



ASSESSMENT GUIDELINE

Work with helicopters

Unit Standard: 423

Level: 3 Credit: 3 Version: 6
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Purpose:

People credited with this unit standard are able to: demonstrate safe procedures for working with helicopters; manage a safe landing site; and demonstrate simulated survival procedures for a crashed helicopter.

Special Notes:

1. All activities must comply with the policies, procedures, and requirements of the enterprises involved and any relevant environmental, legislative and/or regulatory requirements which include but are not limited to the Health and Safety in Employment Act 1992 (HSE), Injury Prevention, Rehabilitation, and Compensation Act 2001, and their subsequent amendments and associated regulations.
2. There are minimum assessor requirements for assessment against this unit standard. The details of these requirements are available on the Sfrito website <http://www.sfrito.org.nz/>.

Overview of assessment:

This assessment has 4 tasks

- Task 1: Choose a landing site
- Task 2: Manage a helicopter landing site
- Task 3: Simulate survival procedures
- Task 4: Discuss hazards and communication

Task 1: Choose a landing site

Overview of task: The focus of this assessment is to show appropriate judgement in the selection of a landing site and an awareness of all the critical factors

Notes to the Assessor

The site chosen must not be an established helicopter landing site. It could be a hypothetical site, that will not actually be used to land a helicopter.

Instruction to candidate:

During this task you are required to:

- Choose a safe landing site
- Justify your choice
- Explain weather conditions and their effect on a helicopter while landing

Element 2: Manage a safe landing site.

Performance criteria	Evidence/Judgement
<p>2.3 Weather conditions that influence landing site choice are identified and their possible effects explained.</p> <p>Range: wind direction and strength, visibility, cloud cover, estimated altitude of cloud ceiling, weather pattern.</p>	<ul style="list-style-type: none">• The candidate chooses a landing site that:<ul style="list-style-type: none">- is flat and smooth enough for a helicopter to set at least one skid down and for someone to enter/exit- has no hazards for either rotor- has an approach path that is free of buildings, cables, trees or other hazards- has no hazardous loose material that could blow around
<p>2.2 A landing site is chosen and the selection justified in terms of safety.</p> <p>Range: factors may include but are not limited to – terrain hazards, slope angle, surface roughness, presence of loose material, proximity to buildings, vegetation, overhead cables.</p>	<p>In a discussion with the assessor, the candidate:</p> <ul style="list-style-type: none">• Justifies the choice of landing site in terms of all the above factors• Explains the weather conditions that are currently affecting the landing site, and their effect on a landing helicopter.• Explains weather conditions in general and their effect on a helicopter while landing, including all of:<ul style="list-style-type: none">- wind direction and strength- visibility- cloud cover- estimated altitude of cloud ceiling- weather trend e.g. improving, stable or deteriorating

Task 2: Manage a helicopter landing site

Overview of Task 1: the focus of the assessment is to safely load and unload a helicopter, and communicate with the pilot

Resources:

Helicopter operating with a load

Resources for communication with pilot (e.g. hands, radio, flags, pyrotechnics etc.)

Notes to the assessor

This task must be performed at least twice for sufficiency, on one occasion loading the helicopter with equipment or people, and on another occasion unloading.

Instruction to candidate:

During the task you are required to manage a helicopter landing site on 2 occasions, and:

- Communicate with the pilot and follow his/her instructions
- Load and unload the helicopter

Element 1: Demonstrate safe procedures for working with helicopters.

Element 2: Manage a safe landing site.

Performance criteria	Evidence/Judgement
<p>1.1 The instructions of the pilot are followed.</p> <p>Range: may include but is not limited to – verbal, hand signals, radio communications.</p>	<p>While a helicopter lands and takes off:</p> <ul style="list-style-type: none"> • Communicates with the pilot during the approach using for example: <ul style="list-style-type: none"> - hand signals - radio - other remote communication method • Communicates ground level wind direction • The instructions of the pilot are understood and followed (verbal, hand or radio) e.g. thumbs up • The pilot understands any communication made • Follows safe approach and leaving procedures: <ul style="list-style-type: none"> - secures equipment and loose items - makes eye contact with pilot - waits for pilot's OK before approaching - approaches from front or downhill side • Loads and unloads the helicopter with equipment or people: <ul style="list-style-type: none"> - latches on doors or hatches are opened and closed correctly on first attempt - load (if any) is securely attached and balanced - passengers (if any) are directed to buckle their seatbelts - follows the direction of the pilot regarding the helicopter's capabilities and the influence of the load on the helicopter's flight
<p>1.2 Procedures to safely approach and leave the operating helicopter are explained and demonstrated.</p> <p>Range: pilot eye contact, pilot approval before approaching, hand signals, slope angle, safely managed equipment.</p>	
<p>1.3 An on-site helicopter is loaded and unloaded according to its capabilities and the instructions of the pilot.</p>	
<p>2.1 Methods used to maintain clear communication with the pilot are explained and/or demonstrated.</p> <p>Range: may include but is not limited to – radio, hand signals, ground marking, flags, pyrotechnics.</p>	

Task 3: Simulate survival procedures

Overview of task: The focus of this assessment is to show what to do in a crash and explain post-crash procedures.

