



Australian Government

PUAFIR313B Operate aviation support equipment

Release 2

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Modification History

Release	TP Version	Comments
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to operate a range of aviation support equipment related to the loading of fuels, and the mixing and loading of aerial suppressants. Aviation operations occur in a heavily regulated environment. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

This unit applies to personnel responsible for operating equipment used to transfer fuel, internal and external foam injection systems and mixing equipment, such as Aircraft Officers, Airbase Managers and support crew.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR209B Work safely around aircraft

Employability Skills Information

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 Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare equipment for operations	1.1 Requirements for operations are identified and confirmed with relevant personnel. 1.2 Hazards that will impact on the operation of the equipment are identified and evaluated. 1.3 Personal protective clothing and equipment is selected and worn in accordance with organisational and work health and safety (WHS) requirements. 1.4 Availability of safety equipment, its accessibility and currency of maintenance are confirmed. 1.5 Support equipment is selected, assembled and set up in accordance with manufacturer specifications, organisational guidelines and regulatory requirements. 1.6 Consumables are checked to ensure they are the correct type, packaging is free from damage, not leaking, is sealed correctly and is within the use-by date. 1.7 Ancillary equipment and consumables are transported and stored in accordance with manufacturer requirements, organisational guidelines and procedures, and regulatory requirements. 1.8 Equipment is inspected/tested and adjusted where required to ensure correct operation. 1.9 Consumables are opened and inspected for contaminants, under pilot supervision if required. 1.10 Contaminated products are identified, marked accordingly and removed. 1.11 Information is documented, maintained and reported in accordance with organisational procedures.
2. Operate specialist equipment	2.1 Aircraft is guided to position for refuelling operations and is approached on pilot approval. 2.2 Equipment is connected to aircraft and operated in accordance with organisational procedures, ensuring quality and consistency of product. 2.3 Equipment is used in accordance with manufacturer specifications, organisational guidelines, WHS and regulatory requirements. 2.4 Quality assurance checks are conducted on consumables to be transferred and adjustments are

made if required.

- 2.5 Consumable material is transferred to the aircraft using **loading equipment** with pilot approval, in accordance with organisational and WHS requirements.
- 2.6 Area of operations is monitored to ensure safety of personnel and operation of equipment.
- 2.7 Operation of equipment is monitored and adjusted to reflect changed conditions and operational requirements.
- 2.8 Equipment is disconnected at completion of transfer on pilot approval and cleared in accordance with permit issued for aircraft to depart.
- 2.9 Appropriate action is taken to rectify faults or deficiencies in the operation of equipment.
- 2.10 **Communication** is maintained throughout operations with appropriate personnel.

3. Conclude operations and restore equipment

- 3.1 Excess consumables and waste products are stored and disposed of in accordance with manufacturer specifications, organisational guidelines and regulatory requirements.
- 3.2 **Servicing and maintaining equipment** is undertaken within scope of authority.
- 3.3 Major faults to equipment are documented and forwarded for rectification in accordance with organisational requirements.
- 3.4 Equipment is stowed or forwarded for repairs, as appropriate.
- 3.5 Documentation related to maintenance or damage to equipment is completed and reported in accordance with procedures.
- 3.6 Site selected for operations is cleared and restored in accordance with organisational guidelines.

Required Skills and Knowledge

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

Required Skills

- apply safety and emergency procedures
- display mechanical aptitude including appropriate hand-eye coordination
- identify and correctly use equipment
- identify potential hazards
- maintain and repair equipment within scope of responsibility
- work as a member of a team

Required Knowledge

- aircraft safety
- documentation requirements and reporting arrangements
- legislative and agency rules and regulations
- potential hazards and their impact on aircraft refuelling operations
- relevant mechanical knowledge

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

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

Assessment must confirm the ability to:

- adhere to safe work practices including safety response action in the event of equipment malfunction
- undertake operations in accordance with WHS guidelines and legislative and operational guidelines
- identify job site and potential site hazards, and plan work to minimise risk
- follow correct preparation and establishment procedures
- service and maintain equipment
- apply relevant workplace procedures including codes of practice, hazard policy and procedures, job procedures and work instructions, guidelines relating to safe use of equipment, housekeeping procedures
- take action promptly – report accidents and incidents within regulatory and agency requirements
- complete work systematically in accordance with safe operating procedures to minimise risk of injury to self, others or damage to aircraft or equipment

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job or in a simulated work environment.

Specific resources for assessment

Access is required to:

- personal protective and safety equipment
- area to conduct operations
- aircraft and necessary equipment
- appropriate tools and equipment for testing, maintaining and inspecting equipment
- safe disposal facilities

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training

environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

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.

<i>Requirements for operations</i> may include:	• aircraft safety procedures • civil aviation legislation • dangerous goods legislation • Fire Code of Practice • flight supplement specifications • installation of hook up procedures • manufacturers specifications • material safety data sheets (MSDS) or safety data sheets (SDS) • organisational operational procedures • WHS guidelines
<i>Equipment</i> may include:	• air compressors and air operated pumps • fuel transfer equipment such as: • anti-static line • drum opening tools • electrical pump • hand pump • petrol or diesel pump • rags/cleaning equipment • hand mixing tools and pumps • internal and external foam injection systems • mixing equipment such as impeller mixers, batch mixers, inductor mixers, eductor mixer
<i>Personal protective clothing and equipment</i> may include:	Loading firebombing aircraft: eye goggles, protective overalls, safety boots, dust respirator, chemical or work gloves, ear defenders Undertaking refuelling of aircraft: ear and eye protection, safety boots and protective overalls, chemical or work gloves
<i>Aircraft</i> may include:	• fixed wing • rotary wing
<i>Guided to position</i> may include:	• using marshalling signals • using radio
<i>Quality assurance checks</i> may include:	• checks for: • contaminants

	• foam concentration • retardant viscosity • salt content • verification of product • water presence
Consumables to be transferred may include:	• aerial firefighting foam and gel concentrates • chemical retardants powdered or liquid • Jet A1 (Avtur) or Avgas from drum or bulk storage • water • other aerial suppressants
Loading equipment may include:	• delivery pumps • hose skates • Kamlock couplings • rigid delivery hose • semi-rigid delivery hose
Communication may include:	• hand signals • radio communications • telephone communications • verbal instructions
Servicing and maintaining equipment may include:	• fault finding and rectification • liaising with specialist personnel • security procedures • servicing, cleaning and maintaining in accordance with manufacturer specifications • stripping and assembling equipment

Unit Sector(s)

Not applicable.