



Australian Government

Department of Education, Employment and Workplace Relations

MEA505A Maintain and pack parachutes

Revision Number: 2

MEA505A Maintain and pack parachutes

Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated. Unit version code updated in unit descriptor.

Unit Descriptor

This unit of competency is part of the Aeroskills Life Support and Furnishing Certificate III and IV training pathways. It covers the competencies required to maintain and pack parachutes. Maintenance includes inspecting, testing, isolating faults, replacing components, repairing and cleaning prior to packing. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA.

This unit is equivalent to PUADEFSL005B Maintain and pack parachutes.

Application of the Unit

This unit 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.

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.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA101B	Interpret occupational health and safety practices in aviation maintenance
MEA103B	Plan and organise aviation maintenance work activity
MEA105C	Apply quality standards applicable to aviation maintenance processes
MEA107B	Interpret and use aviation maintenance industry manuals and specifications
MEA108B	Complete aviation maintenance industry documentation
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance
MEA511A	Operate and maintain sewing machines and overlockers
LMFSF2002B	Machine sew materials

Employability Skills Information

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

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
 - 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

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying OHS 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 maintaining equipment and tools

Required knowledge

Look for evidence that confirms knowledge of:

- relevant regulations, standards, enterprise procedures and maintenance publications
- OHS 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 UV 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

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to maintain and pack parachutes while observing all relevant safety precautions.

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

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.

Evidence of transferability of skills and knowledge related to parachute maintenance and packing is essential. 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. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.

A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements 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.
Context of and specific resources for assessment	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.
Method of assessment	
Guidance information for assessment	

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, if used in the performance criteria, is detailed below. 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) may also be included.

<p>Standard procedures</p>	<p>Standard procedures may be found in any or all of:</p> <ul style="list-style-type: none"> • state/territory/Commonwealth OHS legislation, regulations and codes • Australian Standards • equipment manufacturers' specifications and procedures • industry practices • safety manual • maintenance schedules • work instructions • maintenance organisation manual • MSDS • Defence regulations and instructions • CASR and advisory material • standing instructions
<p>Faults</p>	<p>Faults may include:</p> <ul style="list-style-type: none"> • 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 • UV degradation
<p>Parts of the parachute</p>	<p>Parts of the parachute may include:</p> <ul style="list-style-type: none"> • canopy • hardware (e.g. buckles, eyelets and connector links)

	<ul style="list-style-type: none"> • harness • parachute housing (e.g. pack) • quick release fitting • rigging lines
Basic parachute repairs	<p>Basic parachute repairs may include:</p> <ul style="list-style-type: none"> • broken stitching • corrosion (e.g. fittings) • damaged hardware • frayed lines • pulled threads • tears in parachute
Application	<p>Application of this unit may relate to:</p> <ul style="list-style-type: none"> • scheduled or unscheduled maintenance activities • individual or team-related activities

Unit Sector(s)

Aircraft life support

Competency field

Co-requisite units

MEA118A Conduct self in the aviation maintenance environment