



Australian Government

AURVTS003 Fabricate vehicle composite material components

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to fabricate components for automotive application, using composite materials such as fibreglass and carbon fibre. It involves preparing for the task, selecting and using specialist tools and equipment, identifying composite materials, calculating material quantities, mixing and applying recommended composite materials, finishing components to workplace and customer specifications, and completing workplace processes and documentation.

It applies to those working in the automotive body 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 - Fabrication

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 fabricate vehicle composite material component	1.1 Job requirements are determined from workplace instructions 1.2 <i>Composite information</i> is accessed and interpreted 1.3 Hazards associated with the work are identified and risks are managed

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.
	1.4 <i>Composite materials and equipment</i> and personal protective equipment (PPE) are selected and checked for serviceability 1.5 Component surface area is measured and calculated to determine required quantities of gel coat, resins, catalyst and matting 1.6 Work area with approved ventilation is checked for correct operation and faults are reported to authorised personnel 1.7 Work is planned to identify methods to fabricate component, minimise waste, and use time efficiently
2. Fabricate component	2.1 Equipment and materials are set up and prepared for use 2.2 Composite materials are mixed and applied according to manufacturer and equipment specifications to fabricate component 2.3 Component is fabricated using composite materials according to workplace procedures and <i>safety and environmental requirements</i>, and without causing damage to vehicle and equipment 2.4 Fabricated component is checked against job specifications and workplace quality requirements
3. Complete work processes	3.1 Final inspection is made to ensure work meets workplace and customer specifications, and components are 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 specifications and relevant 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, subtraction, multiplication and division to: - calculate component surface area - calculate quantities of composite materials - determine ratios and mixing percentages.
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 tools and 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>Composite information</i> must include:	- manufacturer specifications - composite material safety data sheets (SDS) - workplace procedures.
<i>Composite materials and equipment</i> must include:	- release agents - composite materials, including: - gel coats - resins - catalysts - composite matting - measuring equipment - composite specialist tools - mixing containers - moulds and jigs.
<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 tools and equipment

	• satisfying ventilation requirements for work area • using 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.
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Unit Mapping Information

Equivalent to AURVTS3003 Fabricate composite material components

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 AURVTS003 Fabricate vehicle composite material 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:

- fabricate two different vehicle composite components, in which the work must involve one air intake.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS), and occupational health and safety (OHS) requirements relating to fabricating 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
- types and features of composite materials
- fabrication methods and techniques, including:
 - hand and machine operations
 - mixing and measuring composite materials
 - mould and plug usage
- procedures for final inspection of fabricated composite components.

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 composite components that they have fabricated for vehicles, 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
- PPE required to fabricate composite components
- SDS for composite materials
- materials to fabricate composite components
- two different vehicle composite components to be fabricated
- tools, equipment and materials tools, equipment and materials appropriate for fabricating vehicle composite material components.

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