



Australian Government

MEA505 Maintain and pack parachutes

Release: 2

MEA505 Maintain and pack parachutes

Modification History

Release 2. Equivalent to MEA505 Maintain and pack parachutes with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the maintenance and packing of parachutes. Maintenance involves inspection, testing, fault diagnosis, replacement of parts, completion of repairs and cleaning during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

The unit applies to person carrying parachutes, including emergency and ejection parachutes. It also applies to ballistic parachutes used for the recovery of light aircraft.

This unit is part of the Aeroskills Life Support and Furnishing Certificate III and IV training pathways.

The unit 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 machines and overlockers
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. Maintain parachute | 1.1 Parachute is inspected for serviceability in accordance with standard procedures |
| | 1.2 Parachute is tested for serviceability in accordance with standard procedures and manufacturer's specifications |
| | 1.3 Identified faults beyond own authority to rectify are reported to supervisor and faulty parachute is quarantined |
| | 1.4 Unserviceable parts of the parachute are replaced to render parachute serviceable 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) |
| | 1.5 Basic parachute repairs are completed in accordance with standard procedures |
| | 1.6 Parachute is cleaned in accordance with standard procedures |
| | 1.7 Parachute is presented for inspection by supervisor in accordance with standard procedures |
| | 1.8 Maintenance documentation is completed and processed in accordance with standard enterprise procedures |
| 2. Pack parachute | 2.1 Parachute is packed for use in accordance with standard procedures |
| | 2.2 Parachute is presented for inspection by supervisor in accordance with standard enterprise procedures |
| | 2.3 Relevant documentation is completed and processed 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.

Standard procedures are found in any or all of:

- 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

Faults include:

- Broken stitching
- Broken quick release fitting springs
- Contamination
- Corrosion of metal parts
- Damaged hardware
- Damaged quick release fitting screws
- Excessive wear
- Expired parachute components
- Frayed lines
- Incorrect manufacture
- Pulled threads
- Incorrect rigging line sequence
- Seized quick release fitting lugs
- Stretched lines
- Tears in parachute

Parts of the parachute include:

- Ultraviolet (UV) degradation
- Canopy
- Hardware (e.g. buckles, eyelets, connector links)
- Harness
- Parachute housing (e.g. pack)
- Quick release fitting
- Rigging lines

Basic parachute repairs include:

- Broken stitching
- Corrosion (e.g. fittings)
- Damaged hardware
- Frayed lines
- Pulled threads
- Tears in parachute

Unit Mapping Information

Release 2. Equivalent to MEA505 Maintain and pack parachutes

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

Assessment Requirements for MEA505 Maintain and pack parachutes

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Performance Evidence

- Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:
- applying WHS practices relating to parachute maintenance processes, including the selection and correct use of PPE, where applicable
- handling, storing and organising transport of equipment
- delivering briefings to personnel in relation to operating parachutes
- using MSDS
- using maintenance publications, drawings and documentation relating to parachute maintenance
- using applicable testing and measuring equipment, tools and maintenance documentation to:
 - test parachutes for serviceability
 - replace unserviceable components in accordance with approved procedures
 - select and use appropriate parachute cleaning materials
 - repair parachutes (both hand and machine sewing)
- cleaning and maintenance of equipment and tools.

The underlying skills inherent in this unit should be transferable across a range of aircraft life support equipment maintenance activities. It is essential that parachute testing and inspection procedures, cleanliness requirements and safety precautions are fully observed, understood and complied with. Ability to interpret maintenance and packing procedures and apply them in practice is critical.

This is to be demonstrated through demonstration of the ability to recognise faults, replace components and perform appropriate repairs that are within the bounds of the individual's authority, and through the demonstration of correct packing procedures.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- relevant regulations, standards, enterprise procedures and maintenance publications
- WHS procedures relating to parachute maintenance, including the selection and use of PPE
- how to obtain MSDS

- critical nature of maintaining and packing parachutes, i.e. risk of death
- approved cleaning methods for aviation life support equipment
- components of a parachute and their function
- parachute assembly materials of construction
- environmental conditions that may affect parachutes and parachute assemblies including ultraviolet degradation
- types of corrosion and contamination that may affect parachute assemblies
- handling, storage and transit procedures relating to parachutes
- physiological effects of flight
- sequence of ejection
- operation of person carrying parachutes
- operation of ballistic parachutes in aircraft recovery
- purpose of different types of canopies
- modification requirements for parachutes
- requirements for a parachute servicing facility
- operation of testing and measuring equipment and tools used to maintain parachutes
- repair limitations for parachutes
- packing tools and measuring equipment required to pack parachutes.

Assessment Conditions

- Competency should be assessed in the workplace or simulated workplace using materials, tools and equipment specified in the maintenance manuals and applicable procedures. It is also expected that general and special-purpose tools and ground support equipment would be used where appropriate.
- The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.
- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements and performance criteria of the unit of competency are being achieved under routine supervision on the following range of tasks:
 - correctly packing a minimum of three (3) parachutes consecutively and without the need for corrective action by the supervisor
 - recognising the limits of own authority
 - replacing canopy/harness, including line sequence tests
 - correctly repairing a tear in parachute canopy material through patching
 - inspecting, testing and replacing unserviceable parts of a quick release fitting
 - recognising a range of faults and their serviceability limits and repairing within limitations/tolerances.
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).

- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

Links

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