BFCL.150 BPL – Extension of privileges to another balloon class or group

Regulation (EU) 2020/357

1. The privileges of the BPL shall be limited to the class of balloon in which the skill test as specified in point BFCL.145 was taken, and, in the case of hot-air balloons, to group A of that class.

2. In the case of hot-air balloons, the privileges of the BPL shall be extended to another group within the hot-air balloon class upon application if a pilot has completed at least:

    1. two instruction flights with an FI(B) on a balloon of the relevant group;
    2. the following amount of hours of flight time as PIC on balloons:
        1. at least 100 hours, if privileges for group B balloons are sought;
        2. at least 200 hours, if privileges for group C balloons are sought;
        3. at least 300 hours, if privileges for group D balloons are sought.

3. Except for the mixed balloon class, the privileges of the BPL shall be extended to another balloon class, or, if privileges for the hot-air balloon class are sought, to group A of the hot-air balloon class, upon application if a pilot has completed in the relevant balloon class and group:

    1. a training course at an ATO or a DTO, including at least:
        1. five dual instructional flights; or
        2. in the case of an extension from hot-air balloons to hot-air airships, five hours of dual instruction time; and

    2. a skill test during which the pilot has demonstrated to the FE(B) an adequate level of theoretical knowledge for the other class in the following subjects:

        1. principles of flight;
        2. operational procedures;
        3. flight performance and planning;
        4. aircraft general knowledge with regard to the balloon class for which the extension of privileges is sought.

4. The completion of the training as specified in paragraphs (b)(1) and (c)(1) shall be entered in the logbook of the pilot and signed by:

    1. in the case of paragraph (b)(1), the instructor who is responsible for the instruction flights; and
    2. in the case of paragraph (c)(1), the head of training of the ATO or of the DTO that is responsible for the training.

5. A BPL holder shall exercise his or her privileges in the mixed balloon class only if he or she has privileges for both the hot-air balloon class and the gas balloon class.

AMC1 BFCL.150(b) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Extension of Hot-Air Balloon Class Privileges to another hot-air balloon group

1. The training flights should concentrate on the differences between the group for which privileges are sought and the group(s) for which the pilot already has privileges. For example, handling needs to consider balloon performance differences arising from greater mass, inertia, response to the burner and, in some cases, differing deflation systems. Additional requirements arise for dealing with larger numbers of passengers.

2. Instructors should only sign off as ‘training completed’ when they are satisfied that the pilot under training has achieved full technical and operational competence for balloons of all sizes included in the given group.

3. An extension to group C is also valid for groups A and B. An extension to group D is also valid for groups A, B and C.

GM1 BFCL.150(b) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Extension of Hot-Air Balloon Class Privileges to another hot-air balloon group

The two training flights stipulated in point BFCL.150(b)(1) constitute the minimum amount of training needed in the case of experienced pilots who seek to extend their privileges by one group size. The instructor may conduct additional training flights, as necessary for the candidate to acquire the competence needed, before entering the completion of training in the candidate’s logbook.

AMC1 BFCL.150(c)(1) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Flight instruction for the extension of privileges to the hot-air airship class

1. The numbering of the exercises set out in point (d) should be used primarily as an exercise reference list and as a broad instructional sequencing guide; therefore, the demonstrations and practices need not necessarily be given in the order listed.

2. In cases where the applicant already holds hot-air balloon privileges, the flight instruction should concentrate on all of the following:

    1. added complication of the engine;
    2. engine controls and different performance;
    3. airship operating limitations; and
    4. airship procedures.

3. In cases where the applicant does not hold hot-air balloon privileges, the ATO or DTO, based on the candidate's experience, may decide to conduct training elements as per point (c) of AMC2 BFCL.130 on hot-air balloons before starting with the flight instruction on hot-air airships, in order to allow the candidate to develop competence in hot-air aircraft operation.

