

**Acceptable Means of Compliance (AMC)  
and  
Guidance Material (GM)  
to Part-SFCL**

**Requirements for sailplane flight crew  
licensing**

Issue 1

18 March 2020<sup>1</sup>

---

<sup>1</sup> For the date of entry into force of this issue, kindly refer to Decision 2020/004/R in the [Official Publication](#) of the Agency.

## TABLE OF CONTENTS

GM1 SFCL.001 Scope.....	5
TERMINOLOGY USED REGARDING SAILPLANES, POWERED SAILPLANES AND TMGs.....	5
AMC1 SFCL.015 Application for and issue, revalidation and renewal of an SPL as well as associated privileges, ratings and certificates .....	5
APPLICATION AND REPORT FORMS .....	5
AMC1 SFCL.045(a)(4) Obligation to carry and present documents .....	5
SUFFICIENT LOGBOOK DATA .....	5
AMC1 SFCL.050 Recording of flight time .....	5
GENERAL.....	5
AMC1 SFCL.115(a)(2)(ii)(A) SPL — Privileges and conditions.....	6
EXPERIENCE AFTER THE ISSUE OF THE SPL NECESSARY FOR THE CARRIAGE OF PASSENGERS .....	6
AMC1 SFCL.130 SPL — Training course and experience requirements .....	6
THEORETICAL KNOWLEDGE INSTRUCTION FOR THE SPL.....	6
AMC2 SFCL.130 SPL — Training course and experience requirements .....	9
FLIGHT INSTRUCTION FOR THE SPL.....	9
AMC3 SFCL.130 SPL — Training course and experience requirements .....	18
TRAINING ELEMENTS FOR THE INITIAL ISSUE OF AN SPL WITH TMG PRIVILEGES.....	18
GM1 SFCL.130(a)(2)(iv) SPL — Training course and experience requirements.....	18
USE OF TMGs DURING TRAINING FOR THE INITIAL ISSUE OF AN SPL WITHOUT TMG PRIVILEGES..	18
AMC1 SFCL.135 SPL — Theoretical knowledge examinations .....	18
GM1 SFCL.135 SPL — Theoretical knowledge examinations.....	19
TERMINOLOGY .....	19
AMC1 SFCL.145 SPL — Practical skill test.....	19
(a) GENERAL .....	19
(b) ADDITIONAL ARRANGEMENTS FOR SKILL TESTS IN TMGs .....	19
(c) FLIGHT TEST TOLERANCE .....	19
(d) CONTENT OF THE SKILL TEST .....	20
AMC1 SFCL.150(b) SPL — Sailplane and TMG privileges .....	23
EXTENSION TO TMG PRIVILEGES.....	23
GM1 SFCL.150(c) SPL — Sailplane and TMG privileges.....	31
FAMILIARISATION WITH ENGINE START/STOP PROCEDURES.....	31
AMC1 SFCL.150(e) SPL — Sailplane and TMG privileges .....	31
EXTENSION TO SAILPLANE PRIVILEGES .....	31
AMC1 SFCL.155(a)(2) SPL — Launching methods.....	32
INSTRUCTION FOR SELF-LAUNCH.....	32
GM1 SFCL.155(a)(4) SPL — Launching methods.....	32
FURTHER LAUNCHING METHODS .....	32
AMC1 SFCL.160 SPL — Recency requirements .....	32

---

CREDITS FOR FLIGHT TIME COMPLETED ON SAILPLANES AS PER ARTICLE 2(8) OF AS WELL AS ANNEX I TO THE BASIC REGULATION .....	32
AMC1 SFCL.160(a)(1)(ii) SPL — Recency requirements .....	33
TRAINING FLIGHTS.....	33
AMC1 SFCL.160(e) Recency requirements.....	33
RECENT EXPERIENCE FOR THE CARRIAGE OF PASSENGERS .....	33
AMC1 SFCL.200(b) Aerobatic privileges.....	33
TRAINING FOR THE BASIC AEROBATIC PRIVILEGES.....	33
AMC1 SFCL.200(c) Aerobatic privileges .....	35
TRAINING FOR THE ADVANCED AEROBATIC PRIVILEGES.....	35
AMC1 SFCL.200(d) Aerobatic privileges.....	35
TRAINING FOR AEROBATIC FLIGHT WITH ENGINE POWER.....	35
AMC1 SFCL.200(e) Aerobatic privileges.....	35
CREDITS FOR AEROBATIC RATING AS PER REGULATION (EU) No 1178/2011.....	35
AMC1 SFCL.205 Sailplane towing and banner towing rating.....	36
TRAINING FOR THE SAILPLANE TOWING AND BANNER TOWING rating .....	36
AMC1 SFCL.210 TMG night rating.....	38
TRAINING FOR THE TMG NIGHT RATING .....	38
AMC1 SFCL.215 Sailplane cloud flying privileges.....	39
TRAINING FOR THE SAILPLANE CLOUD FLYING PRIVILEGES.....	39
AMC1 SFCL.315(a)(7)(ii) FI(S) certificate — Privileges and conditions .....	41
DEMONSTRATION OF ABILITY TO INSTRUCT IN FI(S) TRAINING COURSES .....	41
AMC1 SFCL.325 FI(S) competencies and assessment .....	41
AMC1 SFCL.330(a) FI(S) — Training course.....	43
PRE-ENTRY ASSESSMENT.....	43
AMC1 SFCL.330(b) FI(S) — Training course.....	43
(a) GENERAL.....	43
(b) CONTENT .....	43
AMC1 SFCL.345 FI(S) — Assessment of competence.....	64
GENERAL.....	64
AMC2 SFCL.345 FI(S) — Assessment of competence.....	65
CONTENT OF THE ASSESSMENT OF COMPETENCE .....	65
AMC3 SFCL.345 FI(S) — Assessment of competence.....	66
APPLICATION AND REPORT FORM FOR THE FI(S) ASSESSMENT OF COMPETENCE .....	66
AMC1 SFCL.360(a)(1)(i) FI(S) certificate — Recency requirements .....	68
INSTRUCTOR REFRESHER TRAINING.....	68
GM1 SFCL.360(a)(1)(i) FI(S) certificate — Recency requirements .....	69
FREQUENCY OF INSTRUCTOR REFRESHER TRAINING .....	69
AMC1 SFCL.360(a)(2) FI(S) certificate — Recency requirements.....	69
DEMONSTRATION OF ABILITY TO INSTRUCT.....	69
GM1 SFCL.405 Limitation of privileges in case of vested interests.....	69
GM1 SFCL.405(a) Limitation of privileges in case of vested interests .....	69

---

EXAMINERS WHO PROVIDED INSTRUCTION TO THE CANDIDATE .....	69
AMC1 SFCL.410(b)(3) Conduct of skill tests, proficiency checks and assessments of competence ...	70
APPLICATION AND REPORT FORM FOR THE SPL SKILL TEST OR PROFICIENCY CHECK .....	70
AMC1 SFCL.415(c)(2) FE(S) certificate — Privileges and conditions .....	71
SPECIFIC TRAINING FOR EXAMINER PRIVILEGES RELATED TO THE FI(S) CERTIFICATE .....	71
AMC1 SFCL.420(d) FE(S) certificate — Prerequisites and requirements .....	72
EVALUATION OF THE RELEVANT BACKGROUND OF AN APPLICANT.....	72
AMC1 SFCL.430 FE(S) certificate — Standardisation course.....	72
(a) GENERAL .....	72
(b) CONTENT .....	72
AMC2 SFCL.430 FE(S) certificate — Standardisation course.....	73
STANDARDISATION ARRANGEMENTS FOR EXAMINERS .....	73
GM1 SFCL.430 FE(S) certificate — Standardisation course .....	76
PLANNING OF TESTS AND CHECKS .....	76
AMC1 SFCL.445 FE(S) certificate — Assessment of competence .....	76
(a) GENERAL .....	76
(b) DEFINITIONS .....	76
(c) CONDUCT OF THE ASSESSMENT.....	76
(d) BRIEFING THE ‘CANDIDATE’ .....	77
(e) ASSESSMENT.....	77
(f) DEBRIEFING.....	77
(g) RECORDING OR DOCUMENTATION .....	78
(h) DEMONSTRATION OF THEORETICAL KNOWLEDGE .....	78
AMC1 SFCL.445; SFCL.460 FE(S) certificate — Assessment of competence; FE(S) certificate — Validity, revalidation and renewal .....	78
QUALIFICATION OF SENIOR EXAMINERS.....	78
AMC1 SFCL.460(b)(1) FE(S) certificate — Validity, revalidation and renewal .....	79
EXAMINER REFRESHER COURSE.....	79
AMC1 SFCL.460(b)(2) FE(S) certificate — Validity, revalidation and renewal .....	79
DEMONSTRATION OF ABILITY TO CONDUCT SKILL TESTS, PROFICIENCY CHECKS AND ASSESSMENTS OF COMPETENCE.....	79

## GM1 SFCL.001 Scope

### TERMINOLOGY USED REGARDING SAILPLANES, POWERED SAILPLANES AND TMGs

- (a) When requirements of Part-SFCL refer to 'sailplanes', this includes powered sailplanes as well as touring motor gliders (TMGs), unless otherwise specified.
- (b) In the context of sailplanes excluding TMGs, the term 'launch' is used, while in the context of TMGs, the term 'take-off' is used.

## AMC1 SFCL.015 Application for and issue, revalidation and renewal of an SPL as well as associated privileges, ratings and certificates

### APPLICATION AND REPORT FORMS

Application and report forms can be found as follows:

- (a) for skill tests and proficiency checks for the sailplane pilot licence (SPL), in AMC1 SFCL.410(b)(3); and
- (b) for the assessment of competence for the flight instructor (sailplane) FI(S), in AMC3 SFCL.345.

## AMC1 SFCL.045(a)(4) Obligation to carry and present documents

### SUFFICIENT LOGBOOK DATA

In order to be able to demonstrate compliance with the requirements of Part-SFCL, an SPL holder should carry either the full logbook or at least excerpts or copies (in paper or electronic format) of those parts of the logbook in which compliance with the requirements that are related to the exercised privileges is documented.

## AMC1 SFCL.050 Recording of flight time

### GENERAL

- (a) The record of the flights flown should contain at least the following information:
  - (1) personal details: name(s) and address of the pilot; and
  - (2) for each flight:
    - (i) name(s) of pilot-in-command (PIC);
    - (ii) date of flight;
    - (iii) place and time of departure and arrival;
    - (iv) type/model and registration of the sailplane;
    - (v) total time of flight;
    - (vi) launching method
    - (vii) accumulated total time of flight;

- (viii) details on pilot function, namely PIC, including solo, dual, FI(S) or flight examiner (sailplane) FE(S); and
  - (ix) operational conditions (e.g. night, aerobatic, cloud flying).
- (b) Logging of time
- (1) PIC flight time
    - (i) Holders of a licence may log as PIC time all of the flight time during which they are the PIC.
    - (ii) Applicants for or holders of an SPL may log as PIC time all supervised solo flight time as well as flight time of successfully completed skill tests and proficiency checks, provided that, in the case of supervised solo flight time, the logbook entry is signed by the supervising instructor.
    - (iii) Holders of an FI(S) certificate may log as PIC all flight time during which they act as an instructor in a sailplane.
    - (iv) Holders of an FE(S) certificate may log as PIC all flight time during which they act as an examiner in a sailplane.
    - (iv) If the holder of an SPL carries out a number of flights upon the same day returning on each occasion to the same place of departure, such series of flights may be recorded as a single entry.
  - (2) Instruction time

A summary of all time logged by an applicant for a licence or rating as flight instruction may be logged if certified by the appropriately rated or authorised instructor from whom it was received.
- (c) Format of the record
- A suitable format should be used that contains the relevant items mentioned in (a) and additional information specific to the type of operation.

## AMC1 SFCL.115(a)(2)(ii)(A) SPL — Privileges and conditions

### EXPERIENCE AFTER THE ISSUE OF THE SPL NECESSARY FOR THE CARRIAGE OF PASSENGERS

In cases where an SPL has been issued on the basis of a conversion report as per Article 3b(3) of Regulation (EU) 2018/1976, the date of the issue of the originally national sailplane pilot licence or equivalent document should be deemed as the date of the issue of the SPL.

## AMC1 SFCL.130 SPL — Training course and experience requirements

### THEORETICAL KNOWLEDGE INSTRUCTION FOR THE SPL

(a) General

The training should cover aspects related to non-technical skills in an integrated manner, taking into account the particular risks associated with the licence and the activity. The theoretical knowledge instruction provided by the declared training organisation (DTO) or approved training organisation (ATO) should include a certain element of formal classroom work but may

also include other methods of delivery — for example, interactive video, slide or tape presentation, computer-based training and other media distance-learning courses. The training organisation responsible for the training has to check whether all the appropriate elements of the training course of theoretical knowledge instruction have been completed to a satisfactory standard before recommending the applicant for the examination.

