



Advisory Circular AC115-2

Adventure Aviation—Hot Air Balloon Operations

09 August 2016

General

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

However, the information in the advisory circular does not replace the requirement for participants to comply with their obligations under the Civil Aviation Rules, the Civil Aviation Act 1999 and other legislation.

An advisory circular reflects the Director's view on the rules and legislation. It expresses CAA policy on the relevant matter. It is not intended to be definitive. 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. Should there be any inconsistency between this information and the rules or legislation, the rules and legislation take precedence.

An advisory circular may also include **guidance material** generally, including guidance on best practice as well as guidance to facilitate compliance with the rule requirements. However, guidance material must not be regarded as an acceptable means of compliance.

An advisory circular may also include **technical information** that is relevant to the rule standards or requirements.

Purpose

This advisory circular provides methods, acceptable to the Director, and guidance material on microlight aircraft operation, to assist the applicant for and holder of an adventure aviation certificate, to meet Civil Aviation Rule Part 115 *Adventure Aviation, Initial Issue—Certification and Operations*.

Related Rules

This advisory circular relates to Civil Aviation Rule Part 115 - specifically Subpart I 'Hot Air Balloon Operations'. It also refers to requirements in the operating rules of Parts 12, 43, 61, 91, 100, 101 and 141. It also refers to Part 1, which provides for definitions and abbreviations used in the Civil Aviation Rules.

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.

This AC 115-2 has been released in English and Mongolian language. In the event of any conflict and discrepancy between the two above mentioned versions, English version shall prevail.

This AC 115-2 was developed based on NZ AC 115-2, dated on 26 May 2016.

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Rule 115.501 Airworthiness

An applicant for an adventure aviation operator certificate using a hot balloon must ensure that each balloon used for the operation has a current standard category airworthiness certificate, and there are no conditions precluding use under Part 115, for example: endorsed “not for hire and reward operations”.

Rule 115.503 Instruments and equipment

The applicant must review the requirements in Subpart F of Part 91, to ensure the balloon is appropriately equipped. While many of the requirements of Part 91 Subpart F are not applicable to balloons, rules 91.509(a)(3) and 115.503(2) specifically require a means of indicating altitude in feet.

Rule 91.525(e) requires that a manned balloon must be equipped with 1 life preserver for each person on board stowed in a visibly identified location and readily accessible from the position occupied by the person if:

- (a) the flight crosses or might cross the shore of any lake or sea; or
- (b) The flight takes-off from or intends to land at a site where the take-off or approach path is so disposed over water, that in the event of a mishap there is a likelihood of a ditching; or
- (c) The flight takes-off from a site that is located within 1 nm of water at the ordinary high water mark and the wind is offshore or is less than 5 knots onshore.

Rule 91.513 Communications equipment

Unless authorised by ATC to operate under VFR without radio communication, an aircraft operating under VFR in controlled or uncontrolled airspace must be equipped with radio communication equipment that—

- (a) must be certificated in accordance with a technical standard order (TSO) issued by the FAA or ETSO certificated by EASA (TSO'd)
- (b) is capable of providing continuous two-way communication with an appropriate ATC unit. To establish if an avionic component is TSO'd, refer to the component data label, or contact the manufacturer or avionics service provider.

Rule 91.247 Operations in controlled airspace

The pilot in command of an aircraft operating transponder-mandatory airspace designated under Part 71 must unless otherwise authorised or instructed by ATC—

- (a) operate the transponder:
 - (i) in Mode A and Mode C; or

- (ii) in Mode S if the aircraft is equipped with Mode S equipment and allocated a unique Mode S code assigned by the State of Registry; and
- (b) except if paragraph (c) applies or if operating Mode S equipment, set the transponder SSR code:
 - (i) to the code assigned by ATC for the flight; or
 - (ii) if not assigned a code by ATC, set SSR Code 1300; and
- (c) in the event of an in-flight emergency, loss of radio communications, or an act of unlawful interference, set the transponder to SSR Code 1300.

Rule 115.505 Maintenance

The intent of this rule is to ensure that the inherent airworthiness of a balloon is maintained throughout its operational life.

Any maintenance performed must ensure the balloon continues to meet the type design standards, that every applicable airworthiness directive is complied with, any defects are rectified, and a review of airworthiness has been carried out (refer to rule 91.615). If fitted with transponder or floatation equipment, the applicable requirements of rule 91.605(e) must be complied with.

The maintenance programme required by rule 115.61 is a compilation of the individual maintenance and inspection functions used by an operator to maintain airworthiness of the specific balloon to be listed on the operations specification.

The maintenance programme consists of two basic parts—

- (a) instructions and procedures that maintenance is performed in accordance with and must be equivalent to paragraph (b)
- (b) schedule of the maintenance actions including required inspections and tests of the balloon and its components together with details of parts and areas that—
 - (i) must be inspected
 - (ii) could result in a failure, malfunction, or defect endangering the safe operation of the balloon.

The instructions and procedures define **how** maintenance requirements as defined in rule 115.61 are to be carried out and must be equivalent to—

- (c) the applicable requirements prescribed in Subpart G of Part 91
- (d) the manufacturer's maintenance schedule
- (e) the maintenance programme must include procedures for—
 - (i) recording defects including examples of records
 - (ii) the correction or deferral of defects found during maintenance
 - (iii) inducting a balloon onto the programme

- (iv) ensuring that every maintenance action required by the programme is performed
- (v) the retention of maintenance records under rule 91.623.

The maintenance programme must also include a schedule for performance of required maintenance expressed in terms of time in service, cycles, calendar time, and number of system operations or any combinations of these.

The maintenance inspection must be performed or supervised by and certified by a person who holds an appropriate qualification issued by the Director under the Act or Part 66.

The review of airworthiness must be carried out by the holder of an inspection authorisation (IA) issued under Part 66.

Rule 115.507 Pilot qualification and experience requirements

The requirements for a person to act as pilot in command of a hot air balloon operating under Part 115—

- (a) holds a current commercial balloon pilot licence
- (b) hold an aircraft type rating for the balloon
- (c) has acquired at least—
 - (i) 100 hours flight time experience as pilot-in-command of a balloon
 - (ii) 10 hours flight time experience as pilot-in-command of the type of balloon used.