



Australian Government

AURVTW006 Carry out thermoplastic welding on vehicle trim components

Release: 1

AURVTW006 Carry out thermoplastic welding on vehicle trim components

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to carry out thermoplastic welding on vehicle trim components. It involves preparing for the task, selecting and using thermoplastic welding equipment, setting equipment temperature, selecting and using suitable personal protective equipment (PPE), completing thermoplastic welds to vehicle manufacturer and customer specifications, finishing weld to pre-paint condition, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry.

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

Competency Field

Vehicle Body

Unit Sector

Technical - Welding, Grinding, Machining and Soldering

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to weld	1.1 Job requirements are determined from workplace instructions 1.2 <i>Welding information</i> is accessed and interpreted 1.3 Materials for thermoplastic welding are selected and inspected

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	for quality 1.4 Hazards associated with the work are identified and risks are managed 1.5 Thermoplastic welding tools and equipment and PPE are selected and checked for serviceability 1.6 Work is planned to minimise waste and use time efficiently
2. Carry out thermoplastic welding activities	2.1 Work area and fume extraction system are prepared ready for thermoplastic welding 2.2 Thermoplastic welding equipment is set up and adjusted for specific job requirement following vehicle manufacturer specification 2.3 Reinforcement methods are applied to ensure pre-damage strength 2.4 Thermoplastic welding equipment is used according to workplace procedures and <i>safety and environmental requirements</i> 2.5 Thermoplastic weld is finished to pre-paint condition and completed without causing damage to vehicle or components 2.6 Completed thermoplastic weld is inspected for quality and faults are identified and rectified as required and according to workplace procedures
3. Complete work processes	3.1 Final inspection is made to ensure work meets workplace expectations and component is presented ready for use 3.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected and stored 3.3 Tools and equipment are checked, reported if faulty, and stored according to workplace procedures 3.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.

Skills	Description
Writing skills to:	legibly and accurately fill out workplace documentation.
Oral communication skills to:	- clarify instructions and procedures - clearly report quality issues and job outcomes.
Numeracy skills to:	- use basic mathematical operations, including addition and subtraction, to: - calculate weld time - calculate thermoplastic welding measurements - mark out thermoplastic weld on trim material - calculate quantities of required materials - set and adjust thermoplastic welder settings.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use specialist thermoplastic welding equipment.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Welding information</i> must include:	- vehicle manufacturer specifications - workplace procedures - thermoplastic safety data sheets (SDS).
<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: - selecting and using PPE - using SDS for thermoplastics - manually handling vehicle components and welding equipment - using tools and equipment - using fume extraction equipment - environmental requirements, including procedures for trapping, storing and disposing of waste materials.

Unit Mapping Information

Equivalent to AURVTW3006 Carry out thermoplastic welding procedures

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURVTW006 Carry out thermoplastic welding on vehicle trim components

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- carry out thermoplastic welding procedures on three different vehicle trim components, in which the work must involve:
 - two different types of thermoplastics
 - one weld to a minimum of 50 mm in length.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to carrying out thermoplastic welding on vehicle trim components, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - using safety data sheets (SDS) for thermoplastics
 - manually handling vehicle components and welding equipment
 - using tools and equipment
 - using fume extraction equipment
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- vehicle manufacturer thermoplastic specifications
- type and use of fume extraction systems
- types and characteristics of plastics used in thermoplastic welding
- types and operation of thermoplastic welding equipment, including:
 - set-up

- operation
- methods and techniques for thermoplastic welding
- procedures for protecting vehicle and components during weld
- procedures for final inspection of thermoplastic weld.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the thermoplastic welding that they have carried out, e.g. work orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- SDS for thermoplastics
- PPE required for thermoplastic welding
- fume extraction systems
- consumables and materials to weld thermoplastic
- three different vehicle trim components specified in the performance evidence requiring thermoplastic welding
- thermoplastic welder
- tools, equipment and materials appropriate for carrying out thermoplastic welding.

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