(b) Syllabus

The following table contains the syllabus for theoretical knowledge instruction for the SPL:

<b>1.</b>	<b>AIR LAW AND ATC PROCEDURES</b>
1.1.	International law: conventions, agreements and organisations
1.2.	Airworthiness of aircraft
1.3.	Aircraft nationality and registration marks
1.4.	Personnel licensing
1.5.	Rules of the air
1.6.	Procedures for air navigation: aircraft operations
1.7.	Air traffic regulations: airspace structure
1.8.	Air traffic service (ATS) and air traffic management (ATM)
1.9.	Aeronautical information services (AIS)
1.10.	Aerodromes, external take-off sites
1.11.	Search and rescue
1.12.	Security
1.13.	Accident reporting
1.14.	National law
<b>2.</b>	<b>HUMAN PERFORMANCE</b>
2.1.	Human factors: basic concepts
2.2.	Basic aviation physiology and health maintenance
2.3.	Basic aviation psychology
2.4.	Use of oxygen
<b>3.</b>	<b>METEOROLOGY</b>
3.1.	The atmosphere
3.2.	Wind
3.3.	Thermodynamics
3.4.	Clouds and fog
3.5.	Precipitation
3.6.	Air masses and fronts
3.7.	Pressure systems
3.8.	Climatology
3.9.	Flight hazards
3.10.	Meteorological information
<b>4.</b>	<b>COMMUNICATIONS</b>
4.1.	Definitions
4.2.	VFR communications
4.2.1.	VFR communication at uncontrolled airfields
4.2.2.	VFR communication at controlled airfields
4.2.3.	VFR communication with ATC (en-route)

4.3.	General operating procedures
4.4.	Relevant weather information terms (VFR)
4.5.	Action required to be taken in case of communication failure
4.6.	Distress and urgency procedures
4.7.	General principles of VHF propagation and allocation of frequencies
<b>5.</b>	<b>PRINCIPLES OF FLIGHT</b>
5.1.	Aerodynamics (airflow)
5.2.	Flight mechanics
5.3.	Stability
5.4.	Control
5.5.	Limitations (load factor and manoeuvres)
5.6.	Stalling and spinning
5.7.	Spiral dive
<b>6.</b>	<b>OPERATIONAL PROCEDURES</b>
6.1.	General requirements
6.2.	Launch methods
6.3.	Soaring techniques
6.4.	Circuits and landing
6.5.	Outlanding
6.6.	Special operational procedures and hazards
6.7.	Emergency procedures
6.8.	Emergency parachute operation and landing
<b>7.</b>	<b>FLIGHT PERFORMANCE AND PLANNING</b>
7.1.	Mass and balance
7.2.	Speed polar of sailplanes or cruising speed
7.3.	Flight planning and task setting
7.4.	ICAO flight plan (ATS flight plan)
7.5.	Flight monitoring and in-flight re-planning
<b>8.</b>	<b>AIRCRAFT GENERAL KNOWLEDGE, AIRFRAME AND SYSTEMS AND EMERGENCY EQUIPMENT</b>
8.1.	Airframe
8.2.	System design, loads and stresses
8.3.	Landing gear, wheels, tyres and brakes
8.4.	Mass and balance
8.5.	Flight controls
8.6.	Instruments
8.7.	Rigging of aircraft, connection of control surfaces
8.8.	Manuals and documents
8.9.	Airworthiness and maintenance
8.10.	Airframe, engines and propellers
8.11.	Water ballast systems
8.12.	Batteries (performance and operational limitations)
8.13.	Emergency parachutes
8.14.	Emergency bail-out aid



<b>9.</b>	<b>NAVIGATION</b>
9.1.	Basics of navigation
9.2.	Magnetism and compasses
9.3.	Charts
9.4.	Dead reckoning navigation
9.5.	In-flight navigation
9.6.	Use of GNSS
9.7.	Use of ATS

## AMC2 SFCL.130 SPL — Training course and experience requirements

### FLIGHT INSTRUCTION FOR THE SPL

(a) Entry to training

Before being accepted for training, an applicant should be informed that the appropriate medical certificate must be obtained before solo flying is permitted.

(b) Flight instruction — general

(1) The SPL flight instruction syllabus should take into account the principles of threat and error management (TEM) and also cover:

- (i) pre-flight operations, including verifying mass and balance, aircraft inspection and servicing, airspace and weather briefing;
- (ii) rigging of sailplanes, including control surface connections;
- (iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (iv) control of the aircraft by external visual reference;
- (v) flight at high angle of attack (critically low air speeds), recognition of, and recovery from, incipient and full stalls and spins;
- (vi) flight at critically high air speeds, recognition of, and recovery from spiral dive;
- (vii) normal and crosswind take-offs in respect of the different launch methods;
- (viii) normal and crosswind landings;
- (ix) short field landings and outlandings: field selection, circuit and landing hazards and precautions;
- (x) cross-country flying using visual reference, dead reckoning and available navigation aids;
- (xi) soaring techniques as appropriate to site conditions;
- (xii) emergency actions;
- (xiii) considerations for soaring at high altitudes; and
- (xiv) compliance with air traffic services procedures and communication procedures.

(2) Before allowing applicants to undertake their first solo flight, the FI should ensure that they can operate the required systems and equipment.

---

(c) Syllabus of flight instruction

- (1) The numbering of exercises 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. The actual order and content will depend upon the following interrelated factors:
  - (i) the applicant's progress and ability;
  - (ii) the weather conditions affecting the flight;
  - (iii) the flight time available;
  - (iv) the instructional technique considerations;
  - (v) the local operating environment; and
  - (vi) the applicability of the exercises to the sailplane type.
- (2) At the discretion of the instructors, some of the exercises may be combined and some other exercises may be done in several flights.
- (3) At least, Exercises 1 to 12 have to be completed before the first solo flight.
- (4) Each of the exercises requires the applicant to be aware of the need for as well as the principles of good airmanship and look-out, which should be emphasised at all times.
- (5) List of exercises

**Exercise 1: Familiarisation with the sailplane**

- (i) characteristics of the sailplane;
- (ii) cockpit layout: instruments and equipment;
- (iii) flight controls: stick, pedals, airbrakes, flaps (if available) and trim;
- (iv) cable release and undercarriage; and
- (v) checklists, drills and controls.

**Exercise 2: Emergency procedures**

- (i) use of safety equipment (parachute);
- (ii) reaction to system failures and errors;
- (iii) bail-out procedure drills; and
- (iv) parachute landing fall drills.

**Exercise 3: Preparation for flight**

- (i) pre-flight briefings;
- (ii) required documents on board;
- (iii) equipment required for the intended flight;
- (iv) ground handling, rigging including connection of control surfaces, movements, tow out, parking and security;
- (v) pre-flight external and internal checks;

- (vi) verifying in-limits mass and balance;
- (vii) harness, seat or rudder pedal adjustments; and
- (viii) pre-launch checks.

**Exercise 4: Initial air experience**

- (i) area familiarisation; and
- (ii) look-out procedures.

**Exercise 5: Effects of controls**

- (i) look-out procedures;
- (ii) use of visual references;
- (iii) primary effects when laterally level and when banked;
- (iv) reference attitude and effect of elevator;
- (v) relationship between attitude and speed; and
- (vi) effects of:
  - (A) flaps (if available);
  - (B) airbrakes or spoilers (as applicable); and
  - (C) undercarriage (if available).

**Exercise 6: Coordinated rolling to and from moderate angles of bank**

- (i) look-out procedures;
- (ii) further effects of aileron (adverse yaw) and rudder (roll);
- (iii) coordination; and
- (iv) rolling to and from moderate angles of bank and return to straight flight.

**Exercise 7: Straight flying**

- (i) look-out procedures;
- (ii) maintaining straight flight;
- (iii) flight at critically high air speeds;
- (iv) demonstration of inherent longitudinal stability;
- (v) control of pitch, including use of trim;
- (vi) lateral level, direction and balance and trim; and
- (vii) air speed: monitoring and control.

**Exercise 8: Turning**

- (i) look-out procedures;
- (ii) demonstration and correction of adverse yaw;
- (iii) entry to turn (medium turns);
- (iv) stabilised turns;
- (v) exiting turns;
- (vi) faults in the turn (slipping, skidding and speed control);
- (vii) maintaining appropriate look-out procedures;
- (viii) turns on to selected headings and use of compass; and
- (ix) use of instruments (ball indicator or slip string) for precision.

**Exercise 9a: Slow flight**

Note: The objective is to improve the student's ability to recognise inadvertent flight at critically low speeds (high angle of attack) and to provide practice in maintaining the sailplane in a normal attitude at low speed.

- (i) safety checks;
- (ii) introduction to characteristics of slow flight; and
- (iii) controlled flight down to critically high angle of attack (slow air speed).

**Exercise 9b: Stalling**

- (i) safety checks;
- (ii) pre-stall symptoms, recognition and recovery;
- (iii) stall symptoms, recognition and recovery in straight flight and in turn;
- (iv) recovery when a wing drops;
- (v) approach to stall in the approach and in the landing configurations; and
- (vi) recognition and recovery from accelerated stalls.

**Exercise 10: Recognition and avoidance of spins and spiral dives**

- (i) safety checks;
- (ii) stalling and recovery at the incipient spin stage (stall with un-commanded roll/wing drop to about 45 ° and associated yaw);
- (iii) recognition of entry into fully developed spins;
- (iv) recognition of full spins;
- (v) standard spin recovery;

- (vi) instructor induced distractions during the spin entry;
- (vii) recognition of spiral dives;
- (viii) spiral dive recovery; and
- (ix) differentiation between spins and spiral dives.

Note: Consideration of manoeuvre limitations and the need to refer to the sailplane manual and mass and balance calculations.

**Note (Exercises 11a to 11e):** At least one launch method must be taught containing all the subjects below. A briefing that follows TEM principles should be conducted before every launch.

**Exercise 11a: Winch launch**

- (i) signals or communication before and during launch;
- (ii) use of the launching equipment;
- (iii) pre-take-off checks;
- (iv) into wind take-off;
- (v) crosswind take-off;
- (vi) safe and adequate profile of winch launch and limitations;
- (vii) release procedures; and
- (viii) launch failure procedures, simulated during the winch launch.

**Exercise 11b: Aero tow**

- (i) signals or communication before and during launch;
- (ii) use of the launch equipment;
- (iii) pre-take-off checks;
- (iv) into wind take-off;
- (v) crosswind take-off;
- (vi) on tow: straight flight, turning and slip stream;
- (vii) out of position in tow and recovery;
- (viii) descending on tow (towing aircraft and sailplane);
- (ix) release procedures; and
- (x) launch failure and abandonment, simulated by releasing the cable at a suitable height, with and without response to a signal from the tow plane.

**Exercise 11c: Self-launch**

- (i) review of the flight manual for the sailplane used;
- (ii) engine extending and retraction procedures;
- (iii) engine starting and safety precautions;
- (iv) pre-take-off checks;
- (v) in-flight engine start checks;
- (vi) noise abatement procedures;
- (vii) checks during and after take-off;
- (viii) into wind take-off;
- (ix) crosswind take-off;
- (x) power failures and procedures;
- (xi) abandoned take-off;
- (xii) maximum performance (short field and obstacle clearance) take-off;
- (xiii) short field take-off, soft field procedure or techniques and performance calculations;
- (xiv) in-flight retraction of engine and engine cooling;
- (xv) propeller drag;
- (xvi) effects of reduction and increase of power;
- (xvii) pitch nose-up tendency in case of engine shutdown (in case of over-wing propeller installation);
- (xviii) approach with extended retractable engine inoperative (may be simulated by extended airbrakes);
- (xix) decision process and reasons to terminate the soaring flight and to switch to powered flight; and
- (xx) decision process and reasons for not starting the engine and to end the flight as a non-powered sailplane.

**Exercise 11d: Car launch**

- (i) signals before and during launch;
- (ii) use of the launch equipment;
- (iii) pre-take-off checks;
- (iv) into wind take-off;
- (v) crosswind take-off;
- (vi) safe and adequate launch profile and limitations;
- (vii) release procedures; and
- (viii) launch failure procedures.

**Exercise 11e: Bungee launch**

- (i) signals before and during launch;
- (ii) use of the launch equipment;
- (iii) pre-take-off checks; and
- (iv) into wind take-off.

**Exercise 12: Circuit, approach and landing**

- (i) procedures for rejoining the circuit;
- (ii) collision avoidance, look-out techniques and procedures;
- (iii) pre-landing checks: circuit procedures, downwind and base leg;
- (iv) effect of wind and wind shear on approach and touchdown speeds;
- (v) use of flaps (if applicable);
- (vi) visualisation of an aiming point;
- (vii) approach control and use of airbrakes;
- (viii) normal and crosswind approach and landing; and
- (ix) short landing procedures or techniques.

**Exercise 13: First solo flight**

- (i) instructor's briefing including limitations;
- (ii) awareness of local area and restrictions;
- (iii) use of required equipment;
- (iv) effects of the centre of gravity (CG) on controllability of sailplane; and
- (v) observation of flight and debriefing by instructor.

**Exercise 14: Advanced turning**

- (i) steep turns (45 ° or more);
- (ii) stalling and spin avoidance in the turn and recovery; and
- (iii) recoveries from unusual attitudes, including spiral dives.

**Note (exercises 15a to 15c):** At least one of the three soaring techniques must be taught containing all subjects below.

