



Australian Government

Department of Education, Employment and Workplace Relations

TLIB2104A Identify, diagnose and rectify faults on electric passenger trains

Release: 1

TLIB2104A Identify, diagnose and rectify faults on electric passenger trains

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to identify, diagnose and rectify faults on electric passenger trains in accordance with safeworking and regulatory requirements and workplace procedures. It includes identifying maintenance and/or repair requirements, conducting minor maintenance and routine repairs, and checking and reporting minor repairs and/or maintenance in accordance with workplace procedures. Licensing or certification requirements are not applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with workplace procedures and the regulations and safeworking codes of practice relevant to fault diagnosis and rectification.

Work is generally performed without supervision and within a team environment. It involves the application of routine fault identification, diagnosis and rectification procedures to maintain the safety and operation of equipment on electric passenger trains operating within Australian rail systems.

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 Identify/diagnose faults	1.1 Electric passenger train and equipment is monitored for potential faults 1.2 Faulty or damaged components or equipment are identified and assessed 1.3 Where fault can be rectified, equipment and/or tools required are identified and obtained 1.4 Where fault or component is to be repaired/replaced, work area and equipment are prepared and made safe for repair/component exchange activities
2 Carry out fault rectification/repairs	2.1 Rectification/repair/component exchange is carried out to comply with workplace procedures 2.2 Where used, equipment, tools and materials required are operated, applied and handled to conform to OH&S requirements and manufacturers specifications to prevent injury and damage 2.3 Activities are carried out in accordance with OH&S and workplace procedures
3 Check and report rectification/repairs	3.1 Rectification/repair/component exchange activities are checked for compliance with safety requirements and workplace procedures 3.2 Equipment is checked to confirm that it has been restored to operational standards 3.3 Rectification/repair/component exchange activities are reported and accurately documented in appropriate records or log books

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant state regulations, codes of practice and safeworking system requirements
- Relevant OH&S and environmental protection requirements
- Workplace procedures and policies for the identification, diagnosis and repair of faults
- Typical repair problems that can occur and related action that should be taken
- Tools/equipment used when identifying, diagnosing and rectifying faults, and the procedures and precautions for their care, use and storage
- Workplace documentation and records requirements

REQUIRED KNOWLEDGE AND SKILLS

- Procedures to be followed in the event of an emergency

Required skills:

- Communicate effectively with others when identifying, diagnosing and rectifying faults
- Read and interpret instructions, procedures, information and signs relevant to the identification, diagnosis and rectification of faults
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to identifying, diagnosing and rectifying faults
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when identifying, diagnosing and rectifying faults
- Promptly report when identifying, diagnosing and rectifying faults in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unplanned events that may occur when identifying, diagnosing and rectifying faults
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
- Monitor work activities in terms of planned schedule
- 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 equipment
- Operate and adapt to differences in equipment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Monitor performance of equipment

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

- 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

EVIDENCE GUIDE

unit

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:
 - identifying typical faults that may occur on electric passenger trains
 - correctly rectifying a range of faults on an electric passenger train
 - explaining and/or demonstrating procedures for reporting faults and inoperable equipment

EVIDENCE GUIDE

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:
 - 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, 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.

Types of trains may include:

- any electric passenger trains in service within Australian rail systems

Operations may be conducted:

- by day or night
- in all weather conditions.
- in exposed conditions and controlled or open environment

Fault rectification/repair component exchange may include:

- minor component change out
- diagnosing faults
- replacing faulty/damaged/worn equipment
- resetting circuit breakers

RANGE STATEMENT

- operating isolating taps/cocks
- resetting safety apparatus
- isolating faulty components
- tying up loose equipment
- operating diagnostic equipment

RANGE STATEMENT

- Safety equipment may include:
- high visibility clothing
 - sunscreen and sun glasses
 - insect repellent
 - gloves and footwear
 - portable radios
 - flags and hand lamps
 - safety glasses
 - safety devices
- Environmental hazards may include:
- leaking oil or gases
 - noise from defective or inappropriately adjusted equipment
- Consultative processes may include:
- supervisors and managers
 - union representatives
 - fitters/maintenance staff
 - train examiners
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established or standard procedures
- Contingency processes may relate to:
- personal injury
 - tool malfunctions or loss
- Information/records may include:
- workplace operational and technical instructions and procedures for the identification, diagnosis and rectification of faults
 - records for the identification, diagnosis and rectification of faults
 - tool/equipment manufacturers instructions, specifications and recommended procedures
 - precautions and procedures to be adopted to protect the environment when identifying, diagnosing and rectifying minor faults
 - OH&S procedures
 - relevant Australian standards and certification requirements
 - emergency procedures
 - award, enterprise bargaining agreement, other industrial arrangements
- Applicable regulations and legislation may include:
- relevant state regulations, codes of practice and safeworking system requirements
 - relevant state OH&S legislation

RANGE STATEMENT

- relevant state environmental protection legislation
- workplace relations regulations including equal opportunity, equal employment opportunity and affirmative action legislation
- workers compensation regulations

Unit Sector(s)

Not Applicable

Competency Field

Competency Field B - Equipment Checking and Maintenance