



**Australian Government**

# **AUMGTS001 Prepare materials for fabrication using jigs and fixtures**

**Release: 1**

# AUMGTS001 Prepare materials for fabrication using jigs and fixtures

## Modification History

Release	Comment
Release 1	Unit updated to reflect the new standards for Training Packages Replaces AUMGTS3001 Prepare materials for fabrication using jigs and fixtures

## Application

This unit describes the performance outcomes required to prepare materials according to drawing specifications and then use jigs and fixtures to fabricate components.

It applies to those in an automotive manufacturing environment and involves the application of skills and knowledge at a production worker level.

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

## Competency Field

Manufacturing - Bus, Truck and Trailer

## 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 italicised text is used, further information is detailed in the range of conditions section
1. Plan and prepare	<ul style="list-style-type: none"><li>1.1 Hand tools, equipment and <b>resources</b> are selected and inspected, and faults are repaired or reported</li><li>1.2 Appropriate lifting equipment is selected and used according to <b>workplace procedures</b></li><li>1.3 Work information and working drawings are identified and confirmed</li></ul>

Elements	Performance Criteria
2. Select and mark out materials	2.1 Work health and safety (WHS) requirements and workplace procedures are identified and followed 2.2 Materials are selected, marked out and prepared according to job specifications 2.3 Defective materials are set aside for scrap or rework
3. Load and unload materials onto jig or fixture	3.1 Material and parts are positioned and secured in jig to prevent movement 3.2 Materials and parts are loaded and unloaded into jig according to WHS requirements and workplace procedures
4. Fabricate parts	4.1 Materials are shaped to fit jig and checked against job specifications 4.2 Materials positioned in jig are bolted or welded according to job specification 4.3 Fabrication process is completed according to workplace procedures 4.4 Fabricated components are removed from jig and checked for compliance, and faulty components are returned for rework
5. Complete work processes	5.1 Work area, jigs, tools and equipment are cleaned, maintained and inspected according to workplace procedures 5.2 Faulty equipment is identified, tagged and reported 4.3 Work sheets and production schedule are completed and given to appropriate personnel

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skills	Description
Reading skills to:	<ul style="list-style-type: none"> <li>interpret workplace procedures, WHS requirements, workplace quality standards, job instructions and working drawings</li> <li>identify installation sequence.</li> </ul>
Writing skills to:	<ul style="list-style-type: none"> <li>complete production schedule documentation</li> <li>prepare work plan</li> <li>complete machine maintenance forms</li> <li>complete faulty equipment tags.</li> </ul>
Numeracy skills to:	<ul style="list-style-type: none"> <li>count parts and components to be placed into jig</li> <li>select and arrange correct size and amount of required fasteners</li> </ul>

	<ul style="list-style-type: none"> <li>• identify and adjust welder machine settings.</li> </ul>
Planning and organising skills to:	<ul style="list-style-type: none"> <li>• plan and assemble parts into jigs or fixtures</li> <li>• complete job to specification and timeline.</li> </ul>

## 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.

<b><i>Resources</i></b> must include:	<ul style="list-style-type: none"> <li>• jigs and fixtures</li> <li>• job specifications</li> <li>• lifting equipment</li> <li>• pre-formed parts</li> <li>• production materials and drawings</li> <li>• securing processes:</li> <li>• bolts</li> <li>• clamps</li> <li>• metal pins</li> <li>• work plans</li> <li>• workplace procedures.</li> </ul>
<b><i>Workplace procedures</i></b> must include:	<ul style="list-style-type: none"> <li>• procedures for recording and reporting the preparation of materials for fabrication using jigs and fixtures</li> <li>• use of tools and equipment for preparing materials for fabrication using jigs and fixtures</li> <li>• WHS requirements for preparing materials for fabrication using jigs and fixtures</li> <li>• workplace quality standards relevant to preparing materials for fabrication using jigs and fixtures.</li> </ul>

## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bd587669-08b3-4cd5-85f0-f9fa0c6304c1>