**Exercise 15a: Thermalling**

- (i) look-out procedures;
- (ii) detection and recognition of thermals;

- (iii) use of audio soaring instruments;
- (iv) joining a thermal and giving way;
- (v) flying in close proximity to other sailplanes;
- (vi) centring in thermals;
- (vii) leaving thermals; and
- (viii) considerations for use of oxygen.

**Exercise 15b: Ridge flying**

- (i) look-out procedures;
- (ii) practical application of ridge flying rules;
- (iii) optimisation of flight path;
- (iv) speed control;
- (v) wind shear; and
- (vi) considerations for change of turning radius at same indicated airspeed at different altitudes.

**Exercise 15c: Wave flying**

- (i) look-out procedures;
- (ii) considerations and techniques for wave access and exit;
- (iii) speed limitations with increasing height; and
- (iv) considerations for use of oxygen.

**Exercise 16: Out-landings**

- (i) gliding range;
- (ii) restart procedures (only for self-launching and self-sustaining sailplanes);
- (iii) decision process to not start the engine and to outland;
- (iv) selection of landing area;
- (v) circuit judgement and key positions;
- (vi) circuit and approach procedures;
- (vii) actions after landing;
- (viii) determination of wind direction;
- (ix) selection of landing direction; and
- (x) considerations for landing at high slope landing sites.



**Note (exercises 17a to 17c):** If the required cross-country flight will be conducted as a solo cross-country flight, all the subjects below must be taught before.

**Exercise 17a: Flight planning**

- (i) weather forecast and actuals;
- (ii) notices to airmen (NOTAMs) and airspace considerations;
- (iii) map selection and preparation;
- (iv) route planning;
- (v) radio frequencies (if applicable);
- (vi) pre-flight administrative procedure, including preparation of additional required equipment, as applicable (e.g. life vest, personal locator beacon);
- (vii) ICAO flight plan where required;
- (viii) mass and performance;
- (ix) mass and balance;
- (x) alternate aerodromes and landing areas; and
- (xi) safety altitudes.

**Exercise 17b: In-flight navigation**

- (i) maintaining track and re-routing considerations;
- (ii) use of radio and phraseology (if applicable);
- (iii) in-flight planning;
- (iv) procedures for transiting regulated airspace or ATC liaison where required;
- (v) uncertainty of position procedure;
- (vi) lost procedure;
- (vii) use of additional equipment where required; and
- (viii) joining, arrival and circuit procedures at remote aerodrome.

**Exercise 17c: Cross-country techniques**

- (i) look-out procedures;
- (ii) maximising potential cross-country performance; and
- (iii) risk reduction and threat reaction.

## AMC3 SFCL.130 SPL — Training course and experience requirements

### TRAINING ELEMENTS FOR THE INITIAL ISSUE OF AN SPL WITH TMG PRIVILEGES

For initial SPL training that includes training for TMG privileges, the theoretical knowledge instruction and flight instruction should include the elements specified in points (b) and (c) of AMC1 SFCL.150(b).

## GM1 SFCL.130(a)(2)(iv) SPL — Training course and experience requirements

### USE OF TMGs DURING TRAINING FOR THE INITIAL ISSUE OF AN SPL WITHOUT TMG PRIVILEGES

For initial SPL training that does not include training for TMG privileges, TMGs can be used for a maximum of 8 hours (point SFCL.130(a)(2)(iv)). It follows from the objective of such a training course that all training exercises completed on a TMG must consist of pure gliding manoeuvres, without any TMG-specific manoeuvres. Such pure gliding training in a TMG can be provided by FI(S) certificate holders who do not hold the TMG instructional privileges as specified in point SFCL.315(a)(4), provided that the instructor occupies the pilot seat from which all PIC functions can be executed.

## AMC1 SFCL.135 SPL — Theoretical knowledge examinations

- The theoretical knowledge examinations for the SPL follow the syllabus for theoretical knowledge instruction for the SPL set out in AMC1 SFCL.130.
- The examinations should be in written form. However, for the subject Communications practical classroom testing may be conducted.
- The examinations should comprise a total of 120 multiple-choice questions, covering all the subjects, with the following arrangements for questions and allocated time per subject:

Subject	Number of questions	Duration (in minutes)
Air law	20	40
Human performance	10	20
Meteorology	20	40
Communications	10	20
Navigation	20	75
Principles of flight*	10	20
Operational procedures*	10	20
Flight performance and planning*	10	20
Aircraft general knowledge*	10	20

\* These four subjects may be combined in one single examination paper that comprises 10 questions per subject (40 in total) and has a duration of 80 minutes. In any case, the pass rate as per point SFCL.135(c)(1) needs to be achieved for each subject.

- (d) The period of 18 months mentioned in point SFCL.135(c)(2) should be counted from the end of the calendar month when the applicant first attempted an examination.
- (e) The competent authority should inform applicants of the language(s) in which the examination will be conducted.

## GM1 SFCL.135 SPL — Theoretical knowledge examinations

### TERMINOLOGY

The meaning of the following terms used in SFCL.135 is as follows:

- (a) 'Entire set of examinations': an examination in all subjects required by the licence level.
- (b) 'Examination': the demonstration of knowledge in one or more examination papers.
- (c) 'Examination paper': a set of questions that covers one subject required by the licence level, to be answered by a candidate for examination.
- (d) 'Attempt': a try to pass a specific examination paper.

## AMC1 SFCL.145 SPL — Practical skill test

### (a) GENERAL

- (1) An applicant should be responsible for the flight planning and should ensure that all equipment and documentation for the execution of the flight are available.
- (2) The 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 sailplane in which the test is being taken.

### (b) ADDITIONAL ARRANGEMENTS FOR SKILL TESTS IN TMGs

- (1) The route to be flown for the skill test should be chosen by the FE. The route should end at the point of departure or another aerodrome or operating site. The navigation section of the test should have a duration of at least 30 minutes which allows the pilot to demonstrate the ability to complete a route with at least two identified waypoints and may, as agreed between applicant and FE, be flown as a separate test.
- (2) When indicating to the FE the checks and duties to be carried out, the applicant should include the identification of radio facilities that are intended to be used. During pre-flight preparation for the test, the applicant should be required to determine power settings and speeds. Performance data for take-off, approach and landing should be calculated by the applicant in compliance with the aircraft flight manual for the TMG used.

### (c) FLIGHT TEST TOLERANCE

- (1) The applicant should demonstrate the ability to:
  - (i) operate the sailplane within its limitations;
  - (ii) complete all manoeuvres with smoothness and accuracy;
  - (iii) exercise good judgment and airmanship;
  - (iv) apply aeronautical knowledge; and

- (v) maintain control of the sailplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is never seriously in doubt.
- (2) In the case of skill tests in TMGs, the following limits are for general guidance. The FE should make allowance for turbulent conditions and the handling qualities and performance of the TMG used:
  - (i) height: normal flight  $\pm 150$  ft
  - (ii) speed:
    - (A) take-off and approach  $+15/-5$  knots
    - (B) all other flight regimes  $\pm 15$  knots

(d) CONTENT OF THE SKILL TEST

- (1) The following skill test contents and sections should be used for the skill test for the issue of an SPL in a sailplane, excluding TMGs:

Note: Use of checklist(s), airmanship, control of sailplane by external visual reference, look-out procedures etc. apply in all sections.

**SECTION 1: PRE-FLIGHT OPERATIONS AND DEPARTURE**

a	Pre-flight sailplane (daily) inspection, documentation, flight planning, NOTAM(s) and weather briefing
b	Verifying in-limits mass and balance and performance calculation
c	Sailplane servicing compliance
d	Pre-take-off checks

**Note for SECTION 2A-2C: At least for one of the three launch methods, all the mentioned items are fully exercised during the skill test.**

**SECTION 2A: WINCH OR CAR LAUNCH**

a	Signals before and during launch, including messages to winch driver
b	Adequate profile of winch launch
c	Simulated launch failure (during launch or in free flight)
d	Situational awareness

**SECTION 2B: AEROTOW LAUNCH**

a	Signals before and during launch, including signals to or communications with the tow plane pilot for any problems
b	Initial roll and take-off climb
c	Launch abandonment (simulation only or 'talk-through')
d	Correct positioning during straight flight and turns
e	Out of position and recovery
f	Correct release from tow
g	Look-out and airmanship through the whole launch phase

**SECTION 2C: SELF-LAUNCH  
(powered sailplanes only)**

a	ATC compliance (if applicable)
b	Aerodrome departure procedures
c	Initial roll and take-off climb
d	Look-out and airmanship during the whole take-off

e	Simulated engine failure after take-off
f	Engine shut down and stowage
<b>SECTION 3: GENERAL AIRWORK</b>	
a	Maintain straight flight: attitude and speed control
b	Coordinated medium (30 ° bank) turns, look-out procedures and collision avoidance
c	Turning on to selected headings visually and with use of compass
d	Flight at high angle of attack (critically low air speed)
e	Clean stall and recovery
f	Spin avoidance and recovery*
g	Steep (45 ° bank) turns, look-out procedures and collision avoidance
h	Local area navigation and awareness
<b>SECTION 4: CIRCUIT, APPROACH AND LANDING</b>	
a	Aerodrome circuit joining procedure
b	Collision avoidance: look-out procedures
c	Pre-landing checks
d	Circuit, approach control and landing
e	Precision landing (simulation of out-landing and short field)
f	Crosswind landing if suitable conditions are available
(*)	If no suitable training aircraft is available to demonstrate the fully developed spin including spin recovery, or if such spin manoeuvres cannot be performed due to bad weather constraints, the applicant should demonstrate the competence in all the aspects related to this exercise during a discussion with the examiner.

- (2) The following skill test contents and sections should be used for the skill test for the issue of an SPL in a TMG:

Note: Use of checklist(s), airmanship, control of TMG by external visual reference, de-icing procedures, etc. apply in all sections.

<b>SECTION 1: PRE-FLIGHT OPERATIONS AND DEPARTURE</b>	
a	Pre-flight documentation, flight planning, NOTAM(s) and weather briefing
b	Mass and balance and performance calculation
c	TMG inspection and servicing
d	Engine starting and after starting procedures
e	Taxiing and aerodrome procedures, pre-take-off procedures
f	Take-off and after take-off checks
g	Aerodrome departure procedures
h	ATC liaison: compliance
<b>SECTION 2A: GENERAL AIRWORK (WITH ENGINE POWER)</b>	
a	ATC liaison
b	Straight and level flight, with speed changes
c	Climbing: <ol style="list-style-type: none"> <li>i. best rate of climb;</li> <li>ii. climbing turns; and</li> <li>iii. levelling off.</li> </ol>

d	Medium (30 ° bank) turns, look-out procedures and collision avoidance
e	Steep (45 ° bank) turns
f	Flight at critically low air speed with and without flaps
g	Stalling: i. clean stall and recover with power; ii. approach to stall descending turn with bank angle 20 °, approach configuration; and iii. approach to stall in landing configuration.
h	Descending: i. with and without power; ii. descending turns (steep gliding turns); and iii. levelling off.
<b>SECTION 2B: GENERAL AIRWORK (WITHOUT ENGINE POWER)</b>	
a	Straight and level flight, with speed changes
b	Medium (30 ° bank) turns, look-out procedures and collision avoidance
c	In-flight engine start and stop procedures
d	Stall in turns
<b>SECTION 3: EN-ROUTE PROCEDURES</b>	
a	Flight plan, dead reckoning and map reading
b	Maintenance of altitude, heading and speed
c	Orientation, airspace structure, timing and revision of estimated times of arrival (ETAs), log keeping
d	Diversion to alternate aerodrome (planning and implementation)
e	Flight management (checks, fuel systems, carburettor icing, etc.)
f	ATC liaison: compliance
<b>SECTION 4: APPROACH AND LANDING PROCEDURES</b>	
a	Aerodrome arrival procedures
b	Collision avoidance (look-out procedures)
c	Precision landing (short field landing) and crosswind, if suitable conditions are available
d	Flapless landing (if applicable)
e	Approach to landing with idle power
f	Touch and go
g	Go-around from low height
h	ATC liaison
i	Actions after flight
<b>SECTION 5: ABNORMAL AND EMERGENCY PROCEDURES</b>	
This section may be combined with Sections 1 through 4.	
a	Simulated engine failure after take-off
b	* Simulated forced landing
c	* Simulated precautionary landing
d	Simulated emergencies
e	Oral questions
*	These items may be combined, at the discretion of the FE.

**AMC1 SFCL.150(b) SPL — Sailplane and TMG privileges**

## EXTENSION TO TMG PRIVILEGES

(a) Once the training set out in this AMC is completed, the ATO or the DTO should issue a certificate of satisfactory completion of the training.

(b) Theoretical knowledge

In preparation for the demonstration of additional theoretical knowledge as stipulated in point SFCL.150(b)(2), the training course at an ATO or at an DTO should include theoretical knowledge instruction that should at least cover the revision or explanation of:

(1) Principles of flight

- (i) operating limitations (addition: TMG);
- (ii) propellers; and
- (iii) flight mechanics.

(2) Operational procedures for TMGs

- (i) special operational procedures and hazards; and
- (ii) emergency procedures.

