



Australian Government

MEALSU0001 Maintain and fit anti-G suits

Release: 1

MEALSU0001 Maintain and fit anti-G suits

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 MEA501 Maintain and fit anti-G suits.

Application

This unit describes the skills and knowledge required to maintain and fit anti-G suits worn by aircrew and passengers in high performance aircraft. Maintenance involves inspection, testing, fault diagnosis, parts replacement, fabric repairs, and cleaning. Fitting involves adjusting the anti-G suit to correctly fit an individual. Work may be performed individually or as part of a team.

The scope of repairs excludes inflatable components of the anti-G suit.

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

MEALSU0010 Operate and maintain sewing machines and overlockers

MSFSF2002 Machine sew materials

Competency Field

Aircraft life support

Elements and Performance Criteria

Elements	Performance Criteria
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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Maintain anti-G suit	1.1 Inspect anti-G suit for serviceability in accordance with standard procedures 1.2 Test anti-G suit for serviceability in accordance with standard procedures and manufacturer's specifications 1.3 Report identified faults beyond own authority to rectify to supervisor and quarantine faulty anti-G suit in accordance with standard procedures 1.4 Replace unserviceable parts of the anti-G suit and complete fabric repairs 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 Clean anti-G suit in accordance with standard procedures 1.6 Present anti-G suit for inspection by supervisor in accordance with standard procedures 1.7 Complete and process required maintenance documentation in accordance with standard enterprise procedures
2. Fit anti-G suit	2.1 Explain fitting process to participant to achieve optimal fit 2.2 Measure participant and select appropriate size anti-G suit based on available information 2.3 Use available information and participant feedback to adjust anti-G suit to optimise fit 2.4 Organise verification of anti-G suit fit by supervisor in accordance with standard enterprise procedures 2.5 Complete and process required fitting-related documentation in accordance with standard enterprise procedures 2.6 Clean and perform required maintenance on equipment and tools used in accordance with standard enterprise procedures

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 a wide range of procedures and manuals
- Numeracy skills to interpret technical information

- Writing and oral communication skills to explain the fitting process and 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 MEA501 Maintain and fit anti-G 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 MEALSU0001 Maintain and fit anti-G suits

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Performance Evidence

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

- under routine supervision, maintain three anti-G suits, covering the following tasks and using applicable tools and maintenance documentation:
 - inspect and test anti-G suits for serviceability
 - replace unserviceable components (any of eyelets, press studs, zips) and repair fabric in accordance with approved procedures including sewing
 - select and use appropriate anti-G suit cleaning materials
- correctly fit anti-G suits to at least three differently sized individuals, using lacing of torso and legs and waist extension or reduction to achieve fit
- tie each of the following knots to adjust suit-fitting:
 - reef knot
 - bowline
 - thumb knot
 - daisy chain
 - half hitch
- apply procedures, cleanliness requirements and safety precautions at all times and as relevant to the maintenance and fitting tasks being performed above.
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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 anti-G suit maintenance
- Australian Standards for oxygen masks
- Defence Aviation Safety Authority (DASA) regulations and instructions
- WHS procedures for Anti-G suit maintenance, including the selection and use of personal protective equipment (PPE)
- how to obtain material safety data sheets (MSDSs)
- G forces and anti-G suit operation during flight
- physiological effects of flight
- critical nature of maintaining and fitting anti-G suits
- forces of ejection
- operation of testing and measuring equipment and tools used to maintain anti-G suits
- inflation methods used in the maintenance of anti-G suits
- typical faults that may affect anti-G suits, including:
 - broken zips and stitching
 - corrosion of metal parts (e.g. zippers)
 - contamination
 - damaged hardware
 - excessive wear
 - incorrect manufacture
 - leaks and tears
- modification requirements for anti-G suits
- anti-G suit repair procedures and limitations
- lacing techniques used in the fitting of anti-G suits
- anti-G suit cleaning methods and materials
- handling, storage and transit procedures.
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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 fitting anti-G suits. 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 fitting anti-G suits
- materials tools and equipment specified in the maintenance manuals and procedures
- general- and special-purpose tools and items of ground support.

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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