



**Australian Government**

# **TLIW3016 Weld rail using flashbutt welding process**

**Release: 1**

# TLIW3016 Weld rail using flashbutt welding process

## 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 weld rail using the flashbutt welding process in accordance with safeworking and regulatory requirements, and workplace procedures.

It includes performing pre-operational and post-operational equipment checks, preparing rail for welding, carrying out flashbutt welding, checking weld conformance 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 welding rail using the flashbutt welding process, as part of workplace activities across a variety of operational contexts within the Australian rail system.

Operators of mechanised equipment must have undertaken training and, where appropriate, hold the relevant licence, permit or certificate and be recognised as competent for the class of machinery being used.

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.

- |   |   |
|---|---|
| <b>1 Perform pre-operational equipment checks</b> | <p>1.1 Detailed pre-operational equipment checks are conducted in accordance with manufacturer specifications and/or local maintenance schedules</p> <p>1.2 Deficiencies with equipment are identified and rectified in accordance with workplace procedures</p> <p>1.3 Relevant persons are notified of problems and documentation is completed</p>  |
| <b>2 Prepare rail for welding</b>                 | <p>2.1 Weld location is checked to confirm suitability for welding in accordance with workplace standards</p> <p>2.2 Track preparation for welding is arranged as required in accordance with workplace procedures and standards</p> <p>2.3 Rail ends are prepared for welding in accordance with workplace procedures and standards</p>  |
| <b>3 Carry out flashbutt welding</b>              | <p>3.1 Flashbutt welding equipment is prepared for use</p> <p>3.2 Flashbutt welding unit is clamped to rail ensuring accurate alignment</p> <p>3.3 Equipment is operated in accordance with machine operation instructions and workplace procedures to achieve appropriate quality standard</p> <p>3.4 Warning systems are monitored and appropriately responded to during operation to maintain correct functionality of equipment</p> <p>3.5 Track restoration is arranged as required in accordance with workplace procedures and standards</p> <p>3.6 Weld is profile-ground to ensure smooth running surface in accordance with workplace procedures and standards</p> |
| <b>4 Check weld conformance</b>                   | <p>4.1 Finished ground weld area is visually inspected for surface finish and defects</p> <p>4.2 Finished ground weld area is checked for conformance to rail profile and geometry acceptance standards</p>   |
| <b>5 Perform</b>                                  | <p>5.1 Post-operational equipment checks are conducted to identify</p>  |

<b>post-operational equipment checks</b>		defects and maintenance requirements, in accordance with manufacturer specifications or local maintenance schedules
	5.2	Deficiencies with equipment are identified and rectified in an appropriate manner to maintain correct functionality of equipment
	5.3	Relevant persons are notified of problems and/or documentation is completed in accordance with instructions and relevant codes of practice
<b>6 Complete documentation</b>	6.1	Required documentation and/or record keeping procedures and processes are confirmed
	6.2	Documentation and/or records are filled in legibly and proofread
	6.3	Documentation and/or records are processed in accordance with workplace procedures

## 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 TLIW3016A Weld rail using flashbutt welding process.

## **Links**

Companion Volume implementation guides are found in VETNet -

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