(3) Flight performance and planning

- (i) mass and balance considerations;
- (ii) loading;
- (iii) CG calculation;
- (iv) load and trim sheet;
- (v) performance of TMGs;
- (vi) flight planning for VFR flights;
- (vii) fuel planning;
- (viii) pre-flight preparation;
- (ix) ICAO flight plan; and
- (x) flight monitoring and in-flight re-planning.

(4) Aircraft general knowledge

- (i) system designs, loads, stresses, maintenance;
- (ii) airframe;
- (iii) landing gear, wheels, tyres, brakes;
- (iv) fuel system;
- (v) electrics;
- (vi) piston engines;
- (vii) propellers; and
- (viii) instrument and indication systems.

(5) Navigation

- (i) dead reckoning navigation (addition: powered flying elements);

- 
- (ii) in-flight navigation (addition: powered flying elements);
  - (iii) basic radio propagation theory;
  - (iv) radio aids (basics);
  - (v) radar (basics); and
  - (vi) GNSS.
- (c) Flight instruction
- (1) The numbering of exercises 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) The training elements as per point SFCL.150(b)(1) should cover the revision or explanation of the following exercises:
    - Exercise 1: Familiarisation with the TMG**
      - (i) characteristics of the TMG;
      - (ii) cockpit layout;
      - (iii) systems; and
      - (iv) checklists, drills and controls.
  
    - Exercise 1e: Emergency drills**
      - (i) action if fire on the ground and in the air;
      - (ii) engine cabin and electrical system fire;
      - (iii) systems failure; and
      - (iv) escape drills, location and use of emergency equipment and exits.
  
    - Exercise 2: Preparation for and action after flight**
      - (i) serviceability documents;
      - (ii) equipment required, maps, etc.;
      - (iii) external checks;
      - (iv) internal checks;
      - (v) harness and seat or rudder panel adjustments;
      - (vi) starting and warm-up checks;
      - (vii) power checks;
      - (viii) running down system checks and switching off the engine;
      - (ix) parking, security and picketing (for example, tie down); and
      - (x) completion of authorisation sheet and serviceability documents.



**Exercise 3: Taxiing**

- (i) pre-taxi checks;
- (ii) starting, control of speed and stopping;
- (iii) engine handling;
- (iv) control of direction and turning;
- (v) turning in confined spaces;
- (vi) parking area procedure and precautions;
- (vii) effects of wind and use of flying controls;
- (viii) effects of ground surface;
- (ix) freedom of rudder movement;
- (x) marshalling signals;
- (xi) instrument checks;
- (xii) air traffic control procedures (if applicable).

**Exercise 3e: Emergencies: brake and steering failure****Exercise 4: Straight and level**

- (i) at normal cruising power, attaining and maintaining straight and level flight;
- (ii) flight at critically high air speeds;
- (iii) demonstration of inherent stability;
- (iv) control of pitch, including use of trim;
- (v) lateral level, direction and balance and trim;
- (vi) at selected air speeds (use of power);
- (vii) during speed and configuration changes; and
- (viii) use of instruments for precision.

**Exercise 5: Climbing**

- (i) entry, maintaining the normal and max rate climb and levelling off;
- (ii) levelling off at selected altitudes;
- (iii) en-route climb (cruise climb);
- (iv) climbing with flap down (if available);
- (v) recovery to normal climb;
- (vi) maximum angle of climb; and
- (vii) use of instruments for precision.

**Exercise 6: Descending**

- (i) entry, maintaining and levelling off;
- (ii) levelling off at selected altitudes;
- (iii) glide, powered and cruise descent (including effect of power and air speed);
- (iv) side slipping (on suitable types);
- (v) use of instruments for precision flight; and
- (vi) descending with engine inoperative.

**Exercise 7: Turning**

- (i) entry and maintaining medium level turns;
- (ii) resuming straight flight;
- (iii) faults in the turn (incorrect pitch, bank and balance);
- (iv) climbing turns;
- (v) descending turns;
- (vi) slipping turns (on suitable types);
- (vii) turns onto selected headings, use of gyro heading indicator or compass; and
- (viii) use of instruments for precision.

**Exercise 8a: Slow flight**

Note: The objective is to improve the pilot's ability to recognise inadvertent flight at critically low speeds and provide practice in maintaining the TMG in balance while returning to normal air speed.

- (i) safety checks;
- (ii) introduction to slow flight;
- (iii) controlled flight down to critically slow air speed; and
- (iv) application of full power with correct attitude and balance to achieve normal climb speed.

**Exercise 8b: Stalling**

- (i) airmanship;
- (ii) safety checks;
- (iii) symptoms;
- (iv) recognition;
- (v) clean stall and recovery without power and with power;

- (vi) recovery when a wing drops; and
- (vii) approach to stall in the approach and in the landing configurations, with and without power, recovery at the incipient stage.

**Exercise 9: Take-off and climb to downwind position**

- (i) pre-take-off checks;
- (ii) into wind take-off;
- (iii) safeguarding the nose wheel (if applicable);
- (iv) crosswind take-off;
- (v) drills during and after take-off;
- (vi) short take-off and soft field procedure or techniques including performance calculations; and
- (vii) noise abatement procedures.

**Exercise 10: Circuit, approach and landing**

- (i) circuit procedures, downwind and base leg;
- (ii) approach and landing with and without (idle) engine power;
- (iii) safeguarding the nose wheel (if applicable);
- (iv) effect of wind and wind shear on approach and touchdown speeds;
- (v) use of airbrakes, flaps, slats or spoilers (if available);
- (vi) crosswind approach and landing;
- (vii) glide approach and landing (engine stopped);
- (viii) short landing and soft field procedures or techniques;
- (ix) flapless approach and landing (if applicable);
- (x) wheel landing;
- (xi) missed approach and go-around; and
- (xii) noise abatement procedures.

Note: In the interests of safety, it will be necessary for pilots who are trained on nose wheel TMGs to undergo dual conversion training before flying tail wheel TMGs, and vice versa.

**Exercise 9/10e: Emergencies**

- (i) abandoned take-off;
- (ii) engine failure after take-off;
- (iii) mislanding and go-around; and
- (iv) missed approach.

**Exercise 11: Advanced turning**

- (i) steep turns (45 °), level and descending;
- (ii) stalling in the turn and recovery; and
- (iii) recoveries from unusual attitudes, including spiral dives.

**Exercise 12: Stopping and restarting the engine**

- (i) engine cooling procedures;
- (ii) switching off procedure in-flight;
- (iii) sailplane operating procedures;
- (iv) restarting procedure; and
- (v) decision process to start or not start the engine.

**Exercise 13: Forced landing without power**

- (i) forced landing procedure;
- (ii) choice of landing area, provision for change of plan;
- (iii) gliding distance;
- (iv) descent plan;
- (v) key positions;
- (vi) engine failure checks;
- (vii) use of radio;
- (viii) base leg;
- (ix) final approach;
- (x) landing; and
- (xi) actions after landing.

**Exercise 14: Precautionary landing**

- (i) full procedure away from aerodrome to break-off height;
- (ii) occasions necessitating;
- (iii) in-flight conditions;
- (iv) landing area selection:
  - (A) normal aerodrome;
  - (B) disused aerodrome; and
  - (C) ordinary field;
- (v) circuit and approach; and
- (vi) actions after landing.

---

**Exercise 15a: Navigation**

- (i) Flight planning
  - (A) weather forecast and actuals;
  - (B) map selection and preparation:
    - (1) choice of route;
    - (2) airspace structure; and
    - (3) safety altitudes;
  - (C) calculations:
    - (1) magnetic heading(s) and time(s) en-route;
    - (2) fuel consumption;
    - (3) mass and balance; and
    - (4) mass and performance;
  - (D) flight information:
    - (1) NOTAMs, etc.;
    - (2) radio frequencies; and
    - (3) selection of alternate aerodromes;
  - (E) TMG documentation;
  - (F) notification of the flight:
    - (1) pre-flight administrative procedures; and
    - (2) ICAO flight plan form;
- (ii) Departure:
  - (A) organisation of cockpit workload;
  - (B) departure procedures:
    - (1) altimeter settings;
    - (2) ATC liaison in regulated airspace (may be simulated in case of unavailability of regulated airspace);
    - (3) setting heading procedure; and
    - (4) noting of ETAs;
- (iii) En-route:
  - (A) maintenance of altitude and heading;
  - (B) revisions of ETAs and heading;
  - (C) log keeping;
  - (D) use of radio or compliance with ATC procedures;
  - (E) minimum weather conditions for continuation of flight;
  - (F) in-flight decisions;
  - (G) transiting controlled or regulated airspace;

- (H) diversion procedures;
- (I) uncertainty of position procedure; and
- (J) lost procedure; and
- (iv) Arrival, aerodrome joining procedure:
  - (A) ATC liaison in regulated airspace (may be simulated in case of unavailability of regulated airspace);
  - (B) altimeter setting;
  - (C) entering the traffic pattern;
  - (D) circuit procedures;
  - (E) parking;
  - (F) security of TMG;
  - (G) refuelling;
  - (H) closing of flight plan, if appropriate; and
  - (I) post-flight administrative procedures.

**Exercise 15b: Navigation problems at lower levels and in reduced visibility**

- (i) actions before descending;
- (ii) hazards (for example, obstacles and terrain);
- (iii) difficulties of map reading;
- (iv) effects of wind and turbulence;
- (v) vertical situational awareness (avoidance of controlled flight into terrain);
- (vi) avoidance of noise sensitive areas;
- (vii) joining the circuit; and
- (viii) bad weather circuit and landing.

**Exercise 15c: Radio navigation (basics)**

- (i) Use of GNSS or VOR/NDB:
  - (A) selection of waypoints;
  - (B) to or from indications or orientation; and
  - (C) error messages;
- (ii) Use of VHF/DF and other radio facilities, as available:
  - (A) availability, AIP and frequencies;
  - (B) R/T procedures and ATC liaison; and
  - (C) obtaining a QDM and homing; and
- (iii) Use of en-route or terminal radar:

- (A) availability and AIP;
- (B) procedures and ATC liaison;
- (C) pilot's responsibilities; and
- (D) secondary surveillance radar;
  - (1) transponders;
  - (2) code selection; and
  - (3) interrogation and reply.

## GM1 SFCL.150(c) SPL — Sailplane and TMG privileges

### FAMILIARISATION WITH ENGINE START/STOP PROCEDURES

SPL holders who obtain TMG privileges through a credit in accordance with point SFCL.150(c) should make themselves familiar with the procedures set out in the aircraft flight manual (AFM) for starting and stopping the engine in flight.

## AMC1 SFCL.150(e) SPL — Sailplane and TMG privileges

### EXTENSION TO SAILPLANE PRIVILEGES

(a) Once the training set out in this AMC is completed, the ATO or the DTO should issue a certificate of satisfactory completion of the training.

(b) Theoretical knowledge

In preparation for the demonstration of additional theoretical knowledge as stipulated in point SFCL.150(e)(2), the training course at an ATO or at an DTO should include theoretical knowledge instruction that should at least cover the revision or explanation of:

- (1) Principles of flight
  - Operating limitations
- (2) Operational procedures
  - (i) special operational procedures and hazards; and
  - (ii) emergency procedures.
- (3) Flight performance and planning
  - (i) mass and balance considerations;
  - (ii) loading;
  - (iii) CG calculation;
  - (iv) load and trim sheet; and
  - (v) performance of sailplanes.
- (4) Aircraft general knowledge
  - (i) system designs, loads, stresses, maintenance;
  - (ii) airframe;

- (iii) landing gear, wheels, tyres, brakes; and
  - (iv) instrument and indication systems.
- (5) Navigation
  - (i) dead reckoning navigation (addition: powered flying elements);
  - (ii) in-flight navigation; and
  - (iii) GNSS.
- (c) Flight instruction

The flight instruction should include at least the training syllabus specified in point (c) of AMC2 SFCL.130. However, credit may be given for exercises 4 to 8, 10 and 14.

### AMC1 SFCL.155(a)(2) SPL — Launching methods

#### INSTRUCTION FOR SELF-LAUNCH

- (a) The training for the self-launch method should include the syllabus for self-launch set out in point (c)(5) of AMC2 SFCL.130 (Exercise 11c).
- (c) At the end of the training, the applicant should demonstrate to the instructor the ability to perform all of the following:
  - (1) a self-launch;
  - (2) appropriate actions in the event of engine failures; and
  - (3) the decision processes referred to in items (xix) and (xx) of Exercise 11c in point (c)(5) of AMC2 SFCL.130.

### GM1 SFCL.155(a)(4) SPL — Launching methods

#### FURTHER LAUNCHING METHODS

In addition to the launching methods specified in points (b)(1) to (b)(3) of point SFCL.155, further launching methods (e.g. 'gravity launch' – launching the sailplane by running it down a slope) may be practised in some Member States. Such additional launching methods can be exercised, after applicants have complied with specific training requirements as established by the competent authority.

