



Australian Government

DEFSU003B Employ visual emergency signalling techniques in a survival situation

Release: 2

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Modification History

Release	TP Version	Comments
2	DEF12V2	Layout adjusted. No changes to content.
1	DEF12V1	Primary release.

Unit Descriptor

This unit covers the competency required to employ visual emergency signalling techniques in a survival situation.

The individual is not meant to be an expert signaller, but must demonstrate sufficient skills and knowledge to construct, maintain and employ functional emergency signalling devices to enhance their survival through the attraction of, and basic communication with, search and rescue (SAR) agencies.

Application of the Unit

As agreed in the creation of this Training Package, applications for units transferred from the PUA00 Public Safety Training Package will be developed as part of continuous improvement plans, and taking into account the change in Unit of Competency format as detailed in templates for Streamlined Training Packages.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

DEFSU008B Produce fire using improvised means in a survival situation

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 for the construction of visual emergency signals	1.1 Available <i>natural and artificial resources</i> are assessed for their application in emergency signalling 1.2 Local area is examined to identify the <i>ground</i> that would afford optimum visibility to <i>searchers</i> but minimum physical effort to the survivor 1.3 Sun's transit is observed and noted to determine the optimum placement of reflective signalling devices
2. Prepare emergency signaling devices for use	2.1 <i>Ground-to-air emergency signals</i> are sited and constructed using purpose signal marker panels and/or <i>improvised markers</i> to optimise visibility from the air 2.2 Tinsel/Christmas tree devices are sited and constructed using artificial resources, to optimise visibility from the air 2.3 An emergency signal fire is sited and <i>constructed</i> to optimise visibility from the air 2.4 <i>Shadow trenches are sited</i> and excavated 2.5 <i>Purpose built signalling devices</i> are prepared
3. Employ visual emergency signals	3.1 <i>Timeliness of initiation and visual signature of the emergency signal fire are maximised</i> 3.2 Purpose built signalling devices are employed effectively to attract search aircraft attention 3.3 <i>Recognition and response signals from search aircraft</i> are interpreted and responded to

Required Skills and Knowledge

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

Required Skills

- select combustible and 'smoking' materials
- construct, ignite and maintain a fire

Required Knowledge

- air search procedures
- aircraft recognition and response signals
- ground search procedures
- international distress signals

Evidence Guide

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

Assessment must confirm the ability to:

- accurately 'illuminate' a target at least 300 m away
- site and build a trench symbol visible from the air at 2 000 m (may be a simulated trench if ground is too hard i.e. through use of charcoal, rocks etc.)
- site and construct a tinsel tree to be visible from the air at 2 000 m
- site, construct and maintain the fuel and foliage stock for the fire and on order, light the fire so that it is well ablaze within 120 seconds and then generate smoke through the application of green foliage.

Consistency in performance

Competency should be demonstrated in a range of simulated visual emergency signalling techniques that could be expected in a survival situation.

Context of and specific resources for assessment

Context of assessment

Competency must be assessed in a simulated environment.

While a person can demonstrate the technical ability to employ visual signalling devices, doing so in a survival situation is crucial; consequently it is strongly recommended that holistic assessment be conducted with other associated survival units.

Assessment under simulated survival conditions should include:

- food restrictions (food should be restricted to half the recommended daily caloric intake)
- the absence of normal living conditions and amenities such as showers, beds and bedding (warmth to be provided by fire), kitchens etc. with the attendant levels of personal discomfort and fatigue
- a significant period of time - the recommendation is four days.

Specific resources for assessment

Access to emergency signalling devices.

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>Natural resources</i> may include:	• Charcoal • Rocks • Vegetation (logs, foliage)
<i>Artificial resources</i> may include:	• Foil • Glass (rear vision mirrors, headlight lens) • Metals (hub-caps, headlight dishes) • Tins
<i>Ground</i> may include:	• Hills • Openings in canopy
<i>Searchers</i> may include:	• Aerial • Ground • Sea
<i>Ground-to-air emergency signals</i> may include:	• Proceeding in this direction • no or negative • Require assistance • Require fodder • Require medical assistance • Yes or affirmative
<i>Improvised markers</i> may include:	• Bright textiles • Glass sheet (e.g. windscreen) • Metal sheet (e.g. bonnet, boot, fuselage/wing sections) • Natural materials such as ash or contrasting foliage • Plastic sheet (e.g. hootchie)
<i>Constructing an emergency signal fire</i> includes:	• Considering the prevailing wind's effect (if any) on smoke trails
<i>Siting shadow trenches</i> includes:	• Considering the sun's movement • Or if the ground is hard, simulated using natural resources
<i>Purpose built signalling devices</i> may include:	• Electronic position indicative radio beacon, Personal Locator Beacon (PLB) • Heliograph • Marker panels • Pyrotechnics • Radios • Sea dye marker

	• Strobe lights
<i>Maximising timeliness of initiation and visual signature of the emergency signal fire</i> includes:	• Achieving an immediate and robust bonfire • Applying large quantities of green leafy material or improvised smoking resources (e.g. car tyres; petrols, oils, lubricants; foliage) to the bonfire
<i>Search aircraft recognition and response signals</i> may include:	• I require your attention • Message received and understood • Message received but not understood • Follow aircraft in same direction

Unit Sector(s)

Not applicable.