Australian Government

AVIY0087 Operate helicopter at low level

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the skills and knowledge required to operate a helicopter at low level in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) Manual of Standards - LL-H Helicopter low-level operations and national operating standards.

It includes planning low-level operations, manoeuvring a helicopter at low level and performing quick stop manoeuvres. It also includes executing reversal turns, executing a forced landing from below 200 feet (ft) above ground level (AGL), and operating at low level in hilly terrain.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight crew and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

If the Manual of Standards is amended after the publication of this unit of competency, the delivery of the unit must be in accordance with the latest Manual of Standards as published by CASA.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Pre-requisite Unit

Not applicable.

Competency Field

Y – Aircraft Operation and Traffic Management

Unit Sector

Not applicable.

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 Plan low-level operations	**1.1** Risks at low level are identified, evaluated and managed
	1.2 Consultation with all stake holders involved in the low-level operation to confirm task requirements is completed
	1.3 Aircraft type and performance appropriate for the task is ensured
	1.4 Effects of fatigue and physical health on pilot performance is assessed and allowed for
	1.5 Actual and forecast weather conditions to low-level operations is analysed and applied
	1.6 Area of operations using chart and geographical features is identified
	1.7 Geographical characteristics of the area of flying operations to ensure safe completion of the task is assessed
	1.8 All obstructions are identified and avoided
	1.9 Buildings, personnel, vehicles, animals, vegetation and nuisance areas are identified and avoided
2 Conduct flight component	**2.1** Pre-flight inspection is correctly performed and aircraft serviceability for intended flight is determined
	2.2 Data validity of area navigation system (if fitted) is initialised and checked
	2.3 Aircraft is correctly operated
	2.4 Take-off is correctly performed

3	**Conduct aircraft handling at an altitude below 500 ft AGL**	**3.1** Pre-manoeuvre checks for each manoeuvre is conducted
		3.2 Level flight, climbing and descending steep turns are demonstrated,
		3.3 Approach is recognised and recovery to retreating blade stall in level flight and turning is demonstrated
		3.4 Correct techniques for upset recovery in various configurations is applied, including configuring aircraft appropriately, recognising upset condition, maintaining references by visual cues and recovering to level flight condition
		3.5 Energy state of the aircraft is managed
4	**Conduct low-level handling at an altitude of 200 ft AGL but not below 5 ft AGL**	**4.1** Aircraft energy state is managed
		4.2 Straight flight is performed, including adjusting height according to terrain to maintain assigned height AGL, recognising and managing the effect of rising and descending terrain on aircraft performance and compensating for drift
		4.3 Turning at various bank angles at normal cruise speed is performed
		4.4 Use of escape routes and rising ground is demonstrated
		4.5 Flight at various speed and configurations not below safe single-engine speed +15 knots-indicated air speed (KIAS) for multi-engine aircraft is demonstrated
		4.6 Operation adjacent to powerlines and wires is conducted

4.7 Awareness of wind effect in the vicinity of obstructions, mountainous terrain and illusions are demonstrated

4.8 Illusion of slipping and skidding during turns close to the ground is recognised and controlled

4.9 Effect of rising and descending terrain on aircraft performance is recognised

4.10 Constant altitude over featureless terrain or water is maintained

4.11 Procedure turns from a fixed ground reference point is conducted

4.12 Effects of false horizons is demonstrated

4.13 Impact of sun glare on increased risk of collision with obstacles is recognised and managed

4.14 Escape routes and rising ground are identified

4.15 Requirement to operate in the vicinity of powerlines is identified and wires and risks assessed

4.16 Powerlines (wires) are identified and avoided by a minimum of 15 ft when crossing overhead

4.17 All powerlines and wires are identified and avoided

4.18 Poles, cross trees, wires and insulators to assist powerline and wire location are identified

4.19 Pole stay wires are identified and avoided

	4.20	Quick stop manoeuvres are performed into wind and downwind entry
	4.21	Flight at various speed and configurations is performed
5 Execute autorotative forced landing (simulated) from below 500 ft AGL (single-engine helicopter only)	**5.1**	Potential forced-landing areas prior to and during low-level operations are identified
	5.2	Engine failure or any other emergency requiring a forced landing are recognised and recall actions are conducted
	5.3	Control of the aircraft is maintained, and the most appropriate landing area is selected within gliding distance while avoiding any powerlines or obstructions
	5.4	Aircraft is manoeuvred to a landing area that achieves the safest outcome
	5.5	Plan of action and the landing techniques that would ensure the safest outcome when committed to a forced landing on unfavourable terrain or water is explained
6 Execute engine failure (simulated) from below 500 ft AGL (multi-engine helicopter only)	**6.1**	Potential escape routes prior to and during low-level operations are identified
	6.2	Engine failure or any other emergency and conduct recall actions are recognised
	6.3	Aircraft is controlled and climb to safe altitude is initiated and maintained
	6.4	Aircraft is manoeuvred via escape route to a safe altitude

	6.5	Check system items are completed
	6.6	Plan of action is explained
7 Operate at low level in hilly terrain	**7.1**	Aircraft is safely manipulated at low level in hilly terrain
	7.2	Safe height relevant to application type is established and maintained
	7.3	Safe contour flying is demonstrated
	7.4	Natural markers to aid situational awareness are identified and selected
	7.5	Safe approaches to higher ground, including identification of escape routes, are demonstrated
	7.6	Safe turns in hilly terrain are demonstrated
	7.7	Awareness and management of the effects of wind and turbulence in hilly terrain, including lee effects, are demonstrated

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 AVI Aviation Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is not equivalent to AVIY0049 Operate helicopter at low level.

Links

Companion Volume Implementation Guides are found in VETNet' - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816