### AMC1 SFCL.160 SPL — Recency requirements

#### CREDITS FOR FLIGHT TIME COMPLETED ON SAILPLANES AS PER ARTICLE 2(8) OF AS WELL AS ANNEX I TO THE BASIC REGULATION

All hours flown on sailplanes that are subject to a decision as per Article 2(8) of the Basic Regulation or that are specified in Annex I to the Basic Regulation should count in full towards fulfilling the hourly requirements of point SFCL.160 of Part-SFCL under the following conditions:

- (a) the sailplane matches the definition and criteria of the respective Part-SFCL sailplane or TMG, as applicable;



- (b) a sailplane that is used for a training flight with an instructor is an aircraft as per points (a), (b), (c) or (d) of Annex I to the Basic Regulation that is subject to an authorisation specified in point ORA.ATO.135 of Annex VII (Part-ORA) or point DTO.GEN.240 of Annex VIII (Part-DTO) to Regulation (EU) No 1178/2011.

### AMC1 SFCL.160(a)(1)(ii) SPL — Recency requirements

#### TRAINING FLIGHTS

- (a) The content of the two training flights, as stipulated in point SFCL.160(a)(1)(ii), should include elements from the skill test for the SPL, as set out in AMC1 SFCL.145, selected by the instructor in accordance with point (b).
- (b) Each training flight should be preceded with a briefing and closed with a debriefing between the instructor and the candidate. In order to add value to the training flight, any element of flying a sailplane where candidates feel they would benefit from instruction should be discussed. The flight should then be focused on those specific elements with an instructor demonstration prior to candidate practice being performed.
- (c) If the instructor considers that the candidate during the training flight did not perform to an adequate standard, they should not sign the logbook of the candidate but recommend further training flights instead.
- (d) The 24-month period should be counted from the last day of the month in which the respective training flight took place.

### AMC1 SFCL.160(e) Recency requirements

#### RECENT EXPERIENCE FOR THE CARRIAGE OF PASSENGERS

When a pilot needs to carry out one or more flights with an instructor or an examiner in order to comply with the requirement of point SFCL.160(e) before the pilot can carry passengers, the instructor or examiner on board those flights will not be considered as a passenger.

### AMC1 SFCL.200(b) Aerobatic privileges

#### TRAINING FOR THE BASIC AEROBATIC PRIVILEGES

- (a) The aim of the basic aerobatic training is to qualify SPL holders to perform the aerobatic manoeuvres specified in point SFCL.200(b)(1).
- (b) Theoretical knowledge

The syllabus for the theoretical knowledge instruction as per point SFCL.200(b)(2)(ii)(A) should cover at least all of the following:

- (1) human factors and body limitations
- (i) spatial disorientation;
  - (ii) airsickness;
  - (iii) body stress and G-forces, positive and negative; and
  - (iv) effects of grey- and blackouts.

- 
- (2) technical subjects
    - (i) legislation affecting aerobatic flying to include environmental and noise subjects;
    - (ii) principles of aerodynamics to include slow flight, stalls and spins, flat and inverted; and
    - (iii) general airframe and engine limitations (if applicable).
  - (3) limitations applicable to the specific aircraft category (and type)
    - (i) air speed limitations (sailplane);
    - (ii) symmetric load factors (type-related, as applicable); and
    - (iii) rolling Gs (type-related, as applicable).
  - (4) aerobatic manoeuvres and recovery
    - (i) entry parameters;
    - (ii) planning systems and sequencing of manoeuvres;
    - (iii) rolling manoeuvres;
    - (iv) looping manoeuvres;
    - (v) combination manoeuvres; and
    - (vi) entry and recovery from developed spins, flat, accelerated and inverted.
  - (5) emergency procedures
    - (i) recovery from unusual attitudes; and
    - (ii) drills to include the use of parachutes (if worn) and aircraft abandonment.
- (d) Flying training

The exercises of the basic aerobatic flying training syllabus should be repeated as necessary until the applicant achieves a safe and competent standard. Having completed the flight training, the student pilot should be able to perform a solo flight containing the manoeuvres specified in point SFCL.200(b)(1). The dual training and the supervised solo training flights should be limited to the permitted manoeuvres of the type of sailplane used. The exercises should comprise at least the following practical training items:

- (1) confidence manoeuvres and recoveries
  - (i) slow flights and stalls;
  - (ii) steep turns;
  - (iii) side slips;
  - (iv) engine restart in-flight (if applicable);
  - (v) spins and recovery;
  - (vi) recovery from spiral dives; and
  - (vii) recovery from unusual attitudes.
- (2) aerobatic manoeuvres as per point SFCL.200(b)(1).

## AMC1 SFCL.200(c) Aerobatic privileges

### TRAINING FOR THE ADVANCED AEROBATIC PRIVILEGES

- (a) The aim of the advanced aerobatic training is to qualify SPL holders to perform aerobatic manoeuvres.
- (b) Theoretical knowledge
- The syllabus for the theoretical knowledge instruction as per point SFCL.200(c)(2)(ii)(A) should cover at least the elements specified in point (b) of AMC1 SFCL.200(b).
- (c) Flying training
- The exercises of the advanced aerobatic flying training syllabus should be repeated as necessary until the applicant achieves a safe and competent standard. Having completed the flight training, the student pilot should be able to perform a solo flight containing a sequence of aerobatic manoeuvres. The dual training and the supervised solo training flights should be limited to the permitted manoeuvres of the type of sailplane used. The exercises should comprise at least the following practical training items:
- (1) confidence manoeuvres and recoveries as specified in point (d)(1) of AMC1 SFCL.200(b);
  - (2) aerobatic manoeuvres:
    - (i) Chandelle;
    - (ii) Lazy Eight;
    - (iii) rolls;
    - (iv) loops;
    - (v) inverted flight;
    - (vi) Hammerhead turn; and
    - (vii) Immelmann.
- (d) For applicants who already hold basic aerobatic privileges as per point SFCL.200(b), the theoretical knowledge instruction as per point (b) may consist of a repetition of the elements specified in point (b) of AMC1 SFCL.200(b), and the flying training as per point (c) may focus on the aerobatic manoeuvres that are outside the scope of the basic aerobatic privileges.

## AMC1 SFCL.200(d) Aerobatic privileges

### TRAINING FOR AEROBATIC FLIGHT WITH ENGINE POWER

Applicants who seek privileges for aerobatic flights with engine power in accordance with point SFCL.200(d) should complete, under engine power, all manoeuvres specified in point (d) of AMC1 SFCL.200(b) or point (c) of AMC1 SFCL.200(c), as applicable, that can be completed with engine power.

## AMC1 SFCL.200(e) Aerobatic privileges

### CREDITS FOR AEROBATIC RATING AS PER REGULATION (EU) No 1178/2011

SPL holders who wish to make use of the credit established in point SFCL.200(e) should, when exercising aerobatic privileges, carry one of the following:

- (a) the aeroplane licence with the aerobatic rating, issued in accordance with Part-FCL; and
- (b) a confirmation (e.g. logbook entry) by the competent authority that an aerobatic rating in accordance with Part-FCL is or was held.

## AMC1 SFCL.205 Sailplane towing and banner towing rating

### TRAINING FOR THE SAILPLANE TOWING AND BANNER TOWING rating

- (a) General

The aim of the towing instruction is to qualify SPL holders with TMG privileges to tow a sailplane or a banner. The theoretical knowledge and flight instruction should cover the relevant elements as set out in this AMC.

- (b) Theoretical knowledge: towing of sailplanes

The theoretical knowledge syllabus for towing of sailplanes should cover the revision or explanation of:

- (1) regulations about towing flights;
- (2) equipment for the towing activity;
- (3) sailplane towing techniques, including:
  - (i) signals and communication procedures;
  - (ii) take-off (normal and crosswind);
  - (iii) in-flight launch procedures;
  - (iv) descending on tow;
  - (v) sailplane release procedure;
  - (vi) tow rope release procedure;
  - (vii) landing with tow rope connected (if applicable);
  - (viii) emergency procedures during tow, including equipment malfunctions;
  - (ix) safety procedures;
  - (x) flight performance of the applicable aircraft type when towing sailplanes;
  - (xi) look-out and collision avoidance;
  - (xii) performance data sailplanes, including:
    - (A) suitable speeds; and
    - (B) stall characteristics in turns;
  - (xiii) effects of wake turbulence and downwash on the towed sailplane's performance, handling characteristics and stall speed; and
  - (xiv) effects of propeller wash in the initial phase of the take-off roll at crosswind.

- (c) Theoretical knowledge: banner towing

The theoretical knowledge syllabus for banner towing should cover the revision or explanation of:

- (1) regulations about banner towing;

- 
- (2) equipment for the banner towing activity;
  - (3) ground crew coordination;
  - (4) pre-flight procedures;
  - (5) banner towing techniques, including:
    - (i) take-off launch;
    - (ii) banner pickup manoeuvres;
    - (iii) flying with a banner in tow;
    - (iv) release procedure;
    - (v) landing with a banner in tow (if applicable);
    - (vi) emergency procedures during tow, including equipment malfunctions;
    - (vii) safety procedures;
    - (viii) flight performance of the applicable aircraft type when towing a heavy or light banner; and
    - (ix) prevention of stall during towing operations.
- (d) Flying training: towing of sailplanes
- The exercises of the towing training syllabus for towing sailplanes should be repeated as necessary until the student achieves a safe and competent standard and should comprise at least the following practical training items:
- (1) take-off procedures (normal and crosswind take-offs);
  - (2) 360 ° circles on tow with a bank of 30 ° and more;
  - (3) descending on tow;
  - (4) release procedure of the sailplane;
  - (5) landing with the tow rope connected (if applicable);
  - (6) tow rope release procedure in-flight;
  - (7) emergency procedures (simulation); and
  - (8) signals and communication during tow.
- (e) Flying training: banner towing
- The exercises of the towing training syllabus for banner towing should be repeated as necessary until the student achieves a safe and competent standard and should comprise at least the following practical training items:
- (1) pickup manoeuvres;
  - (2) towing in-flight techniques;
  - (3) release procedures;
  - (4) flight at critically low air speeds;
  - (5) maximum performance manoeuvres;
  - (6) emergency manoeuvres to include equipment malfunctions (simulated);
  - (7) specific banner towing safety procedures;

- (8) go-around with the banner connected; and
- (9) loss of engine power with the banner attached (simulated).

## AMC1 SFCL.210 TMG night rating

### TRAINING FOR THE TMG NIGHT RATING

#### (a) General

The aim of the TMG night instruction is to qualify SPL holders with TMG privileges to operate TMGs in visual meteorological conditions (VMC) at night. The theoretical knowledge and flight instruction should follow the syllabus set out in this AMC.

#### (b) Theoretical knowledge instruction

The theoretical knowledge syllabus should cover the revision or explanation of:

- (1) night VMC minima;
- (2) rules about airspace control at night and facilities available;
- (3) rules about aerodrome ground, runway, landing site and obstruction lighting;
- (4) aircraft navigation lights and collision avoidance rules;
- (5) physiological aspects of night vision and orientation;
- (6) dangers of disorientation at night and recovery techniques;
- (7) dangers of weather deterioration at night and escape procedures;
- (8) instrument systems (functions and errors);
- (9) instrument lighting and emergency cockpit lighting systems;
- (10) map marking for use under cockpit lighting;
- (11) practical navigation principles;
- (12) radio navigation principles;
- (13) planning and use of safety altitude; and
- (14) danger from icing conditions, avoidance and escape manoeuvres.

#### (d) Flying training

The exercises of the flight training syllabus should be repeated as necessary until the student achieves a safe and competent standard. Starred items (\*) should be completed in simulated instrument meteorological conditions (IMC) and may be completed in daylight.

#### **Exercise 1**

- (i) Revise basic manoeuvres when flying by sole reference to instruments\*;
- (ii) Explain and demonstrate transition from visual flight to instrument flight\*; and
- (iii) Explain and revise recovery from unusual attitudes by sole reference to instruments\*.

**Exercise 2**

Explain and demonstrate the use of radio navigation aids when flying by sole reference to instruments, to include position finding and tracking\*.

**Exercise 3:**

Explain and demonstrate the use of radar assistance\*.

**Exercise 4**

- (i) Explain and demonstrate night take-off techniques;
- (ii) Explain and demonstrate night circuit technique;
- (iii) Explain and demonstrate night approaches with or without visual approach aids; and
- (iv) Practise take-offs, circuits, and approaches and landings.

**Exercise 5**

Explain and demonstrate night emergency procedures to include:

- (i) simulated engine failure (to be terminated with recovery at a safe altitude);
- (ii) simulated engine failure at various phases of flight;
- (iii) simulated inadvertent entry to IMC (not on base leg or final);
- (iv) internal and external lighting failure; and
- (v) other malfunctions and emergency procedures as required by the AFM.

**Exercise 6**

Solo night circuits

**Exercise 7**

- (i) Explain and demonstrate night cross-country techniques; and
- (ii) Practise night cross-country dual and either as student PIC (SPIC) or supervised solo to a satisfactory standard.

