2 Operate and monitor on-board equipment | <ul style="list-style-type: none">2.1 Motive power unit equipment is monitored and operated to maintain optimum running conditions and identify faults, defects and deficiencies2.2 Appropriate action is taken in response to identified faults, defects and deficiencies to ensure safe operation of motive power unit, including communications with operations controller where necessary2.3 Faults, defects and deficiencies are assessed to determine risk of damage to equipment or injury to personnel |
| 3 Respond effectively to external operating factors | <ul style="list-style-type: none">3.1 Instructions are verified, when required, interpreted and followed, in accordance with relevant codes of practice, rail regulatory requirements and organisational policies and procedures, to ensure that actions taken are appropriate and safe3.2 Fixed and hand signals and verbal movement commands are interpreted and followed, in accordance with relevant codes of practice, safeworking systems and organisational policies and procedures, to ensure that actions taken are appropriate and safe3.3 Hazardous situations are recognised and interpreted and appropriate initiatives and action are taken to minimise risk to personnel and equipment as per workplace procedures and applicable regulatory requirements |
| 4 Work collaboratively with relevant personnel | <ul style="list-style-type: none">4.1 Safe operation and monitoring of the motive power unit is maintained in collaboration with relevant personnel as per workplace procedures and applicable regulatory requirements4.2 Any potential or actual conflicts or grievances with other members of the train crew, train controllers and other relevant personnel during the operation of the motive power unit are recognised and resolved in accordance with workplace procedures4.3 Where implemented, the principles of rail resource management are applied in all rail operations involving the motive power unit as per workplace procedures |

ELEMENT	PERFORMANCE CRITERIA
5 Communicate with personnel	<p>5.1 Regular communication is maintained with train crew, train controllers, drivers of other trains and other relevant personnel in the course of operation of the motive power unit as per workplace procedures and regulatory requirements</p> <p>5.2 Train crew, train controllers, drivers of other trains and other relevant personnel are advised of operational problems, delays, and safety incident and emergency situations that may arise in the course of operation of the motive power unit</p> <p>5.3 Information provided by train crew, train controllers, drivers of other trains and other relevant personnel relevant to the ongoing operation of the motive power unit is interpreted and applied to driving activities as per workplace procedures and applicable regulatory requirements</p>
6 Follow all applicable rail regulatory requirements	<p>6.1 Rail regulatory requirements applicable to the operation of the motive power unit and the train and track or road concerned are accessed, understood and interpreted</p> <p>6.2 Relevant rail regulatory requirements are applied and followed in the course of operation of the motive power unit</p> <p>16.3 Principles of rail resource management are applied in all rail operations involving the motive power unit as per workplace procedures and applicable rail regulatory requirements</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:

- 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
- Motive power unit controls, instruments and indicators and their purpose, location and use
- Procedures for operating and monitoring the motive power unit
- Motive power unit knowledge including: monitoring devices, braking and drive equipment, ancillary systems, and signalling systems
- Track and road knowledge including: track/bridge limitations, speed limitations, gauge limitations, curves and gradients, curfews, location of signals and crossings, emergency cross-overs, stations platforms and operation of a turntable
- Braking and safety system procedures

REQUIRED KNOWLEDGE AND SKILLS

- Operating controls to start, accelerate, decelerate and stop the motive power unit
- Speed and load limits for the motive power unit
- Procedures for adjusting controls to maximise efficient and safe running
- Procedures for managing safety incidents and hazardous situations that may arise when operating and monitoring a motive power unit
- Procedures for operating and monitoring ancillary equipment on the motive power unit
- Procedures for checking the battery and fluid levels and lubricating a diesel motive power unit (where applicable)
- Procedures for checking the battery and fluid levels and lubricating an electric motive power unit (where applicable)
- Procedures for identifying equipment defects and assessing them for appropriate action
- Procedures for minor maintenance, cleaning, lubricating and servicing of a motive power unit
- Typical faults that can occur on a motive power unit and related action that should be taken for repair, isolation, replacement, reporting and recording of the faulty equipment
- Procedures for raising and lowering the pantograph on an electric motive power unit (where applicable)
- Requirements for completing relevant documentation during and after operation and monitoring of a motive power unit
- Train schedules, motive power unit allocation and operational instructions
- Requirements for communicating and working collaboratively with relevant personnel
- Procedures to be followed in the event of an emergency when operating a motive power unit
- Personal protective equipment required when operating a motive power unit and procedures for its use
- Local procedures and operating requirements
- Procedures for operating electronic communications equipment with required protocol

