



**Australian Government**

# **TLIW0001 Apply rail grinding fundamentals**

**Release: 1**

# TLIW0001 Apply rail grinding fundamentals

## 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 apply rail grinding fundamentals in accordance with rail network standards, safeworking and regulatory requirements, and workplace procedures.

It includes determining job requirements, grinding rail to repair surface defects, and completing all required documentation. This unit relates to the grinding of new welds and weld repairs, wheel burns, rail batter and overflow in plain track.

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 supervision, generally within a team environment. It involves the application of routine operational principles and procedures when grinding rail and welds, 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

Rail sector.

## Elements and Performance Criteria

### ELEMENTS

### PERFORMANCE CRITERIA

Elements describe the essential    Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

- |                                                  |                                                                                                                                  |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Identify rail grinding components</b>       | <b>1.1</b> Basic track and grinding terminology are explained                                                                    |
|                                                  | <b>1.2</b> Fundamental grinding components are identified and their purpose is explained                                         |
| <b>2 Identify rail grinding job requirements</b> | <b>2.1</b> New welds and weld repairs are located                                                                                |
|                                                  | <b>2.2</b> Hazards are identified, risks are assessed and control measures are implemented                                       |
|                                                  | <b>2.3</b> Appropriate grinding equipment is selected and checked for correct operations in accordance with workplace procedures |
|                                                  | <b>2.4</b> Appropriate grinding wheel speed and rate of metal removal is selected in accordance with workplace procedures        |
|                                                  | <b>2.5</b> Appropriate repair method is selected to ensure completed work will meet specifications                               |
|                                                  | <b>2.6</b> Site is cleared of obstructions and combustible material                                                              |
| <b>3 Grind rail weld and/or weld repair</b>      | <b>3.1</b> Rail is ground to specification using approved equipment in accordance with workplace procedures                      |
|                                                  | <b>3.2</b> Grinding equipment is operated safely in accordance with workplace and environmental requirements                     |
|                                                  | <b>3.3</b> Rail surface condition is assessed for compliance with rail network standards                                         |
| <b>4 Complete documentation</b>                  | <b>4.1</b> Required documentation procedures and processes are confirmed                                                         |
|                                                  | <b>4.2</b> 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.

## Unit Mapping Information

This is a new unit. No equivalent unit.

## 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 TLIW0001 Apply rail grinding fundamentals

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## 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 three separate occasions and include:

- applying fundamental grinding techniques to meet requirements of rail network standards and workplace procedures
- applying relevant workplace procedures
- grinding welds and weld repairs using appropriate grinding wheel speed and rate of metal removal
- identifying job hazards and taking required action to minimise, control or eliminate identified hazards
- identifying job requirements
- operating grinding equipment safely
- reporting and/or rectifying identified problems, faults or malfunctions, 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:

- accepted rail network standards for rail grinding
- documentation requirements
- grinding methods and results
- hazards that may exist when grinding rail and welds, and ways of controlling the risks involved
- manufacturer instructions and workplace procedures for operating grinding equipment
- problems that may occur when grinding rail and welds, and actions that can be taken to report or resolve these problems
- relevant rail safety, work health and safety (WHS)/occupational health and safety (OHS) and environmental procedures and regulations
- workplace procedures for grinding rail and welds.

## Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate rail 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 must include:

- relevant and appropriate materials, tools, grinding equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including workplace procedures, regulations, rail network standards, codes of practice and operation manuals.

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