Resources:

Helicopter (does not need to be flying)

Notes to the Assessor

The candidate's demonstrations and answers should be checked with the normal pilot of the helicopter for accuracy.

Instruction to candidate:

During this task you are required to:

- Simulate leaving a helicopter that has crashed while you were flying in it
- Demonstrate the location and operation of any important emergency equipment
- Explain the process to be followed immediately after a crash

Element 3: Demonstrate simulated survival procedures for a crashed helicopter.

Performance criteria	Evidence/Judgement
<p>3.1 The emergency exits of the helicopter are identified and escape procedures demonstrated.</p>	<p>During a simulated crash where the candidate is buckled in to a seat with headset on:</p> <ul style="list-style-type: none"> • Calmly and quickly unbuckles, takes headset off, opens the door and exits the helicopter • Helps other people (if present) to exit the machine and move away • Moves clear of the crash site • Waits until the crashed machine has cooled and stabilised, then makes a decision as to whether it is safe to approach again • If safe - locates emergency locator beacon (if present) and simulates setting it off • Moves clear of the crash site <p>During a discussion on emergency procedures:</p> <ul style="list-style-type: none"> • Demonstrates the location of any important emergency equipment on board, e.g. <ul style="list-style-type: none"> - Axe - First aid kit - Fire extinguisher • Explains the process to be followed immediately after a crash, covering all of: <ul style="list-style-type: none"> - Clear the area - Reduce fire risk - Attend to injured people - Communicate with rescue organisations
<p>3.2 Emergency equipment is located and used appropriately.</p> <p>Range: may include but is not limited to – survival equipment, axe, fire extinguisher, first aid kit, emergency locator beacons.</p>	
<p>3.3 Emergency procedures on surviving a crash are outlined.</p> <p>Range: clear area, reduce fire risk, attend to injured, communicate with rescue organisations.</p>	

Task 4: Discuss hazards and communication

Overview of task: The focus of this assessment is to:

Instruction to candidate:

During this task you are required to explain:

- Methods that can be used to communicate with the pilot during approach
- Procedures to safely approach and leave a helicopter
- 4 hazards associated with working with helicopters, and strategies to manage them

Element 1: Demonstrate safe procedures for working with helicopters.

Element 2: Manage a safe landing site.

Performance criteria	Evidence/Judgement
<p>1.2 Procedures to safely approach and leave the operating helicopter are explained and demonstrated.</p> <p>Range: pilot eye contact, pilot approval before approaching, hand signals, slope angle, safely managed equipment.</p>	<p>In a discussion on communication and safety the candidate covers:</p> <ul style="list-style-type: none"> • At least 3 methods that can be used to communicate with the pilot during the approach • Procedures to safely approach and leave a helicopter, covering all of: <ul style="list-style-type: none"> - pilot eye contact - pilot approval before approaching - hand signals - slope angle - safely managed equipment • At least 4 hazards associated with working with helicopters. May include: <ul style="list-style-type: none"> - smoking - flammable liquids - obscured visibility and down drafts during landing and take-off - rotor blades - flying articles of clothing • Strategies to manage the 4 hazards above
<p>1.4 Possible hazards associated with working with secured and hovering helicopters are described and strategies to manage them are explained.</p> <p>Range: hazards may include but are not limited to – smoking, flammable liquids, obscured visibility and down drafts during landing and take-off, rotor blades, flying articles of clothing or other items.</p>	
<p>2.1 Methods used to maintain clear communication with the pilot are explained and/or demonstrated.</p> <p>Range: may include but is not limited to – radio, hand signals, ground marking, flags, pyrotechnics.</p>	

Candidate Name _____ NSN _____

**Unit 423 (v6) Checklist
Work with helicopters**

Assessor name: _____

Organisation name: _____

C/NYC

Comments

Task 1: Choose a landing site

- The candidate chooses an appropriate landing site
- Justifies the choice of landing site in terms of above factors
- Explains weather conditions and their effect on a helicopter while landing, covering all of:
 - wind direction and strength, visibility, cloud cover, estimated altitude of cloud ceiling, weather trend

Task 2: Manage a helicopter landing site

- Communicates with the pilot during the approach
- The instructions of the pilot are understood and followed
- Follows safe approach and leaving procedure, covering all of:
 - pilot eye contact, pilot approval before approaching, hand signals, slope angle, safely managed equipment
- Loads and unloads the helicopter with equipment or people:

Task 3: Simulate survival procedures

- Exits the helicopter, helps others to exit
- Moves clear of crash site, waits, then makes a decision as to whether it is safe to approach again
- Locates EPIRB (if present) and simulates setting it off
- Moves clear of the crash site
- Demonstrates location of emergency equipment
- Explains the process to be followed immediately after a crash, covering all of:
 - Clear the area; reduce fire risk; attend to injured people; communicate with rescue organisations

Task 4: Discuss hazards and communication

- In a discussion on communication and safety, covers:
- At least 3 methods that can be used to communicate with the pilot during the approach
 - Procedures to safely approach and leave a helicopter:
 - pilot eye contact; pilot approval before approaching; hand signals; slope angle; safely managed equipment
 - At least 4 hazards associated with working with helicopters
 - Strategies to manage the 4 hazards above

DATE	CANDIDATE'S SIGNATURE	ASSESSOR'S SIGNATURE	C/NYC

Comments: