



Australian Government

MEA509 Manufacture, repair and alter aircraft related fabric components

Release: 2

MEA509 Manufacture, repair and alter aircraft related fabric components

Modification History

Release 2. Equivalent to MEA509 Manufacture, repair and alter aircraft related fabric components with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the manufacture, repair and alteration of aircraft and support equipment fabric components. Manufacture and alteration may be to existing designs or may also involve design. Repair may involve sewing and/or the use of adhesives.

The unit applies to a range of aircraft environmental protection sets, aircraft life support equipment components, aircraft soft furnishings and associated trimming, aircrew personal fit and associated life support equipment, and to ground support equipment covers.

The unit is part of the Aeroskills Life Support and Furnishing Certificate III and IV training pathways. It is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA).

Pre-requisite Unit

MEA107	Interpret and use aviation maintenance industry manuals and specifications
MEA118	Conduct self in the aviation maintenance environment
MEA154	Apply work health and safety practices in aviation maintenance
MEA155	Plan and organise aviation maintenance work activities
MEA156	Apply quality standards during aviation maintenance activities
MEA157	Complete aviation maintenance industry documentation
MEA158	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance
MEA511	Operate and maintain sewing and overlocking machines
MSFSF2002	Machine sew materials

Competency Field

Aircraft life support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 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 while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE) |
| | | 1.4 | Aircraft related fabric components are presented for inspection by supervisor in accordance with standard enterprise procedures |
| | | 1.5 | Relevant documentation is completed and processed in accordance with standard enterprise 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 while observing all relevant WHS requirements, including the use of MSDS and items of PPE |
| | | 2.3 | Repaired components are presented for inspection by supervisor in accordance with standard enterprise procedures |
| | | 2.4 | Relevant documentation is completed in accordance with standard enterprise procedures |

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| 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 | A detailed working plan is produced, where necessary, in accordance with standard procedures |
| | | 3.4 | Altered fabric components are presented for inspection by supervisor in accordance with standard enterprise procedures |
| | | 3.5 | Relevant documentation is completed in accordance with standard enterprise procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different 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.

Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Fabric components 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
- Aircraft operational requirements
- Job orders
- Manufacturers' specifications
- Maintenance manuals

Technical instructions include:

Standard procedures are found in any or all of:

- Modification instructions
- Technical drawings
- Commonwealth/state/territory WHS legislation, regulations and codes
- Australian Standards
- Equipment manufacturers' specifications and procedures
- Industry practices
- Safety manuals
- Maintenance schedules
- Work instructions
- Maintenance organisation manuals
- MSDS
- Defence regulations and instructions
- Civil Aviation Safety Regulations (CASRs) and advisory material
- Standing instructions

Detailed working plan includes:

- Cutting plan
- Expected time of completion
- Manpower requirements
- Method and sequence of assembly
- Resource requirements (material, fittings, tools and ground support equipment)
- Technical sketch (working drawing)

Assembly of fabric components and attachment of fittings includes:

- Adhering
- Hand sewing
- Machine sewing
- Press fitting
- Stapling

Faults include:

- Broken stitching
- Broken zippers
- Contamination
- Corrosion of metal parts
- Damaged fittings
- Excessive wear
- Incorrect manufacture
- Tears in fabric
- Ultraviolet (UV) degradation

Customers include:

- Aircraft configuration authorities
- Aircrew
- Engineering maintenance managers
- Supervisors

- Defined outcomes include:**
- Effect on fit of fabric components
 - Effect on performance of altered fabric components
 - Availability of resources
 - Expected time of completion

Unit Mapping Information

Release 2. Equivalent to MEA509 Manufacture, repair and alter aircraft related fabric components

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>