



Australian Government

PUAFIR312 Operate aerial ignition equipment in an aircraft

Release: 1

PUAFIR312 Operate aerial ignition equipment in an aircraft

Modification History

Release 1. This is the first release of this unit of competency in the PUA Public Safety Training Package.

Application

This unit of competency involves the skills and knowledge required to prepare, operate and maintain aerial ignition equipment in an aircraft. Aerial ignition equipment is used to drop incendiaries, capsules or gelled petroleum, from fixed wing aircraft or helicopter.

Aerial ignition operations are undertaken to modify or reduce fuel loads in key areas and to decrease fire intensity and suppression difficulty at wildfires or prescribed burns.

The unit applies to personnel responsible for the safe, effective and efficient conduct of aerial ignition operations to a specified burn prescription and/or fire suppression operation and for liaising with ground and support crews including incendiary operation supervisors.

The fire sector is those sections of government departments, statutory authorities or organisations that have responsibility under jurisdictional arrangements for the delivery of firefighting and fire management services.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

It is essential that the prerequisite units listed below are obtained prior to the issuance of this unit to individuals within the fire sector or the units contributing to the attainment of a fire qualification.

PUAFIR209 Work safely around aircraft

Competency Field

Fire

Unit Sector

Fire

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 Prepare for operations of ignition equipment

- 1.1** Personal protection clothing and equipment and other safety equipment is selected, inspected and tested, in accordance with organisational procedures, prior to operations commencing
- 1.2** Requirements for aerial ignition operations are identified and confirmed with relevant personnel
- 1.3** Activities are undertaken, in accordance with industry standards, legislation, organisational procedures, Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements
- 1.4** Incendiary device to be used is confirmed
- 1.5** Incendiary devices and associated consumable materials are stored and transported, in accordance with the organisational procedures and requirements
- 1.6** Ignition equipment is installed in aircraft, in accordance with the organisational procedures and aircraft operator requirements
- 1.7** Ignition equipment is inspected to ensure correct operation
- 1.8** Mixing operations for incendiary device are undertaken, in accordance with organisational procedures, manufacturers' guidelines and prevailing conditions
- 1.9** Incendiary devices are loaded into ignition equipment, in accordance with the organisational procedures
- 1.10** Ignition equipment is tested and adjusted, where required, to ensure correct operation

2 Conduct aerial ignition operations

- 2.1** Ignition equipment is operated, in accordance with organisational procedures and the manufacturers' specifications
- 2.2** Adjustments to ignition equipment are undertaken, as required, in response to changed conditions or alterations to burn plan
- 2.3** Emergency procedures are conducted, as required

	2.4	Communications between pilot, navigator and ignition equipment operator are maintained throughout the operation
	2.5	Ignition operations are conducted, in accordance with burn plan
3 Service, maintain and store incendiary equipment	3.1	Excess incendiary devices are disposed of, in accordance with organisational procedures
	3.2	Ignition equipment is serviced, maintained and repaired within scope of authority
	3.3	Equipment faults are documented and forwarded to appropriate personnel for action
	3.4	Ignition equipment is stowed and forwarded to appropriate personnel for maintenance

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Ignition equipment must include one of the following

- automated incendiary machines
- hand held manual incendiary injection
- helitorch aerial or drip torch

Unit Mapping Information

This unit replaces and is equivalent to PUAFIR312B Operate aerial ignition equipment in an aircraft.

Links

PUA Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=3eca5672-6d5a-410b-8942-810d0ba05bbf>

Assessment Requirements for PUAFIR312 Operate aerial ignition equipment in an aircraft

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least one occasion and includes

- adhering to safe working practices if machine or ignition equipment malfunctions
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including aircraft or other emergency procedures and personal protective clothing and equipment
- conducting aerial ignition operations using approved devices and equipment
- demonstrating pre-flight testing and installation of aerial ignition equipment
- following approved flight plan
- implementing industry standards and legislation
- operating for extended periods in an aircraft
- preparing for of ignition equipment
- reporting equipment malfunctions, accidents and incidents
- selecting, inspecting and testing personal protective clothing and equipment
- servicing, maintaining, repairing and storing approved devices and equipment
- using communications equipment
- using ignition equipment including helitorch aerial or drip torch, hand held manual incendiary injection and automated incendiary machines
- working as a member of a team

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of

- aircraft safety
- characteristics and limitations of incendiary devices and equipment
- emergency procedures
- guidelines relating to safe use of equipment including personal protective equipment
- incendiary capsule materials including potassium permanganate, ethylene glycol (antifreeze),

- petroleum products, gelling powder and methanol
- ignition equipment including helitorch aerial or drip torch, hand held manual incendiary injection equipment and automated incendiary machines
- industry standards
- lighting patterns
- mechanical knowledge sufficient to service, maintain and repair aerial ignition equipment
- mixing equipment
- organisational documentation, policies and procedures including procedures for working in aerial ignition operations
- service, maintenance and repair of equipment
- personal protection clothing and equipment including ear protectors, eye protection, gloves and other personal protection gear, fire resistant clothing, footwear, rubber gloves, vapour masks and respirators and safety helmets with visors
- types and applications of aerial ignition equipment
- Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) organisational requirements including safety and emergency procedures for undertaking aerial ignition operations, risk mitigation and hazard identification

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in industry approved simulated workplace operational situations that reflect workplace conditions.

Assessment will take place in a simulated environment followed by an assessment by an accredited operator on the job.

Resources for assessment must include access to

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, equipment, tools and personal protective clothing and equipment currently used in industry including
 - aerial ignition equipment and materials
 - aircraft
 - an area to conduct operations
 - appropriate tools for testing, maintenance and inspection of equipment
 - personal protective equipment and relevant safety equipment

- safe disposal facilities
- transport of incendiary devices and ignition equipment
- applicable documentation including organisational procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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