

Adventure Aviation—Special Aircraft Operations

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 1990 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 on special 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 Parts 115 – specifically Subpart O 'Special Aircraft Operations'. It also refers to requirements in the operating rules of Parts 12, 43, 61, 91, 100, 101, 103 and 141. It also refers to Part 1, which provides for definitions and abbreviations used in the Civil Aviation Rules.

Change Notice

This is the initial issue.

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Definition

See also Part 1 of the Civil Aviation Rules for other terms.

Special Aircraft Operations – Is the operation of a standard category aircraft doing special things (non-standard) eg aerobatics or formation flights with passenger on board, or a special category aircraft (Limited exhibition, LSA or Primary) doing standard operations.

Rule 115.751 Aircraft airworthiness

The intent of this rule is to limit adventure aviation operator conducting a special aircraft operation. Each aircraft used to conduct a special aircraft operation must have an airworthiness certificate in one of the following categories:

- (a) *standard category* airworthiness certificate; or
- (b) *special category—primary* airworthiness certificate; or
- (c) *special category—LSA; or* airworthiness certificate; or
- (d) *special category—limited.* airworthiness certificate.

The flight manual for the aircraft used for the operation permits the aircraft to be used for the types of manoeuvres that are intended to be performed on the operation.

Rule 115.753 Instruments and equipment

An aircraft operating under Subpart O must be equipped with instruments and equipment that meet the requirements of rule 91.509 with a means of—

- (a) indicating airspeed
- (b) indicating Mach number, if the speed limitation specified in the aircraft flight manual is expressed in terms of Mach number
- (c) indicating altitude in feet
- (d) indicating magnetic heading
- (e) indicating fuel tank contents, other than auxiliary fuel tank contents
- (f) indicating engine revolutions of each engine
- (g) indicating oil pressure of each engine using a pressure lubricating system
- (h) indicating coolant temperature of each liquid-cooled engine
- (i) indicating oil temperature of each engine rated at over 250 brake horsepower using a pressure lubricating system
- (j) indicating manifold pressure of each supercharged or turbocharged piston engine, and each piston engine fitted with a constant speed propeller
- (k) indicating cylinder head temperature of each air-cooled piston engine rated at over 250 brake horsepower

- (l) indicating flap position, if flaps are fitted, unless the position of the flaps can be determined visually by the flight crew member
- (m) indicating landing gear position, if the aircraft has retractable undercarriage
- (n) indicating the correct functioning of electrical power generating equipment
- (o) indicating the presence of carbon monoxide in the cabin if the aircraft is fitted with an exhaust manifold cabin heater or a combustion cabin heater.

The aircraft must be equipped with an automatic 406 MHz ELT as per rule 91.529. The ELT beacon must be registered. The beacon can be registered online at <http://beacons.org.nz/> .

An aircraft is not required to carry a 406MHz ELT if the aircraft is equipped with no more than two seats (pilot(s) included), and if the aircraft is operated not more than 10 nm from the aerodrome from which the aircraft took off.

Rule 115.755 Aircraft maintenance

The intent of this rule is to ensure that the inherent airworthiness of an aircraft is maintained throughout the operational life.

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 aircraft listed on the operator operations specification.

The maintenance programme consists of two basic parts—

- (a) instructions and procedures that maintenance is performed in accordance with
- (b) a schedule for the performance of maintenance including required inspections and tests of the aircraft 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 aircraft.

Maintenance instructions and procedures

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

- (a) applicable requirements prescribed in Subpart G of Part 91
- (b) manufacturer's maintenance schedule
- (c) must include procedures for—
 - (i) recording defects including samples of records
 - (ii) defect rectification and deferral of defects found during maintenance
 - (iii) inducting an aircraft 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
 - (vi) a description of work performed or reference to data acceptable to the Director and name of person certifying release-to-service, if work is performed outside the applicant's maintenance organisation.

Maintenance schedule

The maintenance programme must 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 including a review of airworthiness under rule 91.615.

Rule 115.757 Pilot qualifications and experience requirements

The requirements for a person to act as pilot-in-command of an aircraft used to perform a special aircraft operation operating under Part 115—

- (a) holds an appropriate and current commercial pilot licence
- (b) holds a valid aircraft type rating for the aircraft used for the operation
- (c) for single piston engine powered aeroplanes or helicopters special aircraft operation, the pilot must have:
 - (d) have a minimum of 200 hours flight time experience as pilot-in-command
 - (e) at least 30 hours flight time experience as pilot-in-command on the category of aircraft being used for the operation; or
 - (f) for multi or turbine engine aeroplanes or helicopters, has at least 300 hours flight time experience as pilot-in-command, and at least 30 hours flight time experience as pilot-in-command on the category of aircraft being used for the operation
- (g) for single piston engine aeroplanes carrying out an adventure aviation aerobatic operation or a formation flight operation, or a simulated military operation, the pilot must have 300 hours flight time experience as pilot-in-command
- (h) for aeroplanes or helicopters carrying out an adventure aviation aerobatic operation or a formation flight operation, or a simulated military operation, the pilot must hold a current aerobatic rating at least —
 - (i) 30 hours flight time experience as pilot-in-command carrying out the types of manoeuvres to be performed during the operation
 - (ii) 300 hours flight time experience as pilot-in-command
 - (iii) 30 hours flight time experience as pilot-in-command carrying out the types of manoeuvres to be performed during the operation.

Pilot Qualifications and Experience Requirements							
Qualification Operation Type	Current CPL	Aircraft Type Rating	Aerobatic Rating	Hours PIC Experience		May be included as part of total experience	
				single engine	multi or turbine engine	Min 30 Hrs as P in C on the Cat. Of A/C being used.	Min 30 Hrs as P in C carrying out the type of manoeuvres to be performed.
Special Aircraft Operation	✓	✓		200	300	✓	
Aerobatic Op	✓	✓	✓	300	300	✓	✓
Formation Flight Op	✓	✓	✓	300	300	✓	✓
Simulated Military Op	✓	✓	✓	300	300	✓	✓