4. In any case, the flying exercises should cover the revision or explanation of the following exercises:

Exercise 1: Familiarisation with the hot-air airship

- (i) characteristics of the hot-air airship;
- (ii) aerostatic and aerodynamic lift;
- (iii) operating limitations;
- (iv) airworthiness limitations;
- (v) the components or systems;
- (vi) instruments, minimum equipment and other equipment; and
- (vii) use of checklist(s) and procedures.

Exercise 2: Preparation for flight

- (i) documentation and equipment;
- (ii) weather forecast and actuals;

- **(iii) flight planning:**
    - (A) NOTAMs;
    - (B) airspace structure;
    - (C) sensitive areas;
    - (D) expected track and distance;
    - (E) pre-flight picture; and
    - (F) possible landing fields;

- **(iv) launch field:**
    - (A) permission;
    - (B) behaviour;
    - (C) field selection;
    - (D) adjacent fields; and
    - (E) noise abatement; and

- (v) load and fuel calculations.

Exercise 3: Crew and passenger briefing

- (i) clothing;
- (ii) crew briefing; and
- (iii) passenger briefing

Exercise 4: Assembly and layout

- (i) crowd control;
- (ii) rigging envelope, gondola, burner and engine;
- (iii) burner test;
- (iv) engine test; and
- (v) pre-inflation checks.

Exercise 5: Inflation

- (i) crowd control;
- (ii) cold inflation:
  - (A) use of restraint line; and
  - (B) use of the inflation fan; and
- (iii) hot inflation.

Exercise 6: Engine

- (i) identification of main parts and controls;
- (ii) familiarisation with operation and checking of the engine; and
- (iii) engine checks before take-off.

Exercise 7: Pressurisation (if applicable)

- (i) pressurisation fan operation;
- (ii) super pressure and balance between pressure and temperature; and
- (iii) pressure limitations.

Exercise 8: Take-off

- (i) before take-off checks and briefings;
- (ii) heating for controlled climb;
- (iii) procedure for ground crew; and
- (iv) assessment of wind and obstacles.

Exercise 9: Climb to level flight

- (i) climbing with a predetermined rate of climb;
- (ii) effect on envelope temperature and pressure;
- (iii) maximum rate of climb according to the manufacturer’s flight manual; and
- (iv) level off at selected altitude.

Exercise 10: Level flight

- (i) maintaining level flight by:
  - (A) use of instruments only;
  - (B) use of visual references only; and
  - (C) all available means;
- (ii) maintaining level flight at different air speeds by taking aerodynamic lift into account;
- (iii) turns; and
- (iv) stationary flight.

Exercise 11: Descent to level flight

- (i) descent with a predetermined rate of descent;
- (ii) maximum rate of descent according to the manufacturer’s flight manual; and
- (iii) levelling off at selected altitude.

Exercise 12A: Emergencies — systems

- (i) engine failure;
- (ii) pressurisation failure;
- (iii) rudder failure;
- (iv) pilot light failure;
- (v) burner failure, valve leaks, flame out and re-light;
- (vi) fuel leaks;
- (vii) envelope over temperature; and
- (viii) envelope damage in-flight.

Exercise 12B: Other emergencies

- (i) fire extinguishers;
- (ii) fire on ground;
- (iii) fire in the air;
- (iv) electrical power supply failure;
- (v) hard landing;
- (vi) landing in strong wind;
- (vii) contact with electrical power lines;
- (viii) obstacle avoidance;
- (ix) escape drills, location and use of emergency equipment.

Exercise 13: Navigation

- (i) map selection and preparation;
- (ii) plotting and steering expected track;
- (iii) marking positions and time;
- (iv) calculation of distance, speed and fuel consumption;
- (v) ceiling limitations (ATC, weather and envelope temperature);
- (vi) planning ahead;
- (vii) monitoring of weather development and acting so;
- (viii) monitoring of fuel and envelope temperature or pressure;
- (ix) ATC liaison (if applicable);
- (x) communication with ground crew; and
- (xi) use of GNSS (if applicable).

Exercise 14: Fuel management

- (i) engine arrangement and tank system;
- (ii) cylinder arrangement and burner systems;
- (iii) pilot light supply (vapour or liquid);
- (iv) fuel requirement and expected fuel consumption for engine and burner;
- (v) fuel state and pressure;
- (vi) fuel reserves; and
- (vii) cylinder and petrol tank contents gauge.

Exercise 15: Approach and go-around

- (i) pre-landing checks;
- (ii) selection of field into wind;
- (iii) use of burner and engine;
- (iv) look-out procedures; and
- (v) missed approach and go-around.

Exercise 16: Approach with simulated engine failure

- (i) pre-landing checks;
- (ii) selection of field;
- (iii) use of burner;
- (iv) look-out procedures; and
- (v) missed approach and go-around.

Exercise 17: Operating at low level

- (i) use of burner and engine;
- (ii) look-out procedures;
- (iii) avoidance of low-level obstacles;
- (iv) avoidance of sensitive areas and nature protection area;
- (v) landowner relations; and

- (v) noise abatement procedures.

Exercise 18: Steering

- (i) assessment of wind; and
- (ii) correcting for wind to steer a given course.

Exercise 19: Final landing

- (i) pre-landing checks;
- (ii) use of burner and engine;
- (iii) look-out;
- (iv) deflation; and
- (v) landowner relations.

AMC2 BFCL.150(c)(1) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Flight instruction for the extension of privileges to the gas balloon class

1. The flight instruction for extending the privileges of a BPL to gas balloon privileges should followthe syllabus for initial BPL training on gas balloons, as set out in point (d) of AMC2 BFCL.130.

2. Specific emphasis should be given to handling differences, related to class privileges held, and specific safety requirements for gas balloons.

AMC3 BFCL.150(c)(1) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Flight instruction for the extension of the privileges to the hot-air balloon class

1. The flight instruction for extending the privileges of a BPL to hot-air balloon privileges should follow the syllabus for initial BPL training on hot-air balloons, as set out in point (c) of AMC2 BFCL.130.

2. Specific emphasis should be given to handling differences, related to class privileges held, and specific safety requirements for hot-air balloons.

AMC1 BFCL.150(c)(2) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

1. **Skill test for the extension of privileges to the hot-air airship class**

    1. The take-off site should be chosen by the applicant depending on the actual meteorological conditions, the area which has to be overflown, and the possible options for suitable landing sites. The applicant should be responsible for the flight planning and should ensure that all equipment and documentation for the execution of the flight are on board.

    2. An applicant should indicate to the FE the checks and duties carried out. Checks should be completed in accordance with the flight manual or the authorised checklist for the balloon on which the test is being taken. During pre-flight preparation for the test, the applicant should be required to perform crew and passenger briefings and demonstrate crowd control. The load calculation should be performed by the applicant in compliance with the operations manual or flight manual for the hot-air airship used.

    3. The flight time of the skill test should be at least 30 minutes.

2. Flight test tolerance

    The applicant should demonstrate the ability to:
    1. Itemoperate the hot-air airship within its limitations;
    2. complete all manoeuvres with smoothness and accuracy;
    3. exercise good judgment and airmanship;
    4. apply aeronautical knowledge; and
    5. maintain control of the airship at all times in such a manner that the successful outcome of a procedure or manoeuvre is never seriously in doubt.

3. Content of the skill test

    The following skill test contents and sections should be used for the skill test for the issue of a BPL hot-air airship extension:
    Note: Use of checklist(s), airmanship, control of hot-air airship by external visual reference, look-out procedures, etc. apply in all sections.

Section 1: Pre-flight operations, inflation and take-off	
a	Pre-flight documentation (licence, medical certificate, permits to take off, insurance certificate, aeronautical charts, AFM, logbook, technical logbook, checklists etc.), flight planning, NOTAM(s) and weather briefing
b	Hot-air airship inspection and servicing
c	Suitability of launch site
d	Load calculation
e	Crowd control, crew and passenger briefings
f	Assembly and layout
g	Inflation and pre-take-off procedures

Section 1: Pre-flight operations, inflation and take-off	
h	Take-off
i	ATC compliance (if applicable)
Section 2: General airwork	
a	Climb to level flight
b	Level flight
c	Turns
d	Stationary flight
e	Descent to level flight
f	Operating at low level
g	ATC compliance (if applicable)
Section 3: En-route procedures	
a	Dead reckoning and map reading
b	Marking positions and time
c	Orientation and airspace structure
d	Plotting and steering expected track
e	Maintenance of altitude
f	Fuel management
g	Pressure and engine parameter checks
h	Communication with ground crew
i	ATC compliance (if applicable)
Section 4: Approach and landing procedures	
a	Approach, missed approach and go-around
b	Pre-landing checks
c	Selection of landing field
d	Landing and deflation
e	ATC compliance (if applicable)
f	Actions after flight (recording of the flight, closing flight plan (if applicable), briefing passengers for packing hot-air airship, contact landowner)
Section 5: Abnormal and emercency procedures	
This section may be combined with Sections 1 through 4	
a	Simulated fire on the ground and in the air
b	Simulated pilot light, burner and engine failures
c	Approach with simulated engine failure, missed approach and go-around
d	Simulated passenger health problems
e	Other abnormal and emergency procedures as outlined in the appropriate flight manual
f	Oral questions

AMC2 BFCL.150(c)(2) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Skill test for the extension of privileges to the gas balloon class

To extend the privileges of a BPL to gas balloon privileges, BPL holders should take the skill test for

the initial issue of a BPL on gas balloons, as set out in AMC1 BFCL.145.

AMC3 BFCL.150(c)(2) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Skill test for the extension of privileges to the hot-air balloon class

To extend the privileges of a BPL to hot-air balloon privileges, BPL holders should take the skill test for the initial issue of a BPL on hot-air balloons, as set out in AMC1 BFCL.145.

AMC4 BFCL.150(c)(2) BPL – Extension of privileges to another balloon class or group

ED Decision 2020/003/R

Theoretical knowledge for extension of privileges to another balloon class

During the skill test as per point BFCL.150(c)(2), the demonstration of an adequate level of theoretical knowledge for the other balloon class should cover all of the following from the syllabus set out in point (b) of AMC1 BFCL.130:

Note: The content of the below syllabus should contain aspects as relevant for the class of balloon used for the training, unless a certain element is specifically marked as relevant for particular classes only.

5.	**Principles of flight**
5.1.	Principles of flight
5.2.	Aerostatics
5.3.	Loading limitations
5.4.	Operational limitations
6.	**Operational procedures**
6.1.	General requirements
6.2.	Special operational procedures and hazards
6.3.	Emergency procedures
7.	**Flight performance and planning**
7.1.	Mass
7.1.1.	Purpose of mass considerations
7.1.2.	Loading
7.2.	Performance
7.3.	Flight planning and flight monitoring
7.3.2.1.	Fuel planning (extension to hot-air balloons & hot-air airships only)
7.3.2.2.	Ballast planning (extension to gas balloons only)
7.3.3.	Pre-flight preparation

5.	**Principles of flight**
7.3.4.	ICAO flight plan (ATS flight plan)
7.3.5.	Flight monitoring and in-flight re-planning
8.	**Aircraft general knowledge, envelope, systems and emercency equipment**
8.1.	System design, loads, stresses and maintenance
8.2.	Envelope
8.3.1.	Burner (extension to hot-air balloons or hot-air airships only)
8.3.2.	Basket (extension to hot-air balloons or gas balloons only)
8.3.3.	Gondola (extensions to hot-air airships only)
8.4.1	Fuel cylinders (extension to hot-air balloons or hot-air airships only)
8.4.2.	Lifting gas (extension to gas balloons only)
8.5.1.	Ballast (extension to gas balloons only)
8.6.	Fuel (extension to hot-air balloons or hot-air airships only)
8.7.	Instruments
8.8.	**Emergency equipment**

→ BFCL.160