



Australian Government

MEA507 Maintain, pack and fit survival inflatable buoyancy vests

Release: 2

MEA507 Maintain, pack and fit survival inflatable buoyancy vests

Modification History

Release 2. Equivalent to MEA507 Maintain, pack and fit survival inflatable buoyancy vests with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the maintenance, packing and fitting of survival inflatable buoyancy vests. Maintenance includes inspecting, testing, isolating faults, replacing components and cleaning prior to packing, during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

The unit does not include repairing buoyancy vests.

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

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.
1. Maintain survival inflatable buoyancy vests	1.1 Survival inflatable buoyancy vests and associated ancillary equipment are inspected for serviceability in accordance with standard procedures
	1.2 Identified faults beyond own authority to rectify are reported to supervisor and faulty survival inflatable buoyancy vest and/or ancillary equipment is quarantined
	1.3 Unserviceable parts of the survival inflatable buoyancy vest and/or ancillary equipment are replaced 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 Survival inflatable buoyancy vest is tested for serviceability in accordance with standard procedures and manufacturer's specifications
	1.5 Survival inflatable buoyancy vest is cleaned in accordance with standard procedures
	1.6 Survival inflatable buoyancy vest is presented for inspection by supervisor in accordance with standard procedures
	1.7 Maintenance documentation is completed and processed in accordance with standard enterprise procedures
2. Pack survival inflatable buoyancy vests	2.1 Survival inflatable buoyancy vest is packed for use in accordance with standard procedures
	2.2 Ancillary equipment is packed for use in accordance with standard procedures
	2.3 Survival inflatable buoyancy vest is presented for inspection by supervisor in accordance with standard enterprise procedures
	2.4 Relevant documentation is completed and processed in accordance with standard enterprise procedures

- | | | | |
|----|--|-----|---|
| 3. | Fit survival inflatable buoyancy vests | 3.1 | Fitting process is explained to the participant so that optimal fit can be achieved through relevant feedback |
| | | 3.2 | Participant is measured to select appropriate size survival inflatable buoyancy vest |
| | | 3.3 | Survival inflatable buoyancy vest is adjusted to optimise fit |
| | | 3.4 | Survival inflatable buoyancy vest fit is verified through participant feedback and supervisor approval |
| | | 3.5 | 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.

Applicable survival inflatable buoyancy vests include:

- Secumar AUS2

Ancillary equipment includes:

- Electronic locating devices
- Lighting devices
- Pyrotechnics
- Rations
- Survival/location aids
- Water

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:	• Abrasion • Broken stitching • Contamination • Corrosion of metal parts • Damaged hardware • Delamination/porosity • Expired components or equipment • Faulty valves • Frayed lines • Holes • Incorrect manufacture • Lifting tapes • Ultraviolet (UV) degradation
Parts include:	• Buoyancy chambers • Cylinders • Hardware • Operating head • Valves • Valise • Zippers
Testing includes:	• Checking ancillary equipment (e.g. electronic locating devices and survival/location aids) • Cylinder weight tolerance • Inflation tests • Light and battery test
Adjustment to vest includes:	• Breast height • Chest • Waist

Unit Mapping Information

Release 2. Equivalent to MEA507 Maintain, pack and fit survival inflatable buoyancy vests

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 MEA507 Maintain, pack and fit survival inflatable buoyancy vests

Modification History

Release 2. Equivalent to MEA507 Maintain, pack and fit survival inflatable buoyancy vests with amended prerequisite codes.

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 survival inflatable buoyancy vest maintenance processes, including the selection and correct use of PPE where applicable
- using MSDS
- using maintenance publications, drawings and documentation relating to survival inflatable buoyancy vests and ancillary equipment maintenance
- handling, storing and organising transport of equipment
- delivering briefings to personnel in relation to operating, donning/doffing and fitting of survival inflatable buoyancy vests
- inflating/deflating survival inflatable devices for maintenance
- using applicable testing and measuring equipment, tools and maintenance documentation to:
 - test survival inflatable buoyancy vests for serviceability
 - replace unserviceable components or items of ancillary equipment in accordance with approved procedures
 - select and use appropriate survival inflatable buoyancy vest cleaning materials
- soldering battery terminals on emergency locator transmitters
- tying various types of knots, including:
 - reef knot
 - bowline
 - thumb knot
 - half hitch
- hand 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 survival inflatable device testing and inspection procedures, cleanliness requirements and safety precautions are fully observed, understood and complied with. Ability to interpret maintenance, packing and fitting procedures and apply them in practice is critical.

This is to be demonstrated through demonstration of the ability to recognise faults and replace components that are within the bounds of the individual's authority, and through the demonstration of correct packing and fitting procedures. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.

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 survival inflatable buoyancy vest maintenance, including the selection and use of PPE
- how to obtain MSDS
- relevant safety precautions including storage and handling of compressed gas cylinders and survival and distress pyrotechnics
- critical nature of maintaining and packing survival inflation devices, i.e. risk of death
- search and rescue procedures
- Priorities of survival and how they relate to survival inflatable buoyancy vests and associated ancillary equipment
- electrical principles
- approved cleaning methods for aviation life support equipment
- environmental conditions that may affect survival inflation devices, including ultraviolet (UV) degradation
- types of corrosion and contamination that may affect survival inflation devices
- handling, storage and transit procedures relating to survival inflation devices
- survival inflation devices and methods of operation
- operation of emergency locator beacons and emergency locator transmitters
- principles of operation of inflation mechanisms
- components of a survival inflation device and their function
- repair limitations for survival inflatable buoyancy vests
- modification requirements for survival inflatable buoyancy vests
- requirements for a survival inflation device servicing facility
- packing tools and measuring equipment required to pack survival inflatable devices
- use of survival inflatable buoyancy vests, including associated ancillary equipment.

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 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:
 - completing a minimum of three (3) inflation tests without the need for corrective action by the supervisor
 - recognising the limits of own authority
 - testing cylinder weight and determining if it is within tolerance
 - correctly packing a minimum of three (3) survival inflatable buoyancy vests without the need for corrective action by the supervisor
 - correctly fitting survival inflatable buoyancy vests to a minimum of three (3) different people without supervisor intervention
 - recognising a range of faults and their serviceability limits (faults must include incorrect manufacture and verifying expiry date of inflatable buoyancy vest and ancillary equipment).
- 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

Companion Volume implementation guides are found in VETNet -

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