**AMC1 SFCL.215 Sailplane cloud flying privileges****TRAINING FOR THE SAILPLANE CLOUD FLYING PRIVILEGES****(a) Theoretical knowledge instruction**

The syllabus for theoretical knowledge instruction as per point SFCL.215(b)(2)(i) should cover the revision and/or explanation of:

- (1) Human factors and body limitations
  - (i) basic aviation physiology as regards cloud flying aspects

- 
- (ii) basic aviation psychology
  - (iii) spatial disorientation
  - (2) Principles of flight
    - (i) stability
    - (ii) control
    - (iii) limitations (load factor and manoeuvres)
  - (3) Aircraft instrumentation
    - (i) sensors and instruments
    - (ii) measurement of air data parameters
    - (iii) gyroscopic instruments
  - (4) Navigation
    - (i) use of charts
    - (ii) dead reckoning navigation
    - (iii) use of GNSS
    - (iv) air traffic regulations — airspace structure
    - (v) aeronautical information service
    - (vi) Member State regulations regarding cloud flying
  - (5) Communications
    - (i) VHF communications
    - (ii) relevant weather information terms
  - (6) Hazards and emergency procedures
    - (i) icing
    - (ii) cloud escape procedures
    - (iii) anti-collision instruments/avionics
  - (b) Flight instruction

The exercises of the sailplane cloud flight instruction syllabus should be repeated as necessary until the student achieves a safe and competent standard and should comprise at least the following practical training items, flown solely by reference to instruments:

- (1) straight flight;
- (2) turning;
- (3) achieving and maintaining heading;
- (4) return to straight flight from steeper angle of bank;
- (5) position fixing using GNSS and aeronautical charts;
- (6) position estimating using DR;
- (7) basic cloud escape manoeuvre/unusual attitude; and
- (8) advanced cloud escape manoeuvre on nominated heading.



- (c) When using a TMG with engine power for training exercises with sole reference to instruments, the student should wear an IFR training hood or other suitable vision limiting devices.
- (d) Course completion standards

The course is successfully completed when the applicant demonstrates, during the course:

- (1) sufficient knowledge in the items specified in point (a); and
- (2) a sufficient level of competence to safely perform the exercises specified in point (b) while complying with the following limits:

	Artificial horizon	Turn & slip
Straight flight	Heading $\pm 10^\circ$ IAS $\pm 10$ kt	Heading $\pm 20^\circ$ IAS $\pm 15$ kt
Turning	Angle of bank $\pm 15^\circ$ IAS $\pm 10$ kt	Small deviations in rate of turn with a maximum deviation between $\frac{1}{2}$ & full scale IAS $\pm 15$ kt
Position fixing given: GPS displaying range and bearing to a point	$\pm 2$ NM	$\pm 3$ NM

## AMC1 SFCL.315(a)(7)(ii) FI(S) certificate — Privileges and conditions

### DEMONSTRATION OF ABILITY TO INSTRUCT IN FI(S) TRAINING COURSES

The demonstration of the ability to provide instruction during FI(S) training courses, as required in point SFCL.315(a)(7)(ii), should consist of exercises from the FI(S) training course, as selected by the supervising FI(S), and should, in any case, include all of the following:

- (a) one launch and one landing exercise;
- (b) a selection of air exercises; and
- (c) one emergency exercise.

## AMC1 SFCL.325 FI(S) competencies and assessment

- (a) Training should be both theoretical and practical. Practical elements should include the development of specific instructor skills, particularly in the area of teaching and assessing TEM.
- (b) The training and assessment of instructors should be made against the following performance standards:

Competency	Performance	Knowledge/understanding of
Prepare resources	(a) ensures adequate facilities; (b) prepares briefing material; (c) manages available tools;	(a) objectives; (b) available tools; (c) competency-based training methods;
Create a climate conducive to learning	(a) establishes credentials, role models appropriate behaviour; (b) clarifies roles;	(a) barriers to learning; (b) learning styles.

Competency	Performance	Knowledge/understanding of
	(c) states objectives; (d) ascertains and supports student pilot's needs.	
Present knowledge	(a) communicates clearly; (b) creates and sustains realism; (c) looks for training opportunities.	teaching methods
Integrate Human Factors and TEM	makes Human Factors and TEM links with technical training;	(a) Human Factors and TEM; (b) Causes and countermeasures against undesired aircraft states
Manage time to achieve training objectives	Allocates the appropriate time to achieve competency objective.	syllabus time allocation
Facilitate learning	(a) encourages trainee participation; (b) shows motivating, patient, confident and assertive manner; (c) conducts one-to-one coaching; (d) encourages mutual support.	(a) facilitation; (b) how to give constructive feedback; (c) how to encourage trainees to ask questions and seek advice.
Assesses trainee performance	(a) assesses and encourages trainee self-assessment of performance against competency standards; (b) makes assessment decision and provides clear feedback;	(a) observation techniques; (b) methods for recording observations.
Monitor and review progress	(a) compares individual outcomes to defined objectives; (b) identifies individual differences in learning rates; (c) applies appropriate corrective action.	(a) learning styles; (b) strategies for training adaptation to meet individual needs.
Evaluate training sessions	(a) elicits feedback from student pilots; (b) tracks training session processes against competency criteria; (c) keeps appropriate records.	(a) competency unit and associated elements; (b) performance criteria.
Report outcome	Reports accurately using only observed actions and events.	(a) training phase objectives; (b) individual versus systemic weaknesses.

**AMC1 SFCL.330(a) FI(S) — Training course****PRE-ENTRY ASSESSMENT**

The content of the pre-entry assessment should be determined by the ATO or the DTO, taking into account the experience of a particular candidate. It may include interviews and/or an assessment during a simulated training session with the candidate being in the role of the instructor.

**AMC1 SFCL.330(b) FI(S) — Training course****(a) GENERAL**

- (1) The aim of the FI(S) training course is to train SPL holders to the level of competence defined in point SFCL.325.
- (2) Throughout the training course, its content and structure should allow the student instructor to develop safety awareness by teaching the knowledge, skills and attitudes relevant to the FI(S) task including at least the following:
  - (i) refresh the technical knowledge of the student instructor;
  - (ii) train the student instructor to teach:
    - (A) the ground subjects and air exercises; and
    - (B) how to access all related sources of information;
  - (iii) ensure that the student instructor's flying is of a sufficiently high standard; and
  - (iv) teach the student instructor the principles of basic instruction and to apply them at all training levels.
- (3) With the exception of the section on teaching and learning, all the subject details contained in the ground and flight training syllabus is complementary to the SPL course syllabus.
- (4) The FI(S) training course should give particular stress to the role of the individual in relation to the importance of human factors in the man-machine interface as well as in the instructor-student interaction during theoretical knowledge instruction. Special attention should be paid to the applicant's maturity and judgement including an understanding of adults, their behavioural attitudes and variable levels of education.
- (5) During the training course, the applicants should be made aware that their own attitudes are key to flight safety. Identifying and avoiding complacency and improving safety awareness should be a fundamental objective throughout the training course. It is of major importance for the training course to aim at giving applicants the knowledge, skills and attitudes relevant to a flight instructor's task.

**(b) CONTENT**

The training course consists of two parts:

**(1) PART 1 — THEORETICAL KNOWLEDGE INSTRUCTION**

Part 1 includes the training specified in points (ii) and (iii) of point SFCL.330(b)(1).

The content of the teaching and learning part of the FI(S) course, as established in AMC1 SFCL.325, should be used as guidance to develop the syllabus for the training specified in point SFCL.325(b)(1)(ii).

## (2) PART 2 — FLIGHT INSTRUCTION

Part 2 includes the training specified in point SFCL.330(b)(1)(iv) and, as applicable, point SFCL.330(b)(2).

## (i) General

- (A) The air exercises are similar to those of the SPL training course but with additional items designed to cover the needs of a flight instructor.
- (B) The numbering of exercises 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. The actual order and content will depend upon the following interrelated factors:
  - (a) the applicant's progress and ability;
  - (b) the weather conditions affecting the flight;
  - (c) the flight time available;
  - (d) the instructional technique considerations;
  - (e) the local operating environment; and
  - (f) the applicability of the exercises to the aircraft type.
- (C) At the discretion of the instructors, some of the exercises may be combined whereas some other exercises may be done in several flights.
- (D) It follows that student instructors will eventually be faced with similar inter-related factors. They should be shown and taught how to develop flight lesson plans, taking these factors into account, so as to make the best use of each flight lesson, combining parts of the set exercises as necessary.

## (ii) Briefings and debriefings

- (A) The briefing normally includes a statement of the aim and a brief allusion to principles of flight only if relevant. An explanation is to be given of exactly which air exercises are to be taught by the instructor and practised by the student during the flight. It should include how the flight will be conducted with regard to who is to fly the aircraft and what airmanship, weather and flight safety aspects currently apply. The nature of the lesson will govern the order in which the constituent parts are to be taught.
- (B) The five basic components of the briefing will be:
  - (a) the aim;
  - (b) the air exercise(s) (what, and how and by whom);
  - (c) flight briefing;
  - (d) check of understanding; and
  - (e) airmanship.
- (C) After each exercise, the student instructor will debrief the FI(S) in the role of the student pilot. The debriefing is to evaluate:
  - (a) whether the objectives have been fulfilled;
  - (b) whether the errors are minor or major;

- (c) what can be corrected or improved; and
- (d) whether the student pilot has reached the required level of competence or the exercise must be done again.

The FI(S) instructor will validate the debriefing.

(iii) Planning of flight lessons

The development of lesson plans is an essential prerequisite of good instruction and the student instructor is to be given supervised practice in the development and practical application of flight lesson plans.

(iv) General considerations

- (A) The student instructor should complete flight training in order to practise the principles of basic instruction at the SPL level. During this training, the student instructor occupies the seat normally occupied by the FI(S).
- (B) The instructor providing this instructor training is normally taking over the role of the student pilot.
- (C) It is to be noted that airmanship is a vital ingredient of all flight operations. Therefore, in the following air exercises, the relevant aspects of airmanship are to be stressed at the appropriate times during each flight.
- (D) The student instructor should learn how to identify common errors and how to correct them properly, which should be emphasised at all times.

(v) Long briefings and air exercises

**Exercise 1: Familiarisation with the sailplane**

(a) Objective

To advise the student instructor on how to familiarise the student with the sailplane which will be used for the training and to test the student's position in the sailplane for comfort, visibility, and ability to use all controls and equipment. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing and exercise

The student instructor has to:

- (1) present the type of sailplane which will be used;
- (2) explain the cockpit layout: instruments and equipment;
- (3) explain the flight controls: stick, pedals, airbrakes, flaps (if available), cable release, undercarriage (if available);
- (4) check the position of the student on the seat for comfort, visibility, ability to use all controls;
- (5) explain the use of the harness;
- (6) demonstrate how to adjust the rudder pedal;
- (7) explain the differences when occupying the instructor's position; and
- (8) explain all checklists, drills, and controls.

(c) Debriefing

**Exercise 2: Procedure in the event of emergencies**

## (a) Objective

To advise the student instructor on how to familiarise the student with the use of the parachute and how to explain the bail-out procedure in case of emergency. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

## (b) Briefing and exercise

The student instructor has to:

- (1) explain how to handle the parachute with care (transport, storage and drying after use);
- (2) demonstrate the adjustment of the parachute harness;
- (3) aid the student to perform the adjustment of the parachute harness;
- (4) demonstrate the attachment of the static line of the parachute (may be simulated);
- (5) explain the bail-out procedure (especially from a sailplane in unusual attitude);
- (6) practise the bail-out procedure;
- (7) explain the procedure for landing with a parachute in normal conditions and with a strong wind; and
- (8) demonstrate and practise parachute landing fall drills.

## (c) Debriefing

**Exercise 3: Preparation for flight**

## (a) Objective

To advise the student instructor on how to explain all the operations to be completed prior to flight. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

## (b) Briefing

The student instructor has to explain:

- (1) the need for a pre-flight briefing;
- (2) the structure and the content of this briefing;
- (3) which documents are required on board;
- (4) which equipment is required for a flight;
- (5) how to handle the sailplane on the ground, how to move it, how to tow it out and how to park it;
- (6) how to do the pre-flight external and internal checks;
- (7) the procedure for verifying in-limits mass and balance; and
- (8) the pre-launch checks (checklist).

