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REQUIREMENTS FOR THE ISSUE AND RENEWAL OF PILOTS' **AGRICULTURAL AIRCRAFT RATING**

1. PURPOSE

The Belize Department of Civil Aviation has developed this Aeronautical information Circular in order to allow for the grant and renewal of the **Agricultural Aircraft Rating** to appropriately licensed airmen as required by BCAR 137 Part II Section 14 (c) (1) . It provides requirements and procedures to those seeking the addition or renewal of the abovementioned rating to their license.

2. RELATED REGULATION

This Aeronautical information Circular relates specifically to BCAR 137 Aerial Work, in particular Part II Agricultural Aircraft Operations.

3. GRANT OF AN AGRICULTURAL AIRCRAFT RATING

An applicant seeking the grant of an Agricultural Aircraft Rating (AAR) shall comply with the following requirements:

- a) Be 18 years of age or older.
- b) Complete form APL Form 001
- c) Be the holder of a private pilot license or commercial pilot license issued by Belize Department of Civil Aviation, accompanied by an appropriate medical certificate.
- d) Accumulate a minimum of 100 flying hours prior to commencing Agricultural Aircraft Operations Training, and must accumulate a minimum of 150 hrs prior to commencing solo operations in agricultural aircraft operations training.
- e) Accomplish and show proof of the Agricultural Aircraft Operations Training detailed in Appendix I & II of this circular or provide proof of receiving agricultural aircraft operation instruction in accordance with an approved training curriculum in another country from an approved pilot and has achieved a minimum of 200 flying hours before applying for agricultural aircraft rating.

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- f) Pass an Agricultural Aircraft Operations written and skill test issued by the BDCA or a BDCA designated examiner as described in BCAR 137 Part II Section 5.
- g) Be the holder of a current Belize Pesticide Control Board (PCB) license.
- h) Pay the appropriate fees in respect of the conduct of the Agricultural Aircraft Operations skill test as well as the grant of the Agricultural Aircraft Rating.

4. DISPENSATION

The Department is aware that presently there are several pilots carrying out agricultural operations. In order to comply with BCAR 137 Part II Section 14 (c) (1) these pilots will be required to obtain the Agricultural Aircraft Rating. The Department is also aware that these pilots are qualified to conduct agricultural aircraft operations and as such will be issuing the Agricultural Aircraft Rating after they have demonstrated the following:

- a) Be 18 years of age or older.
- b) Be the holder of a private pilot license or commercial pilot license issued by Belize Department of Civil Aviation, accompanied by an appropriate Belize medical certificate.
- c) Accumulate a total of 350 flying hours of which 100 flying hours are done conducting agricultural aircraft operations prior to August 31st, 2013.
- d) If a pilot has not accumulated the required 350 hrs he must show proof of having received agricultural aircraft operation instruction in accordance with an approved training curriculum in another country from an approved pilot as detailed in Appendix III or provides proof that he has received training as detailed in Appendix I & II of this circular and has a minimum of 200 flying hours.
- e) Be the holder of a current Belize Pesticide Control Board (PCB) license.
- f) Pay the appropriate fees in respect of the grant of the Agricultural Aircraft Rating.

5. LIMITATIONS

The Agricultural Aircraft Rating will be added to the airman's licence and will allow the airman to conduct both private and commercial agricultural aircraft operations. All other limitations and privileges established in accordance with the category of license remain in force.

Private agricultural operations entail the spraying of farms or areas that a pilot has vested interest in I.E. family or communal farm lands.

Commercial agricultural operations entail operations that pilots are contracted out to spray farms or areas that they do not have a vested interest in, does not form a part of communal land, or are not owned by family members.

6. RECENT EXPERIENCE REQUIREMENT AND RENEWAL

1. The holder of an agricultural pilot (aeroplane) rating must not fly an aeroplane that is engaged in agricultural operations unless:

- a) the holder has, within the period of 1 year immediately before the day of the proposed flight, flown at least 50 hours of flight time as pilot in command of an aeroplane engaged in agricultural operations; or
- b) he or she has, within the period of 1 year immediately before the day of the proposed flight, passed an Agricultural Aircraft Operations skill test issued by the BDCA or a BDCA designated examiner.

2. The holder of an agricultural pilot (helicopter) rating must not fly a helicopter that is engaged in agricultural operations unless:

- a) the holder has, within the period of 1 year immediately before the day of the proposed flight, flown at least 50 hours of flight time as pilot in command of a helicopter engaged in agricultural operations; or
- b) he or she has, within the period of 1 year immediately before the day of the proposed flight, pass an Agricultural Aircraft Operations skill test issued by the BDCA or a BDCA designated examiner.

