



Australian Government

Department of Education, Employment and Workplace Relations

AUM8042B Prepare materials for fabrication using manual processes

Revision Number: 1

AUM8042B Prepare materials for fabrication using manual processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the application of the required skills and knowledge in the Bus/Truck/Trailer Manufacture and Assembly sectors required to interpret the drawings/specifications/materials list and prepare the materials for fabrication using manual processes. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
------------------------	--

Application of the Unit

Application of the unit	This unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge at a <i>specialist</i> level. These skills and knowledge are to be used within the scope of the person's job and authority.
--------------------------------	---

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil
---------------------------	-----

Employability Skills Information

Employability skills	This unit contains Employability Skills.
-----------------------------	--

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.
---	--

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and mark out materials	1.1. Drawings/specifications/materials lists are read and interpreted 1.2. Correct materials for job are selected 1.3. Appropriate transport equipment operated according to company procedures 1.4. Defective materials are set aside for scrap, return or rework 1.5. Job is marked out according to relevant drawing and appropriate final finish is considered (seams and blemishes)
2. Bend/shape material for fabrication	2.1. Appropriate tools are selected in accordance with job requirements 2.2. Distortion prevention measures are identified and applied in accordance with job requirements 2.3. Bend/shape processes are employed according to manufacturer and company procedures 2.4. Bent/shaped material is checked against job specification 2.5. Bending/shaping processes are completed in accordance with company OHS procedures
3. Record workflow and production schedules	3.1. Workflow and production schedules are recorded using the appropriate paper work 3.2. Workflow and production schedules are completed and maintained to ensure production targets are achieved 3.3. Deviations to work flow and production schedules are recorded and reported to the appropriate personnel for action

Required Skills and Knowledge

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
- enterprise technical work documentation covering procedures, specifications, schedules and work plans or equivalent
- enterprise quality system documentation covering instructions, procedures, performance indicators and review processes or equivalent
- enterprise 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.
- materials lists codes
- marking out and fabrication preparation techniques - straight line, template, geometric.

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 • interpret drawings/specifications/materials lists • identify materials • mark out materials • prepare materials for fabrication • employ distortion control techniques • check for squareness and alignment to work order specifications • produce work flow records - written / electronic • apply enterprise OHS 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

EVIDENCE GUIDE	
	disruption to the production process • assessment is to occur under standard and authorised work 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.

Legislative requirements and procedures may include:

Applicable legislation, regulations and codes of practice, including those related to:

- anti-discrimination
- award and enterprise agreements
- confidentiality and privacy
- duty of care
- employee relations
- environment protection
- equal opportunity
- industrial relations
- relevant industry codes of practice.

OHS requirements may include:

Legislation and regulations, organisational safety policies and procedures and may include: the use of personal protective equipment and clothing, rescue services, fire fighting organisation and equipment, first aid equipment, hazard and risk control and elimination, systems covering the use of hazardous materials and substances and manual handling procedures including lifting and carrying.

Organisation requirements 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

RANGE STATEMENT	
	- quality and continuous improvement processes and standards - recording and reporting guidelines.
Job context may include:	- Work areas including: - body construction, aluminium die casting, iron foundry operations, engine machining, spray painting, automotive plastics, stamping & press operations, fabrication hardware, trim manufacture, vehicle assembly, warehousing, engine assembly, seat frame manufacture Processes including: - welding sub-assemblies, fitting hang-on components, fittings dies to die boxes, pouring aluminium, machining parts, application of paint, cutting blanks, assembly of components to form sub-assemblies, fitting parts to bodies, assembly of parts, parts picking and replenishment.
Appropriate personnel may include:	- clients and managers - supervisors - suppliers - team leaders - team members.
Work quality goals may include:	those established within a quality system and may include identification, minimisation and elimination of defects, product/component specifications, tolerances, inspection systems, packaging specifications and non-conforming parts or products.
Changed work requirements may include:	- interruptions to parts supply/quality - line speed - personnel absences and the needing to fill production line gaps.
Cost reduction initiatives may include:	- continuous improvement programs - cost benchmarks - power conservation - productivity achievement - waste avoidance.
Sources of information may include:	- customer requirements - industry/workplace codes of practice

RANGE STATEMENT	
	• manufacturer specifications • organisational operating procedures • OHS legislation.
Resources may include:	• materials - aluminum, mild steel, stainless steel, preformed parts • securing processes - bolts, clamps, metal pins • transport equipment - use of cranes, hoists, tow motors and trolleys • jigs/fixtures • company documents to be completed - paper based / electronic • production drawings / specifications / materials lists • qualified workplace assessor • workplace or simulated workplace.

Unit Sector(s)

Unit sector	Automotive Manufacturing
--------------------	--------------------------

Competency field

Competency field	Truck/Bus/Trailer Manufacture and Assembly
-------------------------	--

Co-requisite units

Co-requisite units	Nil
---------------------------	-----