



Australian Government

TLIW3013 Grind switches and crossings

Release: 1

TLIW3013 Grind switches and crossings

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to grind switches and crossings in accordance with rail industry standards, safeworking and regulatory requirements, and workplace procedures.

It includes determining job requirements, grinding weld and/or weld repair, grinding switches and crossings to repair surface defects, and completing all required documentation.

People achieving competence in this unit will need to fulfil the applicable state/territory legislated rail safety requirements and to comply with relevant codes of practice and/or guidelines.

Work is performed under some supervision, generally within a team environment. It involves the application of routine operational principles and procedures when grinding switches and crossings, as part of workplace activities across a variety of operational contexts within the Australian rail system.

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

Pre-requisite Unit

Not applicable.

Competency Field

W – Equipment and Systems Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Determine job requirements

- 1.1 Weld repairs are located
- 1.2 Defects relating to rail surface profile and condition in switches and crossings are identified
- 1.3 Hazards are identified, risks are assessed and control measures are implemented
- 1.4 Appropriate equipment is selected
- 1.5 Appropriate repair method and/or profile is selected to ensure completed work will meet specifications
- 1.6 Site is cleared of obstructions and combustible material

2 Grind weld repair

- 2.1 Switch or crossing is ground to nominated profile after installation or welded repair using approved equipment in accordance with workplace procedures
- 2.2 Grinding equipment is operated safely in accordance with work health and safety (WHS)/occupational health and safety (OHS) and environmental requirements
- 2.3 Switch or crossing profile and alignment are measured to ensure compliance with acceptance standards
- 2.4 Rail surface condition is assessed for compliance with acceptance standards

3 Grind switch or crossing to repair surface defects

- 3.1 Switch or crossing is ground using approved equipment in accordance with workplace procedures
- 3.2 Grinding equipment is operated safely in accordance with WHS/OHS and environmental requirements
- 3.3 Finished surface is checked to ensure compliance with acceptance standards

4 Complete documentation

- 4.1 Required documentation procedures and processes are confirmed
- 4.2 Documentation is filled in legibly and proofread
- 4.3 Documentation is processed in accordance with workplace requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to TLIW3013A Grind switches and crossings.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIW3013 Grind switches and crossings

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on **at least five** separate occasions and include:

- applying grinding techniques to achieve switch and crossing profile and surface condition to meet required rail industry standards and workplace procedures
- applying relevant safeworking system and workplace procedures
- grinding weld repairs using appropriate grinding wheel speed and rate of metal removal in accordance with workplace procedures
- identifying job hazards and taking required action to minimise, control or eliminate identified hazards
- implementing contingency plans
- interpreting and following operational instructions and prioritising work
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring work activities in terms of planned schedule
- operating and adapting to differences in equipment in accordance with operating procedures
- operating grinding equipment safely
- reading and interpreting relevant technical data, drawings, instructions and manuals
- reporting and/or rectifying identified problems, in accordance with workplace procedures
- selecting and using hand tools, power tools and equipment in accordance with workplace procedures
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- grinding methods and results
- hazards that may exist when grinding switches and crossings, and ways of controlling the risks involved
- problems that may occur when grinding switches and crossings, and action that can be taken to report or resolve these problems
- relevant rail industry standards for switch or crossing profile and surface condition
- relevant recording and documentation procedures
- relevant safety, work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- workplace procedures for grinding switches and crossings.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

Assessment must occur in workplace operational situations or, where this is not available, in simulated workplace operational situations that replicate rail corridor workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment include:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, regulations, rail industry standards, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>