



Australian Government

Department of Education, Employment and Workplace Relations

DEFLS001B Maintain and fit Anti-G suits

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to maintain, repair and fit an Anti-G suit. Anti-G suits are usually worn by aircrew or aircraft passengers.

Maintaining an Anti-G suit includes inspecting, testing, isolating faults, replacing, repairing and cleaning prior to placing the item back into service. Repairing an Anti-G suit is limited to fabric repairs and re-attachment of component parts consequently it excludes inflatable components.

Fitting an Anti-G suit includes adjusting the Anti-G suit to fit the individual because the item is not an off-the-shelf issue.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s Nil

Employability Skills Information

Employability Skills 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 required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Maintain Anti-G suit

- 1.1 Anti-G suit is inspected for serviceability in accordance with **standard procedures**
- 1.2 Anti-G suit is tested for serviceability in accordance with standard procedures and manufacturers' specifications
- 1.3 Identified **faults** beyond own authority to rectify are reported to supervisor and faulty Anti-G suit is quarantined
- 1.4 Unserviceable **parts of the Anti-G suit** are replaced to render suit serviceable
- 1.5 Fabric repairs are completed in accordance with standard procedures
- 1.6 Anti-G suit is cleaned in accordance with standard procedures
- 1.7 Anti-G suit is presented for inspection by supervisor and work is not progressed until supervisor has completed inspections in accordance with standard procedures
- 1.8 Relevant documentation is completed in accordance with standard procedures

2. Fit Anti-G suit

- 2.1 Fitting process is explained to the participant so that optimal fit can be achieved
- 2.2 Participant is measured to select appropriate size Anti-G suit
- 2.3 Anti-G suit is **adjusted** to optimise fit in conjunction with participant feedback
- 2.4 Anti-G suit fit is verified by the supervisor
- 2.5 Relevant documentation is completed in accordance with standard procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds, and physical and mental abilities
- calculate dimension and allowable dimension variations
- deliver briefings to personnel in relation to operating, donning/doffing and fitting of Anti-G garments
- handle, store and organise transport of equipment
- inflate/deflate Anti-G garments for maintenance
- information technology skills to access and input to documentation
- interpret technical requirements
- liaise with outside agencies relating to maintenance activities
- literacy skills for comprehending and interpreting documentation which may include:
 - aircraft documentation
 - maintenance documentation
 - survival and distress pyrotechnic documentation
 - maintenance and servicing schedules
 - flying schedules
 - technical publications
 - technical drawings
 - Material Safety Data Sheets (MSDS)
- operate an industrial sewing machine
- operate and maintain personal protective equipment
- problem solving skills for a limited range of differing procedural circumstances
- raise and complete maintenance documentation
- read technical drawings
- tie various types of knots including:
 - reef knot
 - bowline
 - thumb knot
 - daisy chain
 - half hitch
- use basic sewing techniques
- use relevant hand tools
- use relevant power and machine tools
- use testing and measuring equipment in accordance with approved methods
- work with others and in a team by recognising dependencies and using cooperative

REQUIRED SKILLS AND KNOWLEDGE

approaches to optimise workflow and productivity

Required Knowledge

- Anti-G garment operation in relation to flight
- approved cleaning techniques for aviation life support equipment
- basic sewing techniques
- components of an Anti-G garment and their function
- critical nature of maintaining and fitting Anti-G garments
- different aviation trades and how they relate to each other
- environmental conditions that may affect Anti-G garments
- forces of ejection
- 'G' forces
- handling, storage and transit procedures relating to aviation life support equipment
- industrial sewing machine operation
- inflation methods used to maintain Anti-G garments
- lacing techniques used in the fitting of Anti-G suits
- legal responsibilities
- modification requirements for Anti-G garments
- operation of testing and measuring equipment, and tools used to maintain Anti-G garments
- physiological effects of flight
- procedures in relation to organisation and aviation industry
- quality systems and standards
- reading and interpreting specifications
- relevant legislation and procedures in relation to the aviation industry
- relevant OH&S regulations/requirements, precautions equipment, material and personal safety requirements
- repair limitations for Anti-G garments
- tool control procedures
- types of corrosion and contamination that may affect Anti-G garments
- use of aviation industry documentation
- use of maintenance documentation
- use of Anti-G garments

Evidence Guide

EVIDENCE GUIDE

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

Assessment must confirm the ability to correctly fit Anti-G suits to at least three different sized individuals with no corrective action required by supervisor; to recognise a range of faults, including incorrect manufacture; and to recognise limits of own authority.

Consistency in performance

Competency should be demonstrated over time with a range of fitments and maintenance of Anti-G suits.

Context of and specific resources for assessment**Context of assessment**

Competency should be assessed in the workplace or in a simulated workplace environment.

Specific resources for assessment

Access to Anti-G suit; a live participant; and sewing machine tools and equipment for fitting and maintaining Anti-G suits.

Range Statement

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 in the Performance Criteria is detailed below.

Standard procedures may include

Australian Standards
Equipment manufacturer's specifications and procedures
Industry practices
Maintenance schedules
Occupational Health and Safety (OH&S) requirements
Organisational instructions/journals
Regulatory requirements

Faults may include

Broken zips and stitching
Contamination
Corrosion (e.g. zipper)
Damaged hardware
Excessive wear
Incorrect manufacture
Leaks
Tears

Parts of the Anti-G suit may include

Eyelets
Press studs
Zips

Adjustment of the Anti-G suit may include

Lacing of torso and legs
Waist extension/reduction

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil