



Australian Government

Department of Education, Employment and Workplace Relations

DEFLS009B Manufacture, repair and alter aircraft related fabric components

Release: 1

DEFLS009B Manufacture, repair and alter aircraft related fabric components

Modification History

Not applicable.

Unit Descriptor

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This unit covers the competency required to manufacture fabric components from existing patterns, designs or technical drawings. Existing fabric components can be repaired or designs can be altered to suit customer requirements.

Application of the Unit

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The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package. This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s

LMTPTF05CA Operate and maintain sewing machines
LMFSF2002A Machine sew materials

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. Manufacture a fabric component	1.1 Technical instructions are identified and interpreted to ensure compliance in accordance with standard procedures 1.2 Detailed working plan is produced in accordance with standard procedures 1.3 Fabric component is assembled and fittings are attached in accordance with standard procedures 1.4 Aircraft related fabric components are presented for inspection by supervisor and work is not progressed until supervisor has completed inspections in accordance with standard procedures 1.5 Relevant documentation is completed in accordance with standard procedures
2. Repair a fabric component	2.1 Technical instructions are identified and interpreted to ensure faults are corrected in accordance with standard procedures 2.2 Fabric component is repaired in accordance with standard procedures 2.3 Supervisor inspections are completed in accordance with standard procedures 2.4 Relevant documentation is completed in accordance with standard procedures
3. Alter a fabric component to meet customer requirements	3.1 Customer is consulted to establish the requirements to alter the fabric component and to ensure defined outcomes are met 3.2 Identified alterations beyond own authority to alter are reported to supervisor 3.3 If required, a detailed working plan is produced in accordance with standard procedures 3.4 Fabric components are presented for inspection by supervisor in accordance with standard procedures to ensure customer requirements are met 3.5 Relevant documentation is completed in accordance with standard 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

- apply basic sewing techniques associated with the manufacture, repair and alteration of aircraft fabric components
- calculate dimension and allowable dimension variations
- handle, store and organise transport of equipment
- information technology skills to access and input to documentation
- interpret technical requirements
- liaise with outside agencies relating to manufacture, repair and alteration activities
- literacy skills for comprehending and interpreting documentation which may include:
 - aircraft documentation
 - maintenance documentation
 - survival and distress pyrotechnic documentation
 - maintenance and servicing schedules
 - flying schedules
 - technical publications
 - technical drawings
 - Material Safety Data Sheets (MSDS)
- operate and maintain personal protective equipment
- problem solving skills for a limited range of differing procedural circumstances
- raise and complete maintenance documentation
- read technical drawings
- use basic drawing tools
- use hand sewing techniques
- use mathematical ideas and techniques to correctly complete measurements and estimate fabric requirements and other material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid reworking and avoid wastage
- use relevant hand and power tools
- use the limited workplace technology related to cutting including tools, equipment, calculators and measuring devices
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity

Required Knowledge

- basic sewing techniques using AS 2860 1986
- construction principles of fabric components
- cutting equipment and techniques

REQUIRED SKILLS AND KNOWLEDGE

- different aviation trades and how they relate to each other
- design features of the finished items
- fabric types, common faults and inspection procedures
- geometric drawing processes and techniques
- impact of cutting on fabrics
- industrial sewing machine operation
- organisational and regulatory requirements relating to the design of aircraft and aircrew life support and associated equipment
- organisational procedures relating to the design of fabric components and the construction of fabric components
- quality systems and standards
- reading and interpreting specifications
- relevant OH&S regulations/requirements, equipment, material and personal safety requirements
- relevant safety precautions
- tool control procedures
- use of maintenance documentation
- textiles-stitch types-classification and terminology
- types of corrosion and contamination that may affect aircraft fabric components
- use of aviation industry documentation

Evidence Guide

EVIDENCE GUIDE

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EVIDENCE GUIDE

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

Assessment must confirm the ability to recognise limits of own authority; to correctly manufacture three fabric components from technical instructions using machine sewing and at least one other assembly method (hand sew, press fit, adhere or staple); to recognise a minimum of three faults and identify limits of repair for the fabric components; and to alter a fabric component to meet customer outcome.

Consistency in performance

Competency should be demonstrated over time with a range of assembly methods.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or in a simulated workplace environment.

Specific resources for assessment

Access to a sewing machine, hand tools, facilities and resources for manufacturing fabric components.

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.

Fabric components may include	Aircraft environmental protection sets and warning devices Aircraft life support equipment components Aircraft soft furnishings and associated trimming Aircrew personal fit and associated life support equipment Ground support equipment covers
Technical instructions may include	Aircraft operational requirements Job orders Manufacturers' specifications Maintenance manuals Modification instructions Technical drawings
Standard procedures may include	Australian Standards Equipment manufacturers' specifications and procedures Industry practices Maintenance schedules Occupational health and safety (OH&S) requirements Organisational instructions/journals Regulatory requirements
Detailed working plan may include	Cutting plan Expected time of completion Manpower requirements Method and sequence of assembly Resource requirements (material, fittings, tools and ground support equipment [GSE]) Technical sketch (working drawing)
Assembly of fabric components and attachment of fittings may include	Adhering Hand sewing Machine sewing Press fitting Stapling
Faults may include	Broken stitching Broken zippers Contamination Corroded fittings

RANGE STATEMENT

	Damaged fittings Excessive wear Incorrect manufacture Tears in fabric Ultraviolet degradation
Customers may include	Aircraft configuration authorities Aircrew Engineering maintenance managers Supervisors
Defined outcomes may include	Affect on fit of fabric component Affect on performance of (altered) fabric component Availability of resources Expected time of completion

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s	Nil
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