



Australian Government

AURVTN143 Identify and repair high strength aluminium components

Release: 1

AURVTN143 Identify and repair high strength aluminium 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 locate, identify and repair high strength aluminium (HSA) vehicle components, including advanced and ultra-high strength aluminium. This unit involves preparing for the task, selecting and using specialist tools and equipment and confirming recommended repair procedure from original equipment manufacturer (OEM) or authorised agency. It also involves selecting repair procedures and recommended welding method, removing and replacing HSA components, finishing HSA repairs to pre-paint condition, and completing workplace processes and documentation.

The unit 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.

Unit Sector

Vehicle Body Technical - Body

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. Locate OEM or authorised agency repair procedures	1.1 Determine job requirements from workplace instructions 1.2 Source, interpret and incorporate OEM or authorised agency repair procedures into planning process 1.3 Identify and manage hazards associated with the work 1.4 Select authorised repair tools, equipment and personal protective equipment (PPE) and check for serviceability 1.5 Identify and plan work to required HSA repair methods to minimise waste and use time efficiently

ELEMENTS	PERFORMANCE CRITERIA
2. Repair or replace HSA components	2.1 Protect sections not subject to repair, using approved methods and equipment 2.2 Identify HSA sections to be replaced and remove using OEM or authorised agency recommended removal methods and equipment, workplace procedures, and safety and environmental requirements 2.3 Restore damaged surfaces to a condition required for fitting replacement HSA components 2.4 Position vehicle measuring, or jigging equipment used in the replacement of HSA component according to OEM or authorised agency specifications 2.5 Protect or reapply OEM or authorised agency's surface coatings 2.6 Align and secure replacement HSA components within OEM or authorised agency's tolerances
3. Weld HSA components	3.1 Locate and check recommended welding equipment for HSA for correct operation according to OEM procedures 3.2 Conduct sample welds using recommended welding techniques, and perform inspection and destruction tests for defects according to workplace instructions 3.3 Refit HSA components using recommended repair methods, materials and equipment, and without causing damage to other systems or components 3.4 Follow grinding and drilling procedures according to OEM or authorised agency and weld material specifications
4. Complete work processes	4.1 Finish repairs to HSA components to pre-paint condition according to workplace and OEM or authorised agency repair procedures 4.2 Perform final inspection to ensure work meets workplace expectations and manufacturer specifications, and components are presented ready for painting 4.3 Clean work area, dispose of waste and non-recyclable materials, and collect and store recyclable material 4.4 Check tools and equipment, tag any faults, and store according to workplace procedures 4.5 Process workplace 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	- Sets and uses measuring equipment - Uses basic mathematical operations, including addition and subtraction, to calculate measurements and tolerances.
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 - Ensures tasks are completed within workplace timeframes.
Problem solving	Identifies defects, quality issues and potential problems associated with repairs to HSA components.
Technology	Uses specialist equipment.

Unit Mapping Information

New unit.

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 AURVTN143 Identify and repair high strength aluminium 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:

- identify and repair high strength aluminium (HSA) components to pre-paint condition on at least three different damaged vehicles.

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 identify and repair high strength aluminium components, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to identify and repair high strength aluminium 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 identifying and repairing HSA vehicle components, including procedures for:
 - selecting and using personal protective equipment (PPE)
 - manually handling vehicle components
 - using tools and equipment

- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- original equipment manufacturer (OEM) or authorised agency's:
 - vehicle specifications and measurements
 - approved repair procedures and quality processes
- HSA repair, replacement and welding methods and procedures, including:
 - HSA recommended tools and equipment, including welding equipment
 - types and location of HSA components
 - pre-repair destruction testing of welds on similar material
 - body and panel alignment
 - bonding, riveting and welding
- procedures for protecting vehicle and components during repair work
- procedures for final inspection of HSA repair.

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 damaged HSA vehicle components 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
- OEM or authorised agency's approved specifications and recommended repair procedures
- OEM or authorised agency's approved welding equipment
- PPE required to repair HSA components
- three different damaged vehicles requiring HSA component repairs
- tools, equipment and materials appropriate for identifying and repairing HSA vehicle components.

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

Links

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