

FIJI AERONAUTICAL INFORMATION CIRCULAR



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AIC 05/21

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This AIC replaces AIC 04/19, which is hereby cancelled.

PUBLIC TRANSPORT AND AERIAL WORK OPERATIONS

As part of CAAF's regulatory reform to update existing AICs and define the regulations affecting aerial work operations. This AIC is issued for the information and guidance of all concerned and is intended to clarify the essential differences between public transport and aerial work operations and list the type of activities that fall within aerial work operations which would be required to be classified, authorized and managed on the basis of the assessed safety risk of the activity being undertaken.

1.0. BACKGROUND

1.1. ICAO defines aerial work as the following:

An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

1.2. Aerial work operations are by their very nature very diverse, at times having characteristics of air transport operations or general aviation / private operations and at other times requiring an overlay of unique operational criteria. This invariably leads to the need for the issue of exemptions from the 'normal' rule set to allow the aerial work activity to occur.

1.3. This framework has led to the need for numerous specific exclusions or approvals for many of the aerial work tasks not covered by this category of aircraft or operational rule sets. The current AIC 03/84 does not address the unique needs of the industry.

2.0. CHARACTERISTICS OF AERIAL WORK

2.1. Common to all these activities are airworthiness, aircraft performance, economics and safety including crew training and qualification.

2.2. Airworthiness and performance requirements of aircraft restricted to aerial work may be quite distinct from that applicable to public transport operations. Usually only small aircraft are used in aerial work operations.

Certain Airworthiness and maintenance checks may be permitted in the field rather than at a fixed, well-equipped base/hangar. Performance required of such aircraft would indicate the need for low speed but with good take-off and landing ability and good all round visibility for the pilot.

- 2.3. In the economic area, the most noteworthy characteristics are the low utilization and seasonal nature of the work. Aerial work operations are usually influenced by the weather and such conditions as a clear sky (aerial photography) or light winds (aerial application) are often necessary.
- 2.4. With respect to safety, the risk factor in aerial work is often one of the highest. Aerial work usually involves manoeuvres very close to the surface and a high ratio of take-off and landings due to the need to make a large number of short trips. Inadequate or improper maintenance may result due to lack of facilities. Pilot fatigue may also result and there is a higher degree of influence exerted by weather/meteorological conditions. To these may be added the risk of poisoning from any toxic chemicals being applied. Many of the activities listed under aerial work would also require special training of both flight crew and ground personnel involved in the operation.

3.0. CURRENT LEGISLATION

- 3.1 Due to the complex nature and problems of the aerial work industry, involving many branches of the Government, industry and interests of the public in general, there is a need for proper co-ordination to ensure greater efficiency, economy and safety. The Air Navigation Regulations cover the requirements for aerial work activity and, when such activity is for commercial purposes, flight crew are required to hold professional licenses. The Authority has to-date, treated each request for aerial work operation on an individual basis and has, where necessary, issued special permits for such operation. This procedure has been followed due to the past low aerial work activity, however due to the increase of aerial work activity it has been deemed necessary to review the acceptable method of operations in this field. Crew qualifications, training and familiarization, and flight time limitations remain extant as per Air Navigation Regulations.

4.0. DEFINITIONS

- 4.1. Regulation 24 of the Air Navigation Regulation 1981 states that an aircraft shall be deemed to fly for the purpose of public transport if hire or reward is given or promised for the carriage of passengers or cargo on that flight. The aircraft is also deemed to fly for the purpose of public transport even if passengers are carried gratuitously in an aircraft on a flight operated by an air transport undertaking except when such passengers are in the employment of the undertaking or are its directors. The carriage of cargo gratuitously is also deemed to be a public transports operation except when the cargo is intended for use by the undertaking or its employees (including its directors). The Regulations define an "air transport undertaking" as one whose business includes the carriage by air of passengers or cargo for hire or reward.

- 4.2. Operators should note that the reference to employees/directors or cargo in relation to gratuitous carriage applies only to those directly employed by or are directors of, the company holding the AOC. The carriage of other passengers whether or not gratuitously, will be considered as public transport of passengers. Air transport undertakings, which have aircraft available for hire on a self-fly basis, are required to have such aircraft maintained to the standards applicable to Transport Category (Passengers) and have a valid Certificate of Airworthiness in this category. Unless otherwise permitted by the Authority, flying club aircraft are similarly affected.
- 4.3. Civil Aviation Reform Act 1999 defines "aerial work" means any purpose, other than the carriage of passengers or cargo, for which an aircraft is flown if hire or reward is given or promised in respect of the flight or the purpose of the flight.
- 4.4. The Air Navigation Regulation 1981 defines "aerial work" as any purpose, other than public transport, for which an aircraft is flown, if hire or reward is given or promised in respect of the flight or the purpose of the flight.

5.0. CASE FOR CHANGE

- 5.1. Commercial aerial work must be conducted under an AOC, or Permission issued by the Authority, CAAF currently identifies (in AOC application documentation) 7 separate aerial work operations and a multitude of subsets within. These operations range from very simple operations (such as Aerial Survey) to highly complex operations (such as helicopter emergency service operations for police and other government agency support organisations). This is a situation in which one organisational / certification model may not efficiently fit all requirements.
- 5.2. An AOC, or Permission issued by the Authority is required for any or all combination of aerial work activities, regardless of the associated risk(s) and degree of operational complexity. As such, a number of issues have resulted including:
 - i. exemptions being issued for very simple operations;
 - ii. industry needing exemptions to be able to operate;
 - iii. the imposition of additional administrative costs and organisational burdens on both industry and CAAF
- 5.3. Due to the lack of an accepted global standard for aerial work and with the absence of ICAO SARPS and international harmonisation, CAAF's approach to date has been to maintain our ICAO responsibilities and, where possible adopt the best practices from major aviation countries (where they are appropriate).
- 5.4. CAAF recognises that the management of aerial work operations via individual exemptions imposes an enormous workload and associated cost burden on industry

and CAAF. Furthermore, individual exemptions have the potential to lack transparency and standardisation in their issue and application.