- (c) Air exercise
- The student instructor has to demonstrate:
- (1) the need for a pre-flight briefing;
  - (2) that the required documents are on board;
  - (3) that the equipment required for the intended flight is on board;
  - (4) how to handle the sailplane on the ground, move it to the start position, tow it out and park it;
  - (5) how to perform a pre-flight external and internal check;
  - (6) how to verify in-limits mass and balance;
  - (7) how to adjust harness as well as seat or rudder pedals;
  - (8) the pre-launch checks;
  - (9) how to advise the student pilot in performing the pre-flight preparation; and
  - (10) how to analyse and correct pre-flight preparation errors as necessary.
- (d) Debriefing

**Exercise 4: Initial experience**

- (a) Objective
- To advise the student instructor on how to familiarise the student with being in the air, with the area around the airfield, to note the student's reactions in this situation, and to draw the student's attention to safety and look-out procedures. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.
- (b) Briefing
- The student instructor has to explain:
- (1) the area around the airfield;
  - (2) the need for looking out; and
  - (3) the change of aircraft control.
- (c) Air exercise
- The student instructor has to:
- (1) show the noteworthy references on the ground;
  - (2) analyse the reactions of the student; and
  - (3) check that the student looks out (safety).
- (d) Debriefing

**Exercise 5: Primary effects on controls**

- (a) Objective
- To advise the student instructor on how to:

- (1) demonstrate the primary effects of each control with the help of visual references;
  - (2) train the student pilot to recognise when the sailplane is no longer in a normal attitude along one of the axes and to return to the normal attitude;
  - (3) train continuous and efficient look-out during these exercises; and
  - (4) analyse and correct errors and student pilot mistakes as necessary.
- (b) Briefing

The student instructor has to explain:

- (1) the definitions of the axes of a sailplane;
  - (2) the look-out procedures;
  - (3) the visual references along each axis;
  - (4) the primary effects of controls when laterally level;
  - (5) the relationship between attitude and speed;
  - (6) the use of flaps; and
  - (7) the use of airbrakes.
- (c) Air exercise

The student instructor has to demonstrate:

- (1) the visual references in flight;
  - (2) the primary effect of the elevator;
  - (3) the relationship between attitude and speed (inertia);
  - (4) the primary effect of rudder on the rotation of the sailplane around the vertical axis;
  - (5) the primary effect of ailerons on banking;
  - (6) the effect of airbrakes (including changes in pitch when airbrakes are extended or retracted);
  - (7) the effects of flaps (provided the sailplane has flaps);
  - (8) the look-out procedures during all the exercises;
  - (9) how to advise the student pilot to recognise the primary effects of each control; and
  - (10) how to analyse and correct errors as necessary.
- (d) Debriefing

#### **Exercise 6: Co-ordinated rolling to and from moderate angles of bank**

- (a) Objective

To advise the student instructor on secondary effects of controls and on how to teach the student to coordinate ailerons and rudder in order to compensate for the adverse yaw effect. Furthermore, the student instructor



should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the secondary effects of controls;
- (2) the adverse yaw effect;
- (3) how to compensate for the adverse yaw; and
- (4) the further effect of the rudder (roll).

(c) Air exercise

The student instructor has to demonstrate:

- (1) the adverse yaw effect with a reference on ground;
- (2) the further effect of the rudder (roll);
- (3) the coordination of ruder and aileron controls to compensate for the adverse yaw effects;
- (4) rolling to and from moderate angles of bank (20 to 30 °) and returning to the straight flight;
- (5) how to advise the student pilot to coordinate ailerons and rudder; and
- (6) how to analyse and correct errors as necessary.

(d) Debriefing

**Exercise 7: Straight flight**

(a) Objective

To advise the student instructor on how to train the student to maintain straight flight with a constant heading without slipping and skidding. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) how to maintain straight flight;
- (2) the different air speed limitations;
- (3) the pitch stability of the sailplane; and
- (4) the effect of trimming.

(c) Air exercise

The instructor student has to demonstrate:

- (1) maintaining straight flight;
- (2) inherent pitch stability;
- (3) the control of the sailplane in pitch, including use of trim with visual references and speed;

- (4) how to perform the instrument monitoring;
  - (5) the control of level attitude with visual references;
  - (6) the control of the heading with a visual reference on the ground;
  - (7) the look-out procedures during all the exercises;
  - (8) how to advise the student pilot to maintain straight flight; and
  - (9) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 8: Turning**

- (a) Objective

To advise the student instructor on how to teach students to fly turns and circles with a moderate constant bank of about 30 ° with constant attitude (speed) and coordinated flight. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

- (b) Briefing

The student instructor has to explain:

- (1) the forces on the sailplane during a turn;
- (2) the need to look out before turning;
- (3) the sequences of a turn (entry, stabilising and exiting);
- (4) the common faults during a turn;
- (5) how to turn on to selected headings, use of compass; and
- (6) the use of instruments (ball indicator or slip string) for precision.

- (c) Air exercise

The student instructor has to demonstrate:

- (1) the look-out procedure before turning;
- (2) entering a turn (correction of adverse yaw);
- (3) the stabilisation of a turn (keeping the attitude and compensating the induced roll);
- (4) the exit from a turn;
- (5) the most common faults in a turn;
- (6) turns on to selected headings (use landmarks as reference);
- (7) the use of instruments (ball indicator or slip string) for precision;
- (8) how to advise the student pilot to fly a turn or circle with a moderate bank; and
- (9) how to analyse and correct errors as necessary.

- (d) Debriefing

**Exercise 9a: Slow flight**

## (a) Objective

To advise the student instructor on how to improve the student's ability to recognise inadvertent flight at critically low speeds (high angle of attack) and to provide practice in maintaining the sailplane in balance while returning to normal attitude (speed). Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

## (b) Briefing

The student instructor has to explain:

- (1) the characteristics of slow flight; and
- (2) the risks of stalling.

## (c) Air exercise

The student instructor has to check that the airspace below the sailplane is free of other aircraft before starting the exercise.

The student instructor has to demonstrate:

- (1) a controlled flight down to critically high angle of attack (slow air speed), and draw the attention of the student to the nose up attitude, reduction of noise, reduction of speed;
- (2) a return to the normal attitude (speed);
- (3) how to advise the student pilot to recognise inadvertent flight at critically low speeds;
- (4) how to provide practice in maintaining the sailplane in balance while returning to normal attitude; and
- (5) how to analyse and correct errors as necessary.

## (d) Debriefing

**Exercise 9b: Stalling**

## (a) Objective

To advise the student Instructor on how to improve the student's ability to recognise a stall and to recover from it. This includes stall from a level flight and stalls when a wing drops. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

## (b) Briefing

The student instructor has to explain:

- (1) the mechanism of a stall;
- (2) the effectiveness of the controls at the stall;
- (3) pre-stall symptoms, recognition and recovery;
- (4) factors affecting the stall (importance of the angle of attack and high speed stall);
- (5) effect of flaps if any on the sailplane;

- (6) the effects of unbalance at the stall safety checks;
- (7) stall symptoms, recognition and recovery;
- (8) recovery when a wing drops; and
- (9) approach to stall in the approach and in the landing configurations;
- (10) recognition and recovery from accelerated stalls.

(c) Air exercise

The student instructor has to check that the airspace below the sailplane is free of other aircraft or traffic before starting the exercise.

The student instructor has to demonstrate:

- (1) stall from straight flight;
- (2) pre-stall symptoms, recognition and recovery;
- (3) stall symptoms, recognition and recovery;
- (4) recovery when a wing drops;
- (5) approach to stall in the approach and in the landing configurations;
- (6) recognition and recovery from accelerated stalls;
- (7) stalling and recovery at the incipient stage with 'instructor induced' distractions;
- (8) how to improve the student pilot's ability to recognise a stall and to recover from it; and
- (9) how to analyse and correct errors as necessary.

Note: Consideration is to be given to manoeuvre limitations and references to the flight manual or equivalent document (for example, owner's manual or pilot's operating handbook) in relation to mass and balance limitations. The safety checks should take into account the minimum safe altitude for initiating such exercises in order to ensure an adequate margin of safety for the recovery. If specific procedures for stalling or spinning exercises and for the recovery techniques are provided by the flight manual or equivalent document (for example, owner's manual or pilot's operating handbook), they have to be taken into consideration. These factors are also covered in the next exercise.

(d) Debriefing

**Exercise 10a: Spin recognition and avoidance**

(a) Objective

To advise the student instructor on how to improve the student's ability to recognise a spin at the incipient stage and to recover from it. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) why a sailplane spins;
- (2) how to recognise the symptoms of a spin (not to be confused with spiral dive);
- (3) what are the parameters influencing the spin; and
- (4) how to recover from a spin.

(c) Air exercise

The student instructor has to check that the airspace below the sailplane is free of other aircraft or traffic before starting the exercise.

The student instructor has to:

- (1) demonstrate stalling and recovery at the incipient spin stage (stall with excessive wing drop, about 45 °);
- (2) make sure that the student recognises the spin entry;
- (3) make sure that the student pilot is able to recover from the spin;
- (4) check whether the student still reacts properly if the instructor induces distractions during the spin entry;
- (5) demonstrate how to analyse and correct errors as necessary.

Note: Consideration of manoeuvre limitations and the need to refer to the sailplane manual and mass and balance calculations.

(d) Debriefing

**Exercise 10b: Developed spins: entry and recovery**

(a) Objective

To advise the student instructor on how to recognise a developed spin and to recover from it. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the spin entry;
- (2) the symptoms of a real spin and the recognition and identification of spin direction;
- (3) the spin recovery;
- (4) use of controls;
- (5) effects of flaps (flap restriction applicable to type);
- (6) the effect of the CG upon spinning characteristics;
- (7) the spinning from various flight attitudes;
- (8) the sailplane limitations;
- (9) safety checks; and
- (10) common errors during recovery.

- (c) Air exercise
- The student instructor has to check that the airspace below the sailplane is free of other aircraft or traffic before starting the exercise.
- The student instructor has to demonstrate:
- (1) safety checks;
  - (2) the spin entry;
  - (3) the recognition and identification of the spin direction;
  - (4) the spin recovery (reference to flight manual);
  - (5) the use of controls;
  - (6) the effects of flaps (restrictions applicable to sailplane type);
  - (7) spinning and recovery from various flight attitudes;
  - (8) how to improve the student pilot's ability to recognise a spin and how to recover from it; and
  - (9) how to analyse and correct errors as necessary.
- (d) Debriefing

**Note (exercises 11a to 11c):** The student instructor has to teach at least one of the following launch methods: winch launch, aero tow, and self-launch. At least three launch failure exercises should be completed. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

**Exercise 11a: Winch launch**

- (a) Objective
- To advise the student instructor on how to teach winch launches and on how to make sure that their student will manage an aborted launch. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.
- (b) Briefing
- The student instructor has to explain:
- (1) the signals or communication before and during launch;
  - (2) the use of the launching equipment;
  - (3) the pre-take-off checks;
  - (4) the procedure for into wind take-off;
  - (5) the procedure for crosswind take-off;
  - (6) the safe and adequate profile of winch launch and limitations; and
  - (7) the launch failure procedures.
- (c) Air exercise
- The student instructor has to demonstrate:

- (1) the use of the launching equipment;
  - (2) the pre-take-off checks;
  - (3) the into wind take-off;
  - (4) the crosswind take-off;
  - (5) the safe and adequate profile of winch launch and limitations;
  - (6) the procedure in case of cable break or aborted launch, launch failure procedures simulated during the winch launch;
  - (7) how to teach the student pilot to perform safe winch launches;
  - (8) how to teach the student pilot to manage an aborted launch (different altitudes and speeds); and
  - (9) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 11b: Aero tow**

(a) Objective

To advise the student instructor on how to teach aero towing and on how to make sure that their student will manage an aborted launch. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the signals or communication before and during launch;
- (2) the use of the launch equipment;
- (3) the pre-take-off checks;
- (4) the procedure for into wind take-off;
- (5) the procedure for crosswind take-off;
- (6) the procedure on tow: straight flight, turning and slip stream;
- (7) the recovery from out-of-position on tow;
- (8) the procedures in case of launch failure and abandonment;
- (9) the descending procedure on tow (towing aircraft and sailplane); and
- (10) the reasons for launch failures and abandonment or procedures.

(c) Air exercise

The student instructor has to demonstrate:

- (1) the signals before and during launch;
- (2) the use of the launch equipment;
- (3) the pre-take-off checks;
- (4) the procedure for into wind take-off;
- (5) the procedure for a crosswind take-off;

- (6) the procedures on tow: straight flight, turning and slip stream;
  - (7) the recovery from out-of-position on tow;
  - (8) the procedure in case of launch failure and abandonment simulated by releasing the cable at a suitable height, with and without response to a signal from the tow plane.;
  - (9) the descending procedure on tow;
  - (10) how to teach the student pilot to perform safe aero tow launches;
  - (11) how to teach the student pilot to manage an aborted launch; and
  - (12) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 11c: Self launch**

- (a) Objective

To advise the student instructor on how to teach launching with a self-launching sailplane and on how to make sure that the student will manage an aborted launch. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

- (b) Briefing

The student instructor has to explain:

- (1) the engine extending and retraction procedures;
- (2) the engine starting and safety precautions;
- (3) the pre-take-off checks;
- (4) the noise abatement procedures;
- (5) the checks during and after take-off;
- (6) the into wind take-off;
- (7) the crosswind take-off;
- (8) the procedure in case of power failure;
- (9) the procedure in case of abandoned take-off;
- (10) the maximum performance (short field and obstacle clearance) take-off; and
- (11) the short take-off and soft field procedure or techniques and performance calculations.

- (c) Air exercise

The student instructor has to demonstrate:

- (1) the engine extending and retraction procedures;
- (2) the engine starting and safety precautions;
- (3) the pre-take-off checks;
- (4) the noise abatement procedures;



- (5) the checks during and after take-off;
  - (6) the into wind take-off;
  - (7) the crosswind take-off;
  - (8) the power failures and procedures;
  - (9) the procedure in case of abandoned take-off;
  - (10) the maximum performance (short field and obstacle clearance) take-off;
  - (11) the short take-off and soft field procedure or techniques and performance calculations;
  - (12) how to teach the student pilot to perform safe self-launches;
  - (13) how to teach the student pilot to manage an aborted launch (different altitudes); and
  - (14) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 12: Circuit approach and landing**

(a) Objective

To advise the student instructor on how to teach the student to fly a safe circuit approach and to land the sailplane. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the procedures for rejoining the circuit;
- (2) the procedures for collision avoidance and the look-out techniques;
- (3) the pre-landing check;
- (4) the normal circuit procedures, downwind, base leg;
- (5) the effect of wind on approach and touchdown speeds ;
- (6) the visualisation of a reference point;
- (7) the approach control and use of airbrakes;
- (8) the use of flaps (if applicable); and
- (9) the procedures for normal and crosswind approach and landing.

