



Australian Government

PUAFIR321 Operate heavy plant in fire control operations

Release 2

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Modification History

Release	TP Version	Comments
2	PUA12 V2.1	Editorial changes.
1	PUA12 V2	New unit.

Unit Descriptor

This unit covers the competency required to apply heavy plant operation skills to the specific circumstances of fire operations including fire control line construction; clearing vehicle turnarounds, passing bays and safety zones; and constructing helipads in forest and/or scrub environments.

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

Application of the Unit

This unit applies to personnel who operate machines and will be directed to undertake a range of tasks to support fire operations, such as fire control line construction and clearing for vehicle turnarounds and helipads.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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. Use and service machines

- 1.1 ***Machine*** is set up, maintained and serviced to ensure safe operation in forest environments and that it is free of soil and water borne disease and weeds, prior to and after use.
- 1.2 Effective communication is established with supervisor, team members and support vehicle/s.
- 1.3 ***Safe procedures*** are employed when using the machine to construct a fire control line.
- 1.4 Machine is parked safely and securely when not in operation.
- 1.5 Personal protective clothing and equipment are worn and used in accordance with agency requirements.

2. Construct fire control line

- 2.1 ***Topographical and vegetation factors*** are considered when selecting a route for construction of a fire control line.
- 2.2 ***Environmental, agricultural, cultural and heritage factors*** are considered when selecting a route for construction of fire control line.
- 2.3 Fire control line is constructed directly on the fire's edge or away from the fire's edge taking into account weather conditions and/or changes in fire behaviour to meet fire suppression requirements.
- 2.4 ***Hazards*** are identified and considered when selecting route and construction of fire control line.
- 2.5 Debris from fire control line construction is appropriately placed to facilitate fire suppression

- works and reduce environmental impacts.
- 2.6 Fire control line is constructed to **standards** suitable for fire control purposes and for vehicle access as required.
- 2.7 Turning areas, passing bays and safety zones are constructed as directed.
- 3. Prepare, mop-up and rehabilitate area**
- 3.1 Helipads are constructed as required.
- 3.2 Fire **preparation** works are conducted to specified standards.
- 3.3 **Mop-up** works are conducted to specified standards in coordination with crews.
- 3.4 **Rehabilitation works** are conducted to specified standards.

Required Skills and Knowledge

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

Required Skills

- communicate effectively orally
- maintain and service machines in a non-fire environment
- operate machines in a non-fire environment

Required Knowledge

- burn-over survival techniques
- capabilities of support vehicle teams
- environmental factors relevant to fire control operations
- machine capabilities and limitations
- machine design and safety features
- machine maintenance requirements in a fireground environment
- organisational operating procedures (relevant to machine operations)
- wildfire control tactics and techniques

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:

- construct a fire control line in forest and/or scrub environments
- construct a fire control line adjacent to and at a distance from, live fire edge
- effectively and efficiently select routes for fire control line construction
- effectively cooperate with support vehicles
- effectively communicate with supervisor and other members of the team

Consistency in performance

Competency should be demonstrated over time; some performance criteria may be performed in a simulated wildfire environment.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in an operational environment or in a field-based simulated environment; Element 2 should be assessed in a forest and/or scrub environment.

Specific resources for assessment

Access is required to:

- machinery
- communications equipment
- support personnel

Method of assessment

Assessment should be conducted by direct observation in either the workplace (through recorded subject matter supervision and/or mentoring) or the training environment.

Assessment may occur in an operational environment or in an industry-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>Machines</i> may include:	• bulldozer • excavator • front end loader • skidder
<i>Safe procedures</i> may include:	• applying safe work practices • assisting vehicles and personnel working with machines • communicating with fire control line supervisors and support vehicles • maintaining contact and cooperation with support vehicles • position in relation to live fire edge and fire intensity • survival techniques in burn over situations • wearing appropriate personal protective equipment • wearing seatbelts in the cabin • working within the limits of machine capability
<i>Topographical and vegetation factors</i> may include:	• density and condition of vegetation adjacent to fire control line • proximity of hazardous trees • proximity to and crossing of, drainage lines and creeks • rockiness of terrain • soil type • steepness of terrain
<i>Environmental factors</i> may include:	• presence of species sensitive to disturbance • presence of or sensitivity to, environmental diseases or weeds that may be spread by machines • protection of flora and fauna habitat • rock outcrops and caves • reference/research areas • soil disturbance and erosion • water quality
<i>Agricultural factors</i> may include:	• access tracks • crops • dams/waterways (affected by erosion) • fences • pastures

	• stock
<i>Cultural and heritage factors</i> may include:	• aboriginal sites • historic sites • structures and earthworks
<i>Hazards</i> may include:	• falling trees and branches • heat, dust, smoke • hot ash • power lines • roads • rock outcrops and caves • structures
<i>Standards</i> may include:	• construction of one-way tracks (down-hill only) • cross-slope limitations • dimensions of vehicle turnarounds, passing bays and safety zones • dispersal of material by not creating windrows • distance between turnarounds • steepness limitations • trafficability for vehicles required to use fire control line • width of fire control line
<i>Preparation and mop-up</i> may include:	• breaking up burning heaps • clearing vegetation from around trees • dimensions and/or standard of construction of helipads • providing access for fire crews • pushing material into the burnt area • scrub rolling
<i>Rehabilitation works</i> may include:	• breach and barring tracks • breaking up heaps and mounds • dragging material over fire control line • removing material from creek and drainage lines • ripping compacted areas

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Unit Sector(s)

Not applicable.