- 5.5. This AIC details the requirements for aerial work allowing industry to achieve an appropriate balance between managing the risk of these operations, the retention of acceptable practices available under existing legislation, and the introduction of modernised legislation that takes into account the diversity and uniqueness of aerial work operations in the Fijian aviation environment.

6.0. AERIAL WORK

- 6.1. By definition, this category, therefore, includes all commercial tasks, other than the transport of passengers or cargo and excludes all non-work operations (such as private/pleasure, flying club, exhibition, displays or air rally activities) and aviation service operations (such as pilot and crew training/testing, aircraft research/test flights, demonstrations, delivery flights or flights connected with research, testing and calibration of aeronautical ground facilities and aids).

- 6.2. By consolidating and simplifying the classification of aerial work into 3 general categories applicable to both aeroplanes and rotorcraft activities ensures an appropriate organisational model for all operators in Fiji. This facilitates the identification of operations and aircraft that would be allowed to carry aerial work specialists and some aerial work passengers under specific risk-assessed criteria.

7.0. CLASSIFICATION OF AERIAL WORK ACTIVITIES

The consolidated and simplified classification of aerial work activities required grouping some activities for the purposes of recognizing common risks and applying common risk treatment strategies. The revised risk based definition groups allow for a simplified categorisation of aerial work purposes into:

- 7.1. External load operations including but not limited to:
- 7.1.1. the towing of objects (including towing of banners and targets);
 - 7.1.2. rotorcraft sling load operations; and
 - 7.1.3. winching, rappelling, fast roping and suspended extraction operations from rotorcraft.
- 7.2. Dispensing operations including but not limited to:
- 7.2.1. discharge of projectiles;
 - 7.2.2. discharge of objects; and
 - 7.2.3. discharge of material from a rotorcraft that is not an aerial application operation:
 - 7.2.3.1. food relief; and
 - 7.2.3.2. lifesaving equipment;
- 7.3. A task specialist operation means carrying out a specialized activity using an aircraft in flight and includes (but is not limited to) the following:

- 7.3.1. flights that require the carriage of task specialists;
- 7.3.2. flights requiring the use of specialized equipment;
- 7.3.3. flights requiring close proximity operations;
- 7.3.4. aerial Survey;
- 7.3.5. surveillance for the purposes of saving and protection of life and property or the enforcement of Fijian Laws.

7.4. The following classifications adopt the concept of 'emergency service operations', which are operations conducted at the request of, or tasking by, a set of specified Government agencies and organizations, that fall into one or more of the above 3 aerial work classifications. Emergency service operations would cover flights in association with an emergency service operation when requested by a Government body, or tasked by an operator who supplies services to a Government body, for the purposes of saving and protecting life and property or the enforcement of Fijian Laws.

These operations would include any combination of:

- 7.4.1. police operations;
- 7.4.2. emergency medical service operations;
- 7.4.3. customs and border protection operations;
- 7.4.4. search and rescue operations; and
- 7.4.5. training flights for the above operations.

8.0. CARRIAGE OF SPECIALISTS AND PASSENGERS

The following provides guidance on the carriage of passengers or persons essential to the successful completion of an aerial work operation. The three classifications of passengers below establish the requirements related to carriage of these persons by defining them as 'aerial work specialists' 'aerial work passengers' and 'AOC holder's members of staff'. Moreover, prescribing those situations in which an aerial work specialist and / or an aerial work passenger may be carried for the purposes of an aerial work operation.

8.1. AERIAL WORK SPECIALIST.

Aerial work specialists would be defined as crew (but not a flight crew member or air crew member) required to be carried on an aircraft by an operator, and who has in-flight duties related to a specialised use of the aircraft, and who is informed of, understands and accepts the associated safety risks. Examples of aerial work specialists include:

- 8.1.1. crew operating specialised equipment essential to the aerial work operation i.e. cameras, or
- 8.1.2. other crew members who have assigned in-flight duties related to the specialised use of the aircraft i.e. rappelling and fast roping.

The intent is to clearly define these persons as part of the crew to avoid the potential for confusion in their role in the aircraft.

8.2. AERIAL WORK PASSENGERS

Aerial work passengers would be defined as follows:

- 8.2.1. a person who has been rescued as part of a search and rescue operation; or
- 8.2.2. emergency service operation personnel; or
- 8.2.3. a restricted person; or

An 'aerial work passenger', would be a passenger other than those who use commercial or other publicly available air transport services, and who may be carried on an aerial work operational flight, and who is either:

- 8.2.4. informed of, understands and accepts the safety risks associated with the particular flight that they intend to take; or
- 8.2.5. is not able to be informed of, or understand and accept the safety risks associated with the particular flight that they intend to take, but whose carriage is required to save a human life, reduce harm to persons or the public, or to facilitate the rescue and recovery of a sick or injured person(s)

8.3. AOC HOLDER'S MEMBERS OF STAFF

An 'AOC holder's members of staff', would be a passenger under the permanent employment of the AOC holder, and who may be carried on an aerial work operational flight.