Required skills:

- Communicate effectively with others when operating and monitoring a motive power unit
- Read and interpret instructions, procedures, information and signs relevant to the operation and monitoring of a motive power unit
- Complete documentation related to the operation and monitoring of a motive power unit
- Operate electronic communication equipment to required protocol
- Work collaboratively with others
- Identify and assess motive power unit 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
- Apply precautions and required action to minimise, control or eliminate hazards that may exist

Required skills:

when operating and monitoring a motive power unit

- Recognise problems that may arise when operating and monitoring a motive power unit, and take appropriate action
- Check and replenish fuel and fluids and carry out lubrication processes on a motive power unit (where applicable)
- Modify activities depending on differing operational contingencies, risk situations and environments
- Adapt to differences in motive power units and associated equipment and procedures
- Select and use required personal protective clothing and equipment conforming to industry and OH&S standards
- Operate a motive power unit
- Monitor the performance of a motive power unit

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:
 - applying handling techniques and track and road knowledge correctly
 - identifying and responding to all types of signals, including fixed and hand signals and verbal commands
 - maintaining appropriate levels of communication with appropriate personnel

Context of and specific resources

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

EVIDENCE GUIDE

for assessment

- 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 conducted through appropriate written/oral tests
- Practical assessment must occur:
 - 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:

- by day or night
- in all weather conditions

Motive power units may include all motive power units in service within Australian rail systems and may include:

- diesel motive power units (MPU)
- electric motive power units (MPU)
- railcars

Motive power equipment may include:

- auxiliary systems
- automatic control systems
- braking systems
- drive systems
- instrumentation
- manual controls
- remote train and signal control systems

RANGE STATEMENT

- communication systems
 - warning equipment
 - power source
 - vigilance systems
 - traction systems
 - head and marker lights
- 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
- Relevant personnel may include:
- train crew
 - train controllers and signallers
 - rostering supervisors and staff
 - other train drivers and crews
 - depot coordinators
 - yard masters, supervisors and other operational personnel
 - service delivery supervisors
 - electric train service supervisor
 - station yard staff
 - maintenance and cleaning personnel
 - immediate internal or external customers
- 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 and tagging the faulty equipment and advising appropriate personnel of the fault and need for repair or replacement
- Depending on the organisation concerned workplace procedures may be called:
- standard operating procedures
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Safety and personal protective equipment may include:
- gloves
 - sunscreen and sunglasses
 - safety glasses
 - insect repellent
 - safety headwear and footwear
 - two-way radios/mobile phones/satellite phone hand lamps
 - flags
 - safety devices

RANGE STATEMENT

- Information and documents may include:
- audible indicators
 - breathing equipment
 - fire extinguishers
 - high visibility clothing
 - hearing protection
 - motive power unit operational records and user log books
 - maintenance notices, records and requests
 - preparation sheets, certificates and service dockets
 - train running sheets
 - time sheets
 - roadworthy certificate
 - train wire (MPU status list, dangerous goods list, consist information, etc.)
 - automatic train protection parameters
 - operational instructions, policies and procedures, including: those related to preventing motive power units from moving; track speed, length and load limitations; monitoring and complying with signals; and procedures for operating in accordance with specific track conditions
 - documented details of the train including length and weight
 - emergency procedures manual
- Applicable legislation, regulations and codes 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 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