



Australian Government

Department of Education, Employment and Workplace Relations

AUMGTS3004 Fabricate parts for sub-assemblies

Release: 1

AUMGTS3004 Fabricate parts for sub-assemblies

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the application of the required skills and knowledge to produce, finish and test parts/components for sub-assemblies or specific customer orders. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	The unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the person's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains Employability Skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and operate welding equipment	1.1. Materials list is correctly read and interpreted 1.2. Appropriate welding equipment is selected to weld the required components 1.3. Welding equipment is inspected, tested and adjusted to ensure that it meets the specifications set for the required welds 1.4. Workflow and production schedules are maintained throughout and recorded as per organisation requirements
2. Weld components to form sub-assemblies	2.1. Components are welded at the predetermined points as specified in the relevant drawings 2.2. Welds are completed to the quality standards and specifications stated in the standard operating procedures 2.3. Welded parts are pry tested to ensure welds meet the quality and specifications stated in the standard operating procedures 2.4. Any faults are identified and rectified in accordance with organisation quality procedures
3. Assemble components to form sub-assemblies	3.1. Nuts, bolts, clips, screws and rivets are selected and tensioned to the specification stated in the standard operating procedures 3.2. Seals/sealing strips, spacers, adhesives and sealants are used to ensure assembled components are securely joined and free of leaks 3.3. Sub-assemblies are inspected for quality and against specification 3.4. Faulty/defect sub-assemblies are scrapped or reworked in line with organisation procedures
4. Complete final finish and testing of sub-assemblies	4.1. Final finishing of the sub-assemblies is performed to the required standard and specification 4.2. Final finished sub-assemblies are rechecked for quality against specification 4.3. Final finished sub-assemblies that are faulty/defected are scrapped or reworked in line with organisation procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- speak clearly and directly in order to inform appropriate personnel of work completed
- apply teamwork to a range of situations, including the assembling of components
- solve problems particularly in teams in order to meet performance indicators
- show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas
- access, interpret and apply information on relevant organisation policies, procedures and instructions, particularly to ensure faulty/defective sub-assemblies are scrapped or reworked where appropriate
- manage time when planning, preparing and organising work priorities
- take responsibility for organising own work priorities.

Required knowledge

- relevant Occupational Health and Safety and Environmental regulations and enterprise policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment. The specific regulations will vary according to the area of operation
- organisation technical work documentation covering procedures, specifications, schedules and work plans or equivalent
- organisation quality system documentation covering instructions, procedures, performance indicators and review processes or equivalent
- organisation cost minimisation/waste avoidance policies, procedures and practices
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution techniques
- welding principles and techniques (spot pedestal and portable; MIG; braze; seam; robotic; oxy-acetylene)
- types of welds - fillet; lap; edge; butt
- procedures for the safe and efficient use of welding equipment
- component assembly processes and production schedules
- identification and application of seals and fasteners
- organisation finishing processes
- procedures for the safe and efficient use of testing equipment
- quality standards
- manual handling processes.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- compliance with relevant legislative, regulations, standards, codes of practice and establish safe practices and enterprise policies and procedures for managing personal work priorities
- maintaining a working knowledge of current work systems and practices
- working and communicating effectively and positively with others involved in the work
- applying, within authority, the requirements of the job or work role in relation to:
 - achieving production goals
 - achieving work quality goals
 - responding positively to changing work requirements
 - contributing effectively to cost reduction initiatives
 - effectively applying problem solving techniques
- modify activities to cater for variations in workplace context and environment
- use welding equipment safely and efficiently to produce components / parts
- produce formed component/parts to meet the production schedule
- select and use appropriate seals and fasteners
- complete final finishing processes
- use testing equipment
- produce work flow records
- identify and mark faulty parts
- limit the number of faulty parts to less than quality standards
- apply company OH&S policy and procedures.

Context of and specific resources for assessment

- assessment of the competency should take place in a safe working environment in a passenger motor vehicle manufacturing plant or simulated environment using tools/equipment/machinery required for the production process without undue disruption to the production process
- assessment is to occur under standard and authorised work

EVIDENCE GUIDE	
	practices, safety requirements and environmental constraints.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • assessment may be applied under project related conditions (real or simulated) and require evidence of process • assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

<i>Organisation requirements</i> may include:	• access and equity principles and practices • environmental management (waste disposal, recycling and re-use guidelines) • emergency and evacuation procedures • equipment use procedures • ethical standards • legal obligations • maintenance and storage procedures • OHS requirements • organisational and site guidelines • policies and procedures relating to own role and responsibility • procedural manuals • quality assurance guidelines • quality and continuous improvement processes and standards • recording and reporting guidelines.
<i>Quality Standards</i> may include:	• penetration, fillet size, no undercut on edges, weld width and height, distortion control.
<i>Appropriate personnel</i> may include:	• clients and managers • supervisors • suppliers • team leaders • team members.
<i>Materials</i> may include:	• spanners; screw drivers; measuring equipment; impact guns; air blowers; sockets; torque wrenches; hammers; dollies; flippers; portable sanders/grinders; hand files; pedestal grinders.
<i>Testing</i> may be performed using:	• micrometers; templates; tapes; dial gauges; electronic equipment; hydraulic stretchers; presses; rams.

Unit Sector(s)

Unit sector	Technical - Fabrication
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Competency field

Competency field	Manufacturing - Bus, Truck and Trailer
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Co-requisite units

Not applicable.