



**Australian Government**

# **TLIS3010 Test rail using ultrasonic equipment**

**Release: 2**

# TLIS3010 Test rail using ultrasonic equipment

## Modification History

**Release 2.** This is the second release of this unit of competency in the TLI Transport and Logistics Training Package:

- Minor statement changes in Assessment Conditions.

**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 test plain rail and field welds using ultrasonic equipment in accordance with rail industry standards, safeworking and regulatory requirements, and workplace procedures.

It includes determining test requirements, conducting testing using hand directed equipment, conducting visual examination and measurement of welds, identifying and classifying 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 testing rail using ultrasonic equipment, 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

S – Construction and Installation

## Unit Sector

Rail sector.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

### PERFORMANCE CRITERIA

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

- |                                                                       |                                                                                                                                                                                       |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Determine test requirements</b>                                  | <b>1.1</b> Hazards are identified, risks are assessed and control measures are implemented                                                                                            |
|                                                                       | <b>1.2</b> Test site is identified and prepared using appropriate procedures and materials                                                                                            |
|                                                                       | <b>1.3</b> Preparation processes are carried out in accordance with relevant procedures, statutory and work health and safety (WHS)/occupational health and safety (OHS) requirements |
| <b>2 Conduct testing using hand directed equipment</b>                | <b>2.1</b> Most appropriate ultrasonic test for the application is selected                                                                                                           |
|                                                                       | <b>2.2</b> Testing equipment is selected and prepared in accordance with rail industry standards and workplace procedures                                                             |
|                                                                       | <b>2.3</b> Ultrasonic test is carried out in accordance with relevant standards, specifications and WHS/OHS requirements                                                              |
|                                                                       | <b>2.4</b> Ultrasonic testing equipment is checked for proper function, maintained and stored in accordance with procedures, WHS/OHS requirements and manufacturer instructions       |
| <b>3 Conduct visual examination and measurement of rail and welds</b> | <b>3.1</b> Rail and welds are visually assessed for obvious defects                                                                                                                   |
|                                                                       | <b>3.2</b> New welds are assessed for alignment and adjustment tolerance in accordance with standards and/or procedures                                                               |
|                                                                       | <b>3.3</b> Weld repairs are assessed for alignment tolerance in accordance with standards and/or procedures                                                                           |
| <b>4 Identify and classify defects</b>                                | <b>4.1</b> Indications are assessed and defects detected in accordance with standards and/or procedures                                                                               |
|                                                                       | <b>4.2</b> Defects are classified in accordance with standards                                                                                                                        |

and/or procedures

- 4.3** Defective welds and weld repairs are marked in accordance with standards and/or procedures

- 5 Complete documentation 5.1** Test results are reported in accordance with standards and/or procedures

- 5.2** Documentation requirements are confirmed, in accordance with workplace procedures

- 5.3** Documentation is filled in legibly and proofread

- 5.4** Documentation is 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.

## Unit Mapping Information

This unit replaces and is equivalent to TLIS3010A Test rail using ultrasonic equipment.

## Links

Companion Volume Implementation Guides are found in VETNet -

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