



Australian Government

TLIF5023A Undertake a derailment investigation

Release 1

TLIF5023A Undertake a derailment investigation

Modification History

Release 1. This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to undertake a derailment investigation in accordance with legislative and regulatory requirements. It includes preparing for a derailment investigation, determining potential contributory factors, planning for derailment investigation report requirements, and investigating a derailment.

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

Application of the Unit

This unit applies to people with the responsibility for rail operation management.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Nil

Employability Skills Information

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

- | | | |
|---|-----|---|
| 1 Prepare for derailment investigation | 1.1 | Derailment investigation definitions are identified and explained |
| | 1.2 | Principles of systematic investigation to be employed in derailment investigation are identified and followed |
| | 1.3 | Purpose and objectives of derailment investigation are identified and documented in accordance with organisational and regulatory requirements |
| | 1.4 | Types of data to be collected in order to conduct derailment investigation are identified and documented |
| | 1.5 | Types of evidence to be collected during derailment investigation are identified and documented |
| 2 Determine potential contributory components of the rail system to the derailment | 2.1 | Track structure and track components that may have contributed to derailment are identified in accordance with organisational and regulatory requirements |
| | 2.2 | Rolling stock involved in derailment is identified in accordance with organisational and regulatory requirements |
| | 2.3 | Normal operation of rolling stock at derailment site is outlined in accordance with organisational and regulatory requirements |
| | 2.4 | Safeworking systems in operation at derailment site are explained |
| 3 Plan for derailment investigation report requirements | 3.1 | Methods by which evidence will be gathered are outlined |
| | 3.2 | Appropriate report structure is determined |
| | 3.3 | Timelines for conducting investigation and producing report are established |
| | 3.4 | Equipment required to conduct derailment investigation is identified and accessed |
| 4 Investigate derailment | 4.1 | Resources required to undertaken rail derailment investigation are acquired |
| | 4.2 | Evidence is gathered in accordance with identified methods and required timelines |
| | 4.3 | Rail derailment investigation report is drafted, reviewed and finalised in accordance with organisational and regulatory requirements |
| | 4.4 | Rail derailment investigation report is completed and submitted in accordance with organisational and regulatory requirements |

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Evidence collection and analysis techniques
- Evidence preservation techniques
- Rail safeworking systems
- Relevant legislation and regulations related to rail operations
- Rolling stock operations including traction systems, braking systems, inspection regimes
- Signalling systems
- Track components and dynamics
- Wheel-track interface management

Required skills:

- Communicate effectively with others when undertaking a derailment investigation
- Read and interpret documentation and the organisation's rail safety compliance system and apply them to a derailment investigation
- Recognise non-conformance with rail safety requirements and take appropriate action in accordance with organisational policies and procedures
- Record and preserve evidence
- Work collaboratively with employees and other management staff when undertaking a derailment investigation

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 competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include demonstration of applying:

- required knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement.

Assessment must include exercises that demonstrate competent performance of the following in a range of situations:

- planning a derailment investigation
- evidence preservation and collection
- producing a derailment investigation report.

Context of and specific resources for assessment

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

Resources for assessment include access to:

- a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
- 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

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

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Definitions may include:

- mechanisms of derailment
- types of derailments

Types of data may include:

- dynamic data
- static data

Evidence may include:

- available
- perishable
- retrievable

Track structure may include:

- geometry
- support systems

Track components may include:

- anchors
- fastenings
- rail
- sleepers
- track furniture

Unit Sector(s)

Not applicable.

Competency Field

F – Safety Management