



Australian Government

Department of Education, Employment and Workplace Relations

TLIC4019A Drive train to operational requirements

Release: 1

TLIC4019A Drive train to operational requirements

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to drive a train to operational requirements in accordance with safeworking and regulatory requirements and workplace procedures. This includes applying train management techniques to manage the movement of a train and, as the driver of a motive power unit, to conduct all movements and related activities required to achieve operational requirements. It also includes responding effectively to external factors and emergencies, handing over a train to a relief crew and stabling it at the end of a journey. 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 legislated rail safety requirements including acts and regulations from each applicable 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 the driving of trains as part of workplace activities across a variety of operational contexts within 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 Drive train efficiently and effectively	1.1 Motive power unit is operated in accordance with the relevant codes of practice, workplace procedures and instructions 1.2 Motive power unit is operated safely within track/road characteristics and conditions and to minimise wear and fuel use and avoid damage 1.3 Train is driven with due care for passenger comfort and/or condition of freight 1.4 Performance of equipment and rolling stock is monitored to maintain optimum running conditions and identify faults, defects and inefficiencies 1.5 Relevant codes of practice, OH&S and environmental requirements are followed to prevent injury and damage
2 Complete train journey in accordance with operational requirements	2.1 Train documentation is received, interpreted and followed 2.2 Train is operated in accordance with documentation and procedures 2.3 Events and circumstances affecting planned running schedule are communicated to relevant personnel en route 2.4 Relevant codes of practice, safeworking and signalling requirements are followed throughout train operations 2.5 Train control other instructions are received, interpreted and applied to ensure safe and effective control of the train 2.6 Communications are maintained with train control and other relevant personnel during the train journey in accordance with the relevant codes of practice and safeworking systems 2.7 Instructions concerning train operation are given to relevant personnel to ensure safe and efficient running
3 Respond to changed external operating factors	3.1 Instructions regarding changed external operating factors are verified, 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 3.2 Fixed and hand signals and verbal movement commands are interpreted and followed, in accordance with relevant codes of practice, safeworking systems&organisational policies&procedures, to ensure that actions taken are appropriate&safe 3.3 Hazardous situations are recognised and appropriate action is taken to minimise risk to passengers/freight and equipment 3.4 Emergency situations are recognised and actions are taken that are appropriate and safe
4 Prepare train for crew	4.1 Relevant personnel are advised of condition and location of the

ELEMENT	PERFORMANCE CRITERIA
hand-over	train 4.2 Documentation is updated and faults identified en route are reported to relevant personnel in accordance with established policies and procedures 4.3 Incidents or unusual occurrences are recorded and reported to relevant personnel in accordance with workplace policies and procedures
5 Stable train	5.1 Location for stabling of the train is confirmed with relevant personnel 5.2 Train is shunted and secured in accordance with directions, workplace procedures and relevant rail regulations 5.3 Safety devices are activated or put in position to ensure the safety of personnel and equipment

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
- Operational instructions
- Motive power unit controls, instruments and indicators and their purpose, location and use
- Starting-up and shutting-down procedures
- Train driving procedures
- Braking and safety system procedures
- Operating controls to start, accelerate, decelerate and stop
- Techniques and procedures for complying with speed and load limits
- Processes for adjusting controls to maximise efficient and safe running
- Procedures for responding to hazardous situations and emergencies
- Procedures for operating and monitoring the performance of ancillary systems on a train
- Procedures for refuelling and lubricating a motive power unit (as applicable for various types of MPUs)
- Procedures for minor maintenance, cleaning, lubricating and servicing of motive power unit (as applicable)

REQUIRED KNOWLEDGE AND SKILLS

- Procedures for identifying equipment faults and defects and assessing for appropriate action
- Requirements for completing relevant documentation
- Train operating characteristics including: track and train dynamics, monitoring principles and procedures, load types and security, and signalling systems
- Motive power unit equipment and systems including: monitoring devices, braking and drive equipment, and ancillary systems
- Track and road characteristics including: track and bridge limitations, speed limitations, gauge limitation, curves and gradients, curfews, location of signals and crossings, emergency cross-overs, and yard and siding layouts
- Local procedures and operating requirements
- Typical defects that can occur on a motive power unit and related action that should be taken
- Procedures for operating 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:

- Communicate effectively with others when driving a train to operational requirements
- Read and interpret instructions, procedures, information and signs relevant to driving a train
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to the driving of a train to operational requirements
- 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 when driving a train to operational requirements
- Recognise problems that may arise when driving a train, and take appropriate action
- Check and replenish fluids and carry out lubrication processes in the course of train operations as per workplace requirements
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods, vehicles or equipment
- Adapt to differences in trains, associated motive power units and ancillary equipment
- Select and use required personal protective equipment conforming to industry and OH&S

Required skills:

standards

- Monitor train performance and security of load to facilitate optimum safe operation
- Apply information about the track or road to train operations
- Stable and secure a train
- Monitor journey schedule as per train documentation
- 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
 - 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:
 - driving train according to equipment and track/road characteristics
 - identifying typical faults/defects that may occur
 - monitoring equipment in accordance with organisational requirements

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:

EVIDENCE GUIDE

- 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 locomotives
 - electric locomotives
 - railcars
 - multiple units
 - electric multiple units
- Rolling stock includes:
- any rolling stock in service within Australian rail systems
- Safety devices can include:
- power brakes
 - hand brakes
 - chocks
 - lock-out equipment to prevent train from moving
 - emergency and safety equipment such as vigilance control and deadman relays
- Track and road characteristics include:
- track and bridge limitations
 - speed limitations
 - gauge limitation
 - curves and gradients
 - curfews
 - location of signals and crossings

RANGE STATEMENT

- Relevant personnel can include:
- emergency cross-overs
 - train controllers
 - train examiners
 - maintenance personnel
 - train crews
 - yard and other operational personnel
 - those providing operational assistance
 - signals staff
 - passengers
 - station staff
- Communication protocols may include:
- general safety
 - emergency messages
 - testing communications equipment
 - transmitting and receiving messages
 - identification
 - standard radio terms
 - phonetic alphabet
 - spoken figures
- Communications equipment may include:
- oral, aural or signed communications
 - hand-held or portable two-way radio equipment
 - fixed and mobile telephone equipment
 - Direct Traffic Control (DTC) communications
- Depending on the type of organisation concerned workplace procedures may be called:
- standard operating procedures
 - company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - site procedures
- Information and documents may include:
- motive power unit log book
 - train running sheets
 - time sheets
 - roadworthy certificate
 - equipment operation manuals and maintenance specifications
 - emergency procedure manuals relevant maintenance specifications
 - two-way radio operation procedures
 - maintenance notices, records and requests
 - isolation and lock-out procedures
 - procedures for using protective clothing and equipment

RANGE STATEMENT

- Applicable legislation, regulations and codes may include:
- specified operating limits for motive power units
 - local instructions
 - emergency procedures manual
 - 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 legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field C - Vehicle Operation