



Advisory Circular

AC61-15

Pilot Licences and Ratings - Agricultural Ratings

Revision 4
11 May 2016

General

Civil Aviation Authority advisory circulars contain information about standards, practices, and procedures that the Director has found to be an **acceptable means of compliance** with the associated rule.

An acceptable means of compliance is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate advisory circular.

This advisory circular also includes **guidance material** to facilitate compliance with the rule requirements. Guidance material must not be regarded as an acceptable means of compliance.

Purpose

The advisory circular provides information on the training syllabus content that is acceptable to the Director for meeting the Civil Aviation Rule requirements for the issue of an agricultural rating.

Related Rules

This advisory circular relates specifically to Civil Aviation Rule Part 61 Subpart O – Agricultural Ratings.

Change Notice

Subject to “Memorandum for Technical Cooperation” between the CAA of Mongolia and New Zealand on mutual cooperation in implementation of Assembly Resolution A29-3: Global Rule Harmonization, 29th ICAO Assembly, 1992, which urges States to promote global harmonization of national rules, dated 6th of May, 1999, Mongolian Civil Aviation Safety Regulation has been reconciled to the Civil Aviation Regulation of New Zealand.

Amendment 164 of Annex 1 to the Chicago Convention on International Civil Aviation urges flight crew members, ATC personnel and aircraft maintenance engineers to comply with the language proficiency requirements; and

Under Article 14 of the Civil Aviation Law of Mongolia 1999, "Use of foreign language in civil aviation" the AC has been released in English version only, in order to prevent any mistranslation and misuse of the aviation safety related documents.

This AC 61-15 was developed based on NZAC 61-15 revision 4, dated on 03 April 2014.

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Rule 61.701 Eligibility requirements

Flight time

Rule 61.701(a)(2) requires that before commencing training for a Grade 2 agricultural rating a pilot is required to have at least 200 hours of flight time as a pilot which must include at least 100 hours as pilot in command in the appropriate category of aircraft.

Training course

Rule 61.701(a)(3) and (a)(4) requires an applicant for a Grade 2 agricultural rating to have completed a course of ground agricultural training and a course of agricultural flight training. Details of the syllabus contents of the ground and flight training courses for aeroplanes are set out in Appendix I of this Advisory Circular.

Details of the syllabus contents of the ground and flight training courses for helicopters are set out in Appendix II of this Advisory Circular.

Flight time spent as a Category E instructor, instructing in agricultural aircraft operations, is considered productive flight time on agricultural aircraft operations.

Rule 61.703 Issue

Logbook endorsement

Rule 61.703 states the requirements for the issue of an agricultural rating. The flight instructor or flight examiner must be satisfied that the eligibility requirements of rule 61.701 have been met before issuing the agricultural rating.

The entry in the logbook must be made in accordance with rule 61.29(a)(3) including—

- (i) the purpose of the flight; and
- (ii) the date of the flight; and
- (iii) the expiry date of the flight test, flight review, competency demonstration or check; and
- (iv) the name, client number, and signature of the person conducting the flight test, flight review, competency demonstration, or check.

Appendix I – Training for agricultural rating - Aeroplane

1. General

The holder of an appropriate current category E flight instructor rating who 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—

- Type conversion and familiarisation;
- Intermediate training; and
- 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

Study of aircraft handbook and flight manual:

Agricultural aircraft pre-flight inspection and pilot maintenance:

Fuel, oil and electrical systems:

Hopper tank and, where appropriate, jettison systems.

Flight instruction

Take-off and climb:

Climbing and steep turns:

Approach to stall (various configurations):

Normal approach and landings:

Forced landings:

Approach, rejected landing and overshoot:

Stopping engine, parking and picketing.

Flight times:

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

Single seat aeroplane – not less than: 1 hour dual in an equivalent training aeroplane, 2

hours solo in agricultural aeroplane.

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

Problems associated with low level operations over various types of terrain:

Techniques associated with low level circuits and landings:

Effect of flap in turns.

Flight instruction

Steep turns, stalling in steep turns, maximum rate turns:

Basic low flying:

Take-off into wind, 500–300 foot circuit landing or touch-and-go:

Low flying, including steep turns, effect of wind, effect of flap:

Circuits, 300 foot & 100 foot, cross-wind and downwind landings touch-and-go:

Low flying, over differing terrain at gross weight.

Flight time

This will not be less than 20 hours of which 5 hours must be dual.

4. Agricultural pilot training

Ground instruction

Study of Aeronautical Information Circulars, Civil Aviation Rules, Advisory Circulars, Agrichemical Users Code of Practice, and any other requirements applicable to agricultural aviation:

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:

Care of aircraft, cleaning of windscreen or bubble, airframe, and underside, serviceability of engine and instruments, fuel policy:

Strip operations, surface conditions, effect of soft ground, frost & thaw:

Safety procedures around aeroplane, hot refuelling, briefing of ground personnel, and signals with ground staff.

Flight instruction

Inspection of airstrip from the air, planning approach and landing, take-off:

Briefing of work area, boundary inspections, planning of work, fuel management:

Operations on loading area or landing site, selection of loads, signals with driver:

Simulated sowing, and/or spray, runs, including drills for each stage of flight:

Productive flying with work load being transferred gradually from the instructor to the pilot under instruction.

Flight time

This will not be less than 20 hours dual in an agricultural aeroplane and 40 hours of directly supervised solo training in an agricultural aeroplane.

Appendix II – Training for agricultural rating - Helicopter

1. General

The holder of an appropriate current category E flight instructor rating who 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—

- Type conversion and familiarisation;
- Intermediate training; and
- 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

Study of aircraft handbook and flight manual:

Agricultural aircraft pre-flight inspection and pilot maintenance:

Fuel, oil and electrical systems:

Hopper tank and, where appropriate, jettison systems.

Flight instruction

Correct start and warm-up procedures:

Lift into hover, pattern flying and hover:

Take-off and climb;

Climbing and descending (straight and whilst turning):

Quick stops:

S-turns:

Emergencies – including autorotation and simulated tail rotor failures:

Landings – normal, tail rotor failure, autorotation and power recovery:

Simulated high altitude take-off and landings:

Sloping landings:

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

Problems associated with low level operations over various types of terrain: Techniques associated with low flying and contour flying:

Various requirements for hovering flight both in and out of ground effect:

Effect of loss of translation:

Importance of RPM control.

Flight instruction

Spray turns;

Low contour flying with emphasis on constant speed and height above the surface:

Prolonged hovering both in and out of ground effect. Emphasis on accuracy and position holding:

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

Study of Aeronautical Information Circulars, Civil Aviation Rules, Advisory Circulars, Agrichemical Users Code of Practice, and any other requirements applicable to agricultural aviation:

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:

Care of aircraft, cleaning of windscreen or bubble, airframe, and underside, serviceability of engine and instruments, fuel policy:

Inspection of landing site, surface conditions, landing path and clearance from obstructions:

Safety procedures around helicopter, briefing of ground personnel, signals with ground

staff, and selection of loads.

Flight instruction

Briefing of work area, boundary inspections, planning of work, fuel management:

Operations on loading area or landing site, selection of loads, signals with driver:

Simulated sowing, and/or spray, runs, including drills for each stage of flight:

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.