3. An applicant seeking the renewal of an Agricultural Aircraft Rating (AAR) shall comply with the following requirements:

- a) Be 18 years of age or older
- b) Be the holder of a private pilot license or commercial pilot license issued by Belize Department of Civil Aviation, accompanied by an appropriate Belize medical certificate.
- c) Complete form APL Form 001
- d) Show proof of compliance with the Recent Experience Requirements

Note: This may be done at the time the pilot's license is renewed. In the case of those holding a commercial pilot's license. With respect to those holding a private pilot's license, the Agricultural Aircraft Rating must be renewed annually.

7. Appendix I – Training for agricultural rating - Aeroplane

1. General

A pilot authorized by the Belize Department of Civil Aviation and who holds an appropriate current agricultural pilot rating may conduct all dual training and authorize flights where the student act as pilot-in-command. A pilot must not commence dual training parts of the syllabus unless he has achieved a minimum of 100 total flying hours. A pilot receiving dual training must not commence solo flight training parts of the syllabus unless he has achieved a minimum of 150 flying hours.

The training will be divided into three stages—

- a) Type conversion and familiarisation;
- b) Intermediate training; and
- c) Agricultural pilot training.

2. Type conversion and familiarisation

Type conversion onto the type or types of aircraft to be used in the approved course of training (if the type rating(s) are not already held) should be completed and type rating(s) issued. The purpose of this training is to ensure that the pilot under instruction is type rated on the appropriate aircraft type prior to commencing agricultural flying training.

Ground instruction

- a) Study of aircraft handbook and flight manual:
- b) Agricultural aircraft pre-flight inspection and pilot maintenance:
- c) Fuel, oil and electrical systems:
- d) Hopper tank and dumping systems.

Flight instruction

- a) Take-off and climb.
- b) Climbing and steep turns.
- c) Approach to stall (various configurations).
- d) Normal approach and landings.
- e) Forced landings.
- f) Approach, rejected landing and overshoot.
- g) Stopping engine and parking.

Flight times:

Dual agricultural aircraft – not less than: 1 hour dual, 1 hour solo.

3. Intermediate training

This period of pure flying instruction and solo practice is intended to bridge the gap between the commercial pilot licence standard and the standard required of the pilot prior to beginning (agricultural operational) role training.

Ground instruction

- a) Problems associated with low level operations over various types of terrain:
- b) Techniques associated with low level circuits and landings:
- c) Effect of flap in turns (where applicable).

Flight instruction

- a) Steep turns, stalling in steep turns, maximum rate turns:
- b) Basic low flying:
- c) Take-off into wind, 500–300 foot circuit landing or touch-and-go:
- d) Low flying, including steep turns, effect of wind, effect of flap (where applicable):
- e) Circuits, 300 foot & 100 foot, cross-wind and downwind landings touch-and-go:
- f) Low flying, over differing terrain at gross weight.

Flight time

This will not be less than 20 hours of which a minimum of 10 hours must be dual.

4. Agricultural pilot training

Ground instruction

- a) Study of Aeronautical Information Circulars, Belize Civil Aviation Regulations, Advisory Circulars, guidance and regulatory material from the Pesticides Control Board , and any other requirements applicable to agricultural aviation:
- b) Theoretical aspects of agricultural aviation including types of material sprayed or sown, application rates, application techniques, airspeed versus swath widths, meteorological aspects affecting drift, environmental responsibilities:
- c) Care of aircraft, cleaning of windscreen or bubble, airframe, and underside, serviceability of engine and instruments, fuel policy:
- d) Strip operations, surface conditions, effect of soft ground.
- e) Safety procedures around aeroplane, hot refuelling, briefing of ground personnel, and signals with ground staff.

Flight instruction

- a) Inspection of airstrip from the air, planning approach and landing, take-off:
- b) Briefing of work area, boundary inspections, planning of work, fuel management:
- c) Operations on loading area or landing site and selection of loads.
- d) Simulated spreading and spray runs, including emergency drills for each stage of flight:
- e) Productive flying with work load being transferred gradually from the instructor to the pilot under instruction.

Flight time

This will not be less than:

- a) 10 hours dual in an agricultural aeroplane and 40 hours of directly supervised solo training in an agricultural aeroplane. **Actual application of agro products may only be conducted during the last 10 hours of supervised solo training. This may only be conducted with prior written consent from the proprietor of the land over which this activity will take place.**

8. Appendix II – Training for agricultural rating - Helicopter

1. General

A pilot authorized by the Belize Department of Civil Aviation and also holds an appropriate current agricultural pilot rating is to conduct all dual training and authorise flights where the student acts as pilot-in-command.

The training will be divided into three stages—

- a) Type conversion and familiarisation;
- b) Intermediate training; and
- c) Agricultural pilot training.

2. Type conversion and familiarisation

Type conversion onto the type or types of aircraft to be used in the approved course of training (if the type rating(s) are not already held) should be completed and type rating(s) issued. The purpose of this training is to ensure that the pilot under instruction is type rated on the appropriate aircraft type before beginning the agricultural flying training.

Ground instruction

- a) Study of aircraft handbook and flight manual:
- b) Agricultural aircraft pre-flight inspection and pilot maintenance:
- c) Fuel, oil and electrical systems:
- d) Hopper tank and, where appropriate, jettison systems.

Flight instruction

- a) Correct start and warm-up procedures:
- b) Lift into hover, pattern flying and hover:
- c) Take-off and climb; Climbing and descending (straight and whilst turning):
- d) Quick stops:
- e) S-turns:
- f) Emergencies – including autorotation and simulated tail rotor failures:
- g) Landings – normal, tail rotor failure, autorotation and power recovery:
- h) Simulated high altitude take-off and landings:
- i) Sloping landings:
- j) Rundown, stopping engines, and tying down rotors.

Flight times:

Dual agricultural aircraft – not less than: 1 hour dual, 1 hour solo.

3. Intermediate training

This period of pure flying instruction and solo practice is intended to bridge the gap between the commercial pilot licence standard and the standard required of the pilot prior to beginning role training.

Ground instruction

- a) Problems associated with low level operations over various types of terrain:
- b) Techniques associated with low flying and contour flying:
- c) Various requirements for hovering flight both in and out of ground effect:
- d) Effect of loss of translation:
- e) Importance of RPM control.

Flight instruction

- a) Spray turns;
- b) Low contour flying with emphasis on constant speed and height above the surface:

- c) Prolonged hovering both in and out of ground effect. Emphasis on accuracy and position
- d) holding:
- e) All up weight operation.

Flight time

This will not be less than 8 hours dual and 6 hours solo.

4. Agricultural pilot training

Ground instruction

- a) Study of Aeronautical Information Circulars, Belize Civil Aviation Regulations, Advisory Circulars, guidance and regulatory material from the Pesticides Control Board, and any other requirements applicable to agricultural aviation:
- b) Theoretical aspects of agricultural aviation including types of material sprayed or sown, application rates, application techniques, airspeed versus swath widths, meteorological aspects affecting drift, environmental responsibilities:
- c) Care of aircraft, cleaning of windscreen or bubble, airframe, and underside, serviceability of engine and instruments, fuel policy:
- d) Inspection of landing site, surface conditions, landing path and clearance from obstructions:
- e) Safety procedures around helicopter, briefing of ground personnel, signals with ground staff, and selection of loads.

Flight instruction

- a) Briefing of work area, boundary inspections, planning of work, fuel management:
- b) Operations on loading area or landing site, selection of loads, signals with driver:
- c) Simulated sowing, and/or spray, runs, including drills for each stage of flight:
- d) Productive flying with work load being transferred gradually from the instructor to the pilot under instruction.

Flight time

This will be not less than 25 hours dual in an agricultural helicopter and 35 hours of directly supervised solo training in an agricultural helicopter.

9. Appendix III – Approved Pilots

Approved pilots

1. An applicant for approval to conduct initial agricultural flying training or operational flying training shall have the following minimum experience on agricultural operations in the kind of aircraft for which he or she requests approval:

- a) aeroplanes — 2 000 hours of which a minimum of 1 000 hours shall have been gained on spraying operations and 500 hours on top dressing operations; or
- b) helicopters — 1 000 hours.

2. An applicant for approval to conduct direct and indirect supervision or agricultural conversion training shall have the following minimum experience on agricultural operations in the kind of aircraft for which he requests approval:

- a) aeroplanes — 1 000 hours of which a minimum of either 250 hours shall have been gained upon spraying operations or 250 hours upon top dressing operations, depending on the applicable operation; or
- b) helicopters — 500 hours.

3. Approvals for initial and operational agricultural flying training may be renewed annually subject to the applicant having obtained a minimum of 100 hours on agricultural operations during the previous 12 months. In the event that the applicant cannot show proof of having obtained 100 hours of agricultural operations, pass an Agricultural Aircraft Operations skill test issued by the BDCA or a BDCA designated examiner.

4. Approval for direct or indirect supervision or agricultural aircraft conversion or endorsement training may be renewed with the agricultural rating.

THIS AIC C005/2013 REPLACES AIC C004/2013
