



Australian Government

MEA503 Maintain and fit immersion suits

Release: 2

MEA503 Maintain and fit immersion suits

Modification History

Release 2. Equivalent to MEA503 Maintain and fit immersion suits with amended prerequisite codes.

Application

This unit of competency requires application of skills and knowledge relating to the maintenance and fitment of immersion suits. Maintenance involves inspection, testing, fault diagnosis, replacement of parts and cleaning and may be performed individually or as part of a team.

Fitment involves adjusting the immersion suit to correctly fit an individual.

There are two types of immersion suits: quick don and constant wear. Quick don usually does not require fitting while constant wear is custom fitted to the individual.

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
MSTTF2008	Use adhesives

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 immersion suit | 1.1 | Immersion suit is inspected for serviceability in accordance with standard procedures |
| | | 1.2 | Immersion suit 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 immersion suit is quarantined |
| | | 1.4 | Unserviceable parts of the immersion suit are replaced 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 | Immersion suit is cleaned in accordance with standard procedures |
| | | 1.6 | Immersion suit is re-packed in accordance with standard procedures |
| | | 1.7 | Immersion suit 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. | Fit immersion suit | 2.1 | Fitting process is explained to the participant so that optimal fit can be achieved |
| | | 2.2 | Participant is measured and appropriate size immersion suit is selected |
| | | 2.3 | Immersion suit is adjusted to optimise fit in |

conjunction with participant feedback

2.4 Immersion suit fit is verified by the supervisor

2.5 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.

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
- Standing instructions

Faults include:

- Contamination
- Corrosion of metal parts, such as zippers
- Delamination
- Incorrect manufacture
- Leaks
- Lifting of tapes
- Scuffing (e.g. boot)
- Tears in suit and/or seals

Parts of the immersion suit include:

- Boots
- Gloves
- Life line

- Adjustment of the immersion suit includes:**
- Light
 - Seals (e.g. wrist, neck)
 - Whistle
 - Leg length
 - Sleeve length
 - Trimming seals

Unit Mapping Information

Release 2. Equivalent to MEA503 Maintain and fit immersion suits

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 MEA503 Maintain and fit immersion suits

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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 immersion suit maintenance processes, including the selection and correct use of PPE, where applicable
- using MSDS
- using applicable tools and maintenance documentation to:
 - test/inspect immersion suits for serviceability
 - replace unserviceable components in accordance with approved procedures, including the use of hazardous materials and adhesives
 - select and use appropriate immersion suit cleaning materials
 - correctly fit immersion suits to users
- operating specialist equipment, including:
 - heat press
 - vacuum heat sealer
 - 3 stage in-line breathing apparatus
 - filter extraction systems
 - spill kits
- 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 immersion suit testing and inspection procedures, cleanliness requirements and safety precautions, including the correct use of PPE, are fully observed, understood and complied with. Ability to interpret maintenance and fitting procedures and apply them in practice is critical.

This is to be demonstrated through demonstration of the ability to recognise faults and damage and perform appropriate repairs that are within the bounds of the individual's authority, and through the demonstration of correct fitting 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 immersion suit maintenance, including the selection and use of PPE
- how to obtain MSDS
- emergency procedures in relation to chemical spills and emergency evacuation of personnel in distress
- chemical disposal procedures
- requirements for storage of adhesives
- cold shock and hypothermia in relation to survival
- priorities of survival and how they relate to immersion suits and associated ancillary equipment
- physiological effects of flight
- critical nature of maintaining and fitting immersion suits
- materials used to manufacture immersion suits (i.e. neoprene and gortex)
- operation of testing and measuring equipment and tools used to maintain immersion suits
- components of an immersion suit and their function
- types of corrosion and contamination that may affect immersion suits
- modification requirements for immersion suits
- immersion suit repair procedures and limitations
- immersion suit cleaning methods and materials
- handling, storage and transit procedures relating to life support equipment
- handling and storage procedures relating to immersion suits (i.e. MACPAC highly susceptible to damage)
- specialist equipment operation, including:
 - heat press
 - vacuum heat sealer
 - 3 stage in-line breathing apparatus
 - filter extraction systems
- spill kits.

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 a representative range of maintenance tasks and on the correct fitting of immersion suits.

- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

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