

FIJI AERONAUTICAL INFORMATION CIRCULAR



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GUIDANCE MATERIAL for HELICOPTER FLIGHTS OVER WATER

1. INTRODUCTION

- 1.1 The aim of this Guidance Material (GM) is to bring into focus what is required, and to clarify the operator's responsibility, when a decision is made to conduct helicopter flights over water.

2. ANR 98 - FLIGHTS OVER OR NEAR WATER OR ON ITS SURFACE

- 2.1 An aircraft operated by an operator domiciled in Fiji, when flying over water for the purpose of public transport, shall, without prejudice to the regulations contained in Part III, and except as may be necessary for the purpose of take-off or landing, fly at such an altitude as would enable the aircraft to reach a place at which it can -
 - (a) if it has more than 1 engine, in the event of the failure of 1 of those engines and with the remaining engine or engines operating within the maximum continuous power conditions specified in the certificate of airworthiness relating to that aircraft, land safely; or
 - (b) if it has only 1 engine and in the event of the failure of that engine, carry out a safe forced landing.
- 2.2 When 2 aircraft or an aircraft and a vessel on the water are approaching one another and there is a risk of collision, the aircraft shall proceed with careful regard to existing circumstances and conditions including the limitations of the respective craft.
- 2.3 At night, all aircraft on the water shall display lights as prescribed in the International Regulations for Preventing Collisions at Sea and, in addition, any other lights as may be prescribed by the Authority.
- 2.4 Any operation of aircraft on or near the surface of the water not provided for by this Regulation shall be subject to such conditions as may be notified by the Authority.

3. CATEGORY A CRITERIA

- 3.1 Helicopters that have been certified according to any of the following standards are considered to satisfy the Category A [criteria¹](#). Provided that they have the necessary performance, information scheduled in the AFM,

such helicopters are therefore eligible for performance class 1 or 2 operations:

- (a) Certification as Category A under CS-27 or CS-29;
- (b) Certification as Category A under JAR-27 or JAR-29;
- (c) Certification as Category A under FAR Part 29;
- (d) Certification as group A under BCAR Section G; and
- (e) Certification as group A under BCAR-29.

4. CATEGORY B CRITERIA

- 4.1 Any properly certified helicopter is considered to satisfy the Category B criteria² if appropriately equipped (in accordance with ANR 23), such helicopters are therefore eligible for performance class 3 operations. All single engine helicopters, operating in performance class 3, on flights over water beyond safe forced landing distance from the shoreline³ must be fitted with an approved flotation system.

5. GENERAL

- 5.1 Any person taking off or landing a helicopter at a heliport constructed over water may make such momentary flight as is necessary for take-off or landing through the prohibited range of the limiting height-speed envelope established for the helicopter if that flight through the prohibited range takes place over water on which a safe ditching can be accomplished and if the helicopter is amphibious or is equipped with floats or other emergency flotation gear adequate to accomplish a safe emergency ditching on open water.
- 5.2 The pilot in command of the aircraft must not fly over water at a distance from the shoreline³ greater than the distance from which the aircraft could reach the shoreline if the engine, or, in the case of a multi-engine helicopter, the critical engine (being the engine the non-operation of which when the other engines are in operation gives the highest minimum speed at which the aircraft can be controlled) is inoperative.

6. HELICOPTER FLOTATION REQUIREMENTS.

- 6.1 Helicopters used for Commercial Air Transport, and Aerial work over water beyond the shoreline³ must be equipped with fixed floats or an inflatable flotation system adequate to accomplish a safe emergency ditching, if:
- (a) It is a single-engine helicopter; or
 - (b) It is a multi-engine helicopter that cannot be operated with the critical engine⁴ inoperative at a weight that will allow it to climb, at least 50 feet a minute, at an altitude of 1,000 feet above the surface, as provided in the Rotorcraft Flight Manual (RFM).

- 6.2 Each helicopter that is required to be equipped with an inflatable flotation system must have:
- The activation switch for the flotation system on one of the primary flight controls (Cyclic pitch control lever or the collective control lever), and
 - The flotation system armed when the helicopter is over water and is flying at a speed that does not exceed the maximum speed prescribed in the Rotorcraft Flight Manual for flying with the flotation system armed.
- 6.3 Fixed floats or an inflatable flotation system is not required for a helicopter if:
- The helicopter is over water only during the take-off or landing portion of the flight, or
 - The helicopter is operated within Autorotative distance to the [shoreline](#)³ for the duration of the flight and each occupant is wearing a [life jacket](#)⁵ from before take-off until the aircraft is no longer over water.

¹ **'Category A'** means a multi-engine helicopter designed with engine and system isolation features specified in the applicable airworthiness codes and capable of operations using take-off and landing data scheduled under a critical engine failure concept that assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off in the event of engine failure.

² **'Category B'** means a single-engine or multi-engine helicopter that does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and unscheduled landing is assumed.

³ **'Shoreline'** means that area of the land adjacent to the water of an ocean, sea, lake, pond, river or tidal basin that is above the high-water mark and excludes land areas unsuitable for landing such as vertical cliffs or land intermittently under water during the particular flight.

⁴ **'Critical engine'** on a multi-engine, helicopter is the one whose failure would result in the most adverse effects on the aircraft's handling and performance. A helicopter with an engine failure, One Engine Inoperative (OEI), shall be capable of maintaining 1000 feet terrain clearance to a location suitable for an OEI landing. Therefore, the helicopter shall be capable of maintaining a 1% gradient of climb as a minimum, to the minimum required altitude to reach the destination or a suitable OEI landing area.

⁵ **'Life jacket'** means a flotation device used by an aircraft occupant if the aircraft ditches in water. If an inflatable device, it must be un-inflated and ready for its intended use once inflated. In evaluating whether a non-inflatable life preserver is acceptable to the Authority, the operator must demonstrate to the Authority that such a Life jacket can be used during an evacuation and will allow all passengers to exit the aircraft without blocking the exit. Each occupant must have the physical capacity to wear and inflate the type of device used once briefed by the operator. Seat cushions do not meet this definition.