(c) Air exercise

The student instructor has to demonstrate:

- (1) the procedures for rejoining the circuit;
- (2) the procedures for collision avoidance and the look-out techniques;
- (3) the pre-landing check;

- (4) the standard circuit and contingency planning (for example, running out of height);
  - (5) the effect of wind on approach and touchdown speeds;
  - (6) the visualisation of an aiming point;
  - (7) the approach control and use of airbrakes;
  - (8) the use of flaps (if applicable);
  - (9) the procedures for normal and crosswind approaches and landings;
  - (10) how to teach the student pilot to fly a safe circuit approach;
  - (11) how to improve the student pilot's ability to perform a safe landing; and
  - (12) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 13: First solo flight**

- (a) Objective
- To advise the student instructor on how to prepare their students for the first solo flight.
- (b) Briefing
- The student instructor has to explain:
- (1) the limitations of the flight (awareness of local area and restrictions);
  - (2) the use of required equipment; and
  - (3) the effect of the CG on the longitudinal stability of the sailplane.
- (c) Air exercise
- The student instructor has to:
- (1) check with another or more senior instructor if the student can fly solo;
  - (2) monitor the flight; and
  - (3) debrief the flight with the student.
- (d) Debriefing

**Exercise 14: Advanced turning**

- (a) Objective
- To advise the student instructor on how to teach steep turns or circles (45 ° banking) at constant attitude (speed) and with the yaw string centred. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.
- (b) Briefing
- The student instructor has to explain:

- (1) the relationship between banking and speed;
  - (2) how to master steep turns or circles;
  - (3) the unusual attitudes which can occur (stalling or spinning and spiral dive); and
  - (4) how to recover from these unusual attitudes.
- (c) Air exercise
- The student has to demonstrate:
- (1) steep turns (45 °) at constant speed and with the yaw string centred;
  - (2) common errors (slipping and skidding);
  - (3) unusual attitudes and how to recover from them;
  - (4) how to teach the student pilot to fly steep turns or circles; and
  - (5) how to analyse and correct errors as necessary.
- (d) Debriefing

**Note (exercises 15a to 15c):** If the weather conditions during the instructor training course do not allow the practical training of soaring techniques, all items of the air exercises have to be discussed and explained during a long briefing exercise only.

**Exercise 15a: Soaring techniques: thermalling**

(a) Objective

To advise the student instructor on how to teach the student to recognise and detect thermals, on how to join a thermal and on how to look out, in order to avoid mid-air collisions. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the look-out procedures;
- (2) the detection and recognition of thermals;
- (3) the use of audio soaring instruments;
- (4) the procedure for joining a thermal and giving way;
- (5) how to fly in close proximity to other sailplanes;
- (6) how to centre in thermals; and
- (7) how to leave thermals.

(c) Air exercise

The student instructor has to demonstrate:

- (1) the look-out procedures;
- (2) the detection and recognition of thermals;
- (3) the use of audio soaring instruments;

- (4) the procedure for joining a thermal and giving way;
  - (5) the procedure for flying in close proximity to other sailplanes;
  - (6) the centring in thermals;
  - (7) the procedure for leaving thermals;
  - (8) how to improve the student pilot's ability to recognise and detect thermals;
  - (9) how to improve the student pilot's ability to join a thermal and how to look out; and
  - (10) how to analyse and correct errors as necessary.
- (d) Debriefing

**Exercise 15b: Soaring techniques: ridge flying**

(a) Objective

To advise the student instructor on how to teach the student to fly safely on ridges, to control their speed, and to apply the rules in order to avoid mid-air collisions. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

(b) Briefing

The student instructor has to explain:

- (1) the look-out procedures;
- (2) the ridge flying rules;
- (3) the recognition of safe and adequate flight path; and
- (4) speed control.

(c) Air exercise (if applicable during training and, if possible, at training site)

The student instructor has to demonstrate:

- (1) the look-out procedures;
- (2) the practical application of ridge flying rules;
- (3) the recognition of safe and adequate flight path;
- (4) speed control;
- (5) how to teach the student pilot to fly safely on ridges; and
- (6) how to analyse and correct errors as necessary.

(d) Debriefing

**Exercise 15c: Soaring techniques: wave flying**

(a) Objective

To advise the student instructor on how to introduce students to wave flying and to teach them to fly safely at high altitude. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.

- (b) Briefing
- The student instructor has to explain:
- (1) the look-out procedures;
  - (2) the techniques to be used to access a wave;
  - (3) the speed limitations with increasing height; and
  - (4) the risks of hypoxia and the use of oxygen.
- (c) Air exercise (if applicable during training and if possible at training site)
- The student instructor has to demonstrate:
- (1) the look-out procedures;
  - (2) the wave access techniques;
  - (3) the speed limitations with increasing height;
  - (4) the use of oxygen (if available);
  - (5) how to improve the student pilot's ability to recognise and detect waves;
  - (6) how to teach the student pilot to fly safely in a wave; and
  - (7) how to analyse and correct errors as necessary.
- (d) Debriefing

### Exercise 16: Out-landings

Note: If the weather conditions during the instructor training do not allow the practical training of out-landing procedures (a TMG may be used), all items of the air exercise have to be discussed and explained during a long briefing exercise only. Instructors may only teach the safe out-landing exercise after they have demonstrated the practical ability to do so.

- (a) Objective
- To advise the student instructor on how to teach students to select an out-landing field, to fly the circuit and how to master the unusual landing situation. Furthermore, the student instructor should learn how to identify student errors and how to correct them properly.
- (b) Briefing
- The student instructor has to explain:
- (1) the gliding range at max glide ratio;
  - (2) the engine re-start procedures (only for self-launching and self-sustaining sailplanes);
  - (3) the selection of a landing area;
  - (4) the circuit judgement and key positions;
  - (5) the circuit and approach procedures; and
  - (6) the actions to be performed after landing.

- (c) Air exercise
- The student instructor has to demonstrate:
- (1) precision landings on the airfield;
  - (2) the gliding range;
  - (3) the procedures for joining, arrival and circuit at a remote aerodrome;
  - (4) the selection of an out-landing area;
  - (5) the procedures for circuit and approach on an out-landing field;
  - (6) the actions to be performed after landing.
- The student instructor also has to be trained on:
- (7) how to advise the student pilot to do perform a safe out-landing;
  - (8) how to master an unusual landing situation; and
  - (9) how to analyse and correct errors as necessary.
- (d) Debriefing

**Note (Exercises 17a to 17c):** If the weather conditions during the instructor training do not allow a cross-country training flight, the items of the air exercise have to be discussed and explained during a long briefing exercise only.

**Exercise 17a: Flight planning**

- (a) Objective
- To advise the student instructor on how to plan and prepare a cross-country flight.
- (b) Briefing
- The student instructor has to explain:
- (1) the weather forecast and current situation;
  - (2) the selection of the amount of water to be carried as a function of the weather forecast;
  - (3) the method for selecting a task, taking into account the average speed to be expected;
  - (4) the map selection and preparation;
  - (5) the NOTAMs and airspace considerations;
  - (6) the radio frequencies (if applicable);
  - (7) the pre-flight administrative procedures;
  - (8) the procedure for filing an ICAO flight plan where required; and
  - (9) alternate aerodromes and landing areas.
- (c) Debriefing

**Exercise 17b: In-flight navigation**

## (a) Objective

To advise the student instructor on how to teach performing a cross-country flight.

## (b) Briefing

The student instructor has to explain:

- (1) how to maintain track and re-route if necessary;
- (2) the altimeter settings;
- (3) the use of radio and phraseology;
- (4) the in-flight planning;
- (5) the procedures for transiting regulated airspace or ATC liaison where required;
- (6) the procedure in case of uncertainty of position; and
- (7) the procedure in case of becoming lost;

## (c) Air exercise

The student instructor has to demonstrate:

- (1) maintaining track and re-routing if necessary;
- (2) altimeter settings;
- (3) the use of radio and phraseology;
- (4) in-flight planning;
- (5) procedures for transiting regulated airspace or ATC liaison where required;
- (6) uncertainty of position procedure;
- (7) lost procedure;
- (8) use of additional equipment where required;
- (9) joining, arrival and circuit procedures at remote aerodrome;
- (10) how to teach the student pilot to perform a cross-country flight; and
- (11) how to analyse and correct errors as necessary.

## (d) Debriefing

**Exercise 17c: Cross-country soaring techniques**

## (a) Objective

To advise the student instructor on the techniques for an efficient cross-country flight.

## (b) Briefing

The student instructor has to explain:

- (1) the speed to fly at maximal glide ratio;

- (2) the speed to fly to maximise the cruise speed (MacCready theory);
  - (3) how to select the optimal track (efficient use of cloud streets, etc.);
  - (4) how to calculate the final glide; and
  - (5) how to perform a safe out-landing.
- (c) Air exercise
- The student instructor has to demonstrate:
- (1) a cross-country flight;
  - (2) the selection of the optimal track (efficient use of cloud streets, etc.);
  - (3) methods for determining optimal speed to fly;
  - (4) use of final glide computers;
  - (5) how to reduce risk and to react to potential dangers;
  - (6) how to plan and perform an out-landing;
  - (7) how to teach the student pilot techniques for an efficient cross-country flight; and
  - (8) how to analyse and correct errors as necessary.
- (d) Debriefing
- (vi) Additional training elements for TMG instructional privileges as per point SFCL.330(b)(2))

Additional training for TMG instructional privileges should include, following the principles of briefing, exercise and debriefing as established in points (b)(2)(ii) and (b)(2)(v), the training syllabus set out in point (c) of AMC1 SFCL.150(b).

## AMC1 SFCL.345 FI(S) — Assessment of competence

### GENERAL

- (a) The format and application form for the assessment of competence are determined by the competent authority.
- (b) The sailplane that is used for the assessment should meet the requirements for training aircraft.
- (c) The FE(S) acts as the PIC.
- (d) During the skill test the applicant occupies the seat normally occupied by the instructor. The FE(S) functions as the 'student'. The applicant is required to explain the relevant exercises and to demonstrate their conduct to the 'student', where appropriate. Thereafter, the 'student' executes the same manoeuvres which can include typical mistakes of inexperienced students. The applicant is expected to correct mistakes orally or, if necessary, by intervening physically.
- (e) All relevant exercises should be completed within a period of 6 months. However, all exercises should, where possible, be completed on the same day. In principle, failure in any exercise requires a retest covering all exercises, with the exception of those that may be retaken separately. The FE(S) may terminate the assessment at any stage if they consider that a retest is required.



## AMC2 SFCL.345 FI(S) — Assessment of competence

### CONTENT OF THE ASSESSMENT OF COMPETENCE

(a) The content of the assessment of competence for the FI(S) should be the following:

#### SECTION 1: ORAL THEORETICAL KNOWLEDGE EXAMINATION

1.1	Air law
1.2	Aircraft general knowledge
1.3	Flight performance and planning
1.4	Human performance and limitations
1.5	Meteorology
1.6	Navigation
1.7	Operational procedures
1.8	Principles of flight
1.9	Training administration

#### SECTION 2: PRE-FLIGHT BRIEFING

2.1	Visual presentation
2.3	Technical accuracy
2.4	Clarity of explanation
2.5	Clarity of speech
2.6	Instructional technique
2.7	Use of models and aids
2.8	Student participation

#### SECTION 3: FLIGHT

3.1	Arrangement of demonstration
3.2	Synchronisation of speech with demonstration
3.3	Correction of faults
3.4	Aircraft handling
3.5	Instructional technique
3.6	General airmanship and safety
3.7	Positioning and use of airspace

#### SECTION 4: POST-FLIGHT DE-BRIEFING

4.1	Visual presentation
4.2	Technical accuracy
4.3	Clarity of explanation
4.4	Clarity of speech
4.5	Instructional technique
4.6	Use of models and aids
4.7	Student participation

(b) Section 1, the oral theoretical knowledge examination part of the assessment of competence, is divided into two parts:

- (1) The applicant is required to give a lecture under test conditions to other 'student(s)', one of whom will be the FE(S). The test lecture is to be selected from items of Section 1. The amount of time for preparation of the test lecture is agreed upon beforehand with the FE(S). Appropriate literature may be used by the applicant. The test lecture should not exceed 45 minutes.
- (2) The applicant is tested orally by an FE(S) for knowledge of items of Section 1 and the core instructor competencies (teaching and learning content given in the FI(S) training course).
- (c) Sections 2, 3 and 4 comprise exercises to demonstrate the ability to be an FI(S) (for example, instructor demonstration exercises) chosen by the FE(S) from the flight syllabus of the FI(S) training course. The applicant is required to demonstrate FI(S) abilities, including briefing, flight instruction and de-briefing.

### AMC3 SFCL.345 FI(S) — Assessment of competence

#### APPLICATION AND REPORT FORM FOR THE FI(S) ASSESSMENT OF COