



Australian Government

TLIW3035 Heat and cut materials using oxy-LPG equipment for the rail industry

Release: 1

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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 heat and cut materials for the rail industry using oxy-LPG equipment.

It includes planning and preparing for work, setting up and testing the equipment, heating and cutting materials, shutting down equipment and completing clean-up activities.

People achieving competence in this unit will need to fulfil applicable state/territory legislated work health and safety (WHS)/occupational health and safety (OHS) requirements and rail safety requirements, and to comply with relevant codes of practice and/or guidelines.

Work involves heating and cutting steel and includes cutting up waste for salvage; cutting steel, rails and bolts; and cutting holes in plate (with the exception of structural steel members). Heating activities include steel and bolts (excluding structural steel members).

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 Plan and prepare for work**
- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied to the scope of work to be performed
 - 1.2 Safety and WHS/OHS requirements are followed in accordance with safety plans and organisational policies
 - 1.3 Signage and barricade requirements are identified and implemented as required
 - 1.4 Plant, tools and equipment consistent with the requirements of the job are selected, checked for serviceability, and faults are rectified or reported prior to commencement
 - 1.5 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use
 - 1.6 Environmental requirements are identified and work is carried out in accordance with environmental plans, and statutory and legislative authority obligations
- 2 Set up and test equipment**
- 2.1 Appropriate type of fire extinguisher is selected and located to be readily accessible prior to and during operations
 - 2.2 Regulators are attached to oxy-LPG bottles in accordance with manufacturer specifications and WHS/OHS regulations
 - 2.3 Lines are purged to manufacturer recommendations prior to lighting up
 - 2.4 Equipment is tested for leaks and corrective action is undertaken or faults are reported
 - 2.5 Correct pressures and cutting tips are selected in accordance with material to be heated or cut and manufacturer specifications
- 3 Heat and cut material**
- 3.1 Material is accurately marked and secured or clamped ready for cutting
 - 3.2 Torch is lit correctly and safely in accordance with manufacturer specifications
 - 3.3 Setting of flame is adjusted for cutting in accordance with manufacturer recommendations
 - 3.4 Heat is applied to specified material and weakening effects of the heating process are minimised

- 3.5 Correct cutting position is adopted during cutting to set out mark
- 3.6 Material is correctly cooled
- 4 Shut down equipment and clean up**
 - 4.1 Torch is switched off in accordance with manufacturer specifications
 - 4.2 Gas supply is shut off in accordance with manufacturer specifications
 - 4.3 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification
 - 4.4 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and organisational policies and procedures
- 5 Complete documentation**
 - 5.1 Required documentation procedures and processes are confirmed
 - 5.2 Documentation is filled in legibly and proofread
 - 5.3 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.

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

Unit Mapping Information

This unit replaces and is equivalent to TLIW3035A Heat and cut materials using oxy-LPG equipment for the rail industry.

Links

Companion Volume implementation guides are found in VETNet -

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