



Australian Government

Department of Education, Employment and Workplace Relations

TLIC3028A Operate and monitor a heritage motive power unit

Release: 1

TLIC3028A Operate and monitor a heritage motive power unit

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to operate and monitor a heritage 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, 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 and local rail regulations and codes of practice as they apply to the operation of heritage railway systems.

Work is performed under minimal 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 heritage 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 | 1.1 Motive power unit handling techniques and track and road knowledge are interpreted and applied to eliminate or minimise risk of injury to personnel or damage to equipment, rolling stock and load
1.2 Acceleration and braking techniques are applied safely within track and road and weather conditions
1.3 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 | 2.1 Motive power unit equipment is monitored and operated to maintain optimum running conditions and identify faults, defects and deficiencies
2.2 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 necessary
2.3 Faults, defects and deficiencies are assessed to determine risk of damage to equipment or injury to personnel |
| 3 Respond effectively to external operating factors | 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 safe
3.2 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 safe
3.3 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 other train crew and relevant personnel | 4.1 Safe operation and monitoring of the motive power unit is maintained in collaboration with other members of the train crew, train controllers and other relevant personnel as per workplace requirements and the principles of rail resource management
4.2 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 procedures and the principles of rail resource management |
| 5 Communicate with | 5.1 Regular communication is maintained with train crew, train |

ELEMENT	PERFORMANCE CRITERIA
train crew, train controllers and other personnel	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 5.2 Train crew, train controllers, drivers of other trains and other relevant personnel are advised of operational problems, delays, safety incident and emergency situations that may arise in the course of operation of the motive power unit 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
6 Follow all applicable rail regulatory requirements	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 6.2 Relevant rail regulatory requirement are applied and followed in the course of operation of the motive power unit 6.3 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

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 and local rail regulations and codes of practice as they relate to heritage railway operations
- 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, 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 on 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 other members of the train crew, train controllers and other 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 in the course of 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
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the operation and monitoring of a motive power unit
- Operate electronic communication equipment to required protocol
- Work collaboratively with others as part of a train crew
- 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

Required skills:

procedures

- Implement contingency plans for unplanned events
- Apply precautions and required action to minimise, control or eliminate hazards that may exist 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
- 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 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

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

EVIDENCE GUIDE

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:
 - 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:

- by day or night in all relevant weather conditions

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

- diesel MPUs
- electric MPUs
- railcars

Motive power equipment may include:

- auxiliary systems
- automatic control systems
- braking systems
- drive systems
- instrumentation
- manual controls
- remote train and signal control systems
- communication systems
- warning equipment
- power source
- vigilance systems

RANGE STATEMENT

Risk minimisation may require differentiating between faults, defects and deficiencies that:	• traction systems • head and marker lights • 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 • hand lamps • flags • safety devices • audible indicators • breathing equipment • fire extinguishers

RANGE STATEMENT

Information and documents may include:

- high visibility clothing
- hearing protection
- applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines
- 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 legislated rail safety requirements including acts and regulations from each 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

Applicable legislation, regulations and codes may include:

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

C - Vehicle Operation