



**Australian Government**

# **MEALSU0012 Maintain and pack survival inflatable life rafts**

**Release: 1**

# MEALSU0012 Maintain and pack survival inflatable life rafts

## Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA513 Maintain and pack survival inflatable life rafts.

## Application

This unit describes the skills and knowledge required to maintain and pack survival inflatable life rafts. Maintenance involves inspection, testing, fault diagnosis, parts replacement and cleaning during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

The unit applies to a range of types of survival inflatable life raft. It does not include repairing life rafts.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

## 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

## Elements and Performance Criteria

| Elements                                  | Performance Criteria                                                                            |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Maintain survival                      | 1.1 Inspect survival inflatable life raft and associated ancillary                              |

| Elements                                  | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| inflatable life raft                      | <p>equipment for serviceability in accordance with standard procedures</p> <p>1.2 Report identified faults beyond own authority to rectify to supervisor, and quarantine faulty survival inflatable life raft and ancillary equipment</p> <p>1.3 Replace unserviceable parts of the survival inflatable life raft and ancillary equipment items in accordance with standard procedures while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDSs) and items of personal protective equipment (PPE)</p> <p>1.4 Test survival inflatable life raft for serviceability in accordance with standard procedures and manufacturer's specifications</p> <p>1.5 Clean survival inflatable life raft in accordance with standard procedures</p> <p>1.6 Present survival inflatable life raft for inspection by supervisor in accordance with standard procedures</p> <p>1.7 Complete and process maintenance documentation in accordance with standard enterprise procedures</p> <p>1.8 Clean and perform required maintenance on equipment and tools used in accordance with standard enterprise procedures</p> |
| 2. Pack survival inflatable life raft     | <p>2.1 Pack survival inflatable life raft for use in accordance with standard procedures</p> <p>2.2 Pack ancillary equipment for use in accordance with standard procedures</p> <p>2.3 Present survival inflatable life raft for inspection by supervisor in accordance with standard enterprise procedures</p> <p>2.4 Complete and process relevant documentation in accordance with standard enterprise procedures</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance manuals and procedures.
- Numeracy skills to interpret technical information.

- Writing skills to complete documentation.

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

## **Unit Mapping Information**

Release 1. Supersedes and is equivalent to MEA513 Maintain and pack survival inflatable life rafts.

## **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 MEALSU0012 Maintain and pack survival inflatable life rafts

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## Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- maintain and pack at least one type of survival inflatable life raft during scheduled and unscheduled maintenance, including the following tasks:
  - complete a minimum of three inflation tests without the need for corrective action by the supervisor
  - test cylinder weight and determine if it is within tolerance
  - pack a minimum of three survival inflatable life rafts or escape slides without the need for corrective action by the supervisor
  - recognise the following potential faults and their serviceability limits:
    - incorrect manufacture
    - elapsed expiry date of inflatable life raft and ancillary equipment or escape slide
- handle, store and organise transport of equipment
- deliver briefings to personnel in relation to operating survival inflatable life rafts
- inflate and deflate survival inflatable devices for maintenance
- use applicable testing and measuring equipment, tools and maintenance documentation
- solder battery terminals on emergency locator transmitters during replacement of unserviceable parts
- tie various types of knots during life raft packing, including:
  - reef knot
  - bowline
  - thumb knot
  - half hitch
- perform hand sewing during replacement of unserviceable parts
- follow procedures, cleanliness requirements and safety precautions at all times and as relevant for the inflatable life rafts being maintained and packed.
- 

## Knowledge Evidence

There must be evidence the candidate has knowledge of:

- relevant enterprise procedures and maintenance publications, including:
  - equipment manufacturers' specifications and procedures
  - industry practices
  - safety manuals
  - maintenance schedules
  - work instructions
  - maintenance organisation manuals
  - standing instructions
- Commonwealth, state and territory work health and safety (WHS) legislation, regulations, codes and procedures for survival inflatable device maintenance and packing
- Australian Standards for restraint systems
- types of survival inflatable life raft, including:
  - 10U Mk8
  - F2B
  - LRU 16
- relevant Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (CASA) regulations and instructions
- 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 life rafts 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
- typical faults that may affect survival inflation devices, including:
  - abrasion
  - broken stitching
  - contamination
  - corrosion of metal parts
  - damaged hardware
  - delamination and porosity
  - expired components or equipment
  - faulty valves
  - frayed lines
  - holes
  - incorrect manufacture
  - lifting tapes
- 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, including:
  - cylinders
  - operating head
  - valves
  - valise
- repair limitations for survival inflatable life rafts
- modification requirements for survival inflatable life rafts
- requirements for a survival inflation device servicing facility
- packing tools and measuring equipment required to pack survival inflatable devices
- use of survival inflatable life rafts, including associated ancillary equipment
- types of ancillary equipment associated with survival inflatable devices, including:
  - electronic locating devices
  - lighting devices
  - pyrotechnics
  - rations
  - survival/location aids
  - water.
  -

## Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in maintaining and packing survival inflatable life rafts. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
  - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to maintaining and packing survival inflatable life rafts
  - materials, tools and equipment specified in the maintenance manuals and applicable procedures
  - general and special-purpose tools and items of ground support equipment.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

## Links

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