



Australian Government

AURVTS104 Repair vehicle composite material components

Release: 1

AURVTS104 Repair vehicle composite material components

Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to repair components on vehicle bodies using composite materials. It involves preparing for the task, selecting and using specialist tools and equipment, identifying suitable composite materials, calculating material quantities, mixing and applying recommended composite materials to repair components according to workplace and customer specifications, and completing workplace processes and documentation.

This unit applies to those working in the automotive service and body repair industry.

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

Unit Sector

Vehicle Body Technical – Fabrication

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to repair vehicle composite material component	1.1 Use workplace instructions to determine job requirements 1.2 Access and interpret fibreglass and composite material repair information is accessed and interpreted from workplace procedures and manufacturer specifications 1.3 Identify, select and inspect composite materials for quality 1.4 Identify hazards associated with the work and manage risks 1.5 Check work area with approved ventilation for required operation and report faults to authorised personnel 1.6 Identify composite tools and equipment and personal protective equipment (PPE) and check for serviceability

ELEMENTS	PERFORMANCE CRITERIA
	1.7 Prepare work area and plan work to identify methods for repairing a vehicle using composite materials and to minimise waste
2. Carry out repair activities	2.1 Locate items to be repaired and assess damage or faults to determine repair methods 2.2 Set up tools and equipment and mix and prepare materials for use 2.3 Carry out repairs to composite material components according to workplace procedures and safety and environmental requirements 2.4 Apply reinforcement techniques to reinstate pre-damage strength to composite materials 2.5 Apply finishing techniques to present composite surfaces to manufacturer and workplace quality standards 2.6 Complete repairs to composite material components without causing damage to equipment and components
3. Complete work processes	3.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 3.2 Clear work area and dispose of or recycle materials according to workplace procedures 3.3 Complete documentation according to workplace procedures

Foundation Skills

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

SKILL	DESCRIPTION
Learning	• Locates required sources of information efficiently.
Numeracy	• Uses basic mathematical operations, including addition, subtraction, multiplication and division to: • calculate component surface area • calculate quantities of composite and fibreglass materials • Determines ratios and mixing percentages.
Oral communication	• Clarifies instructions and procedures • Reports quality issues and job outcomes clearly.
Planning and organising	• Plans own work requirements • Prioritises actions to achieve required outcomes

SKILL	DESCRIPTION
	Ensures tasks are completed within workplace timeframes.
Technology	Uses specialist composite material tools and equipment.

Unit Mapping Information

Supersedes and is equivalent to AURVTS004 Repair vehicle composite material components.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for AURVTS104 Repair vehicle composite material components

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- repair composite components of at least two different vehicles, including a repair to a different one of the following for each:
 - a 50 mm diameter hole
 - a 100 mm split.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to repair vehicle composite material components, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to repair vehicle composite material components, including:
 - establishing serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - disposal of excess materials
 - recycling procedures
- work health and safety (WHS) requirements relating to repairing vehicle composite material components, including procedures for:
 - selecting and using personal protective equipment (PPE)

- using tools and equipment
- satisfying ventilation requirements for work area
- using safety data sheets (SDS) for composite materials
- handling and storing hazardous resins and chemicals
- environmental requirements, including procedures for trapping, storing and disposing of resins, chemicals and waste materials produced during fabrication process
- fibreglass and composite material repair procedures and techniques, including:
 - types and application of specialist composite tools and equipment
 - composite material measuring equipment
 - specialist hand tools
 - types and features of fibreglass and composite materials including:
 - fibreglass matting
 - gel coats
 - release agents
 - resins
 - catalysts
 - cleaning materials
 - use of composite moulds required for support backing during repair
 - measuring and calculation techniques
 - surface preparation for composite repairs
 - mixing and applying composite materials according to manufacturer specifications
 - finishing techniques for composite surfaces
 - reinforcement methods to reinstate pre-damage strength
 - composite repair problems and resolution techniques
- procedures for final inspection of repaired composite component.

Assessment Conditions

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 vehicle components made of composite materials that they have repaired, e.g. repair 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
- PPE required to repair composite components

- SDS for composite materials
- composite materials
- two different vehicles requiring the composite component repairs specified in the performance evidence
- tools, equipment and materials appropriate for repairing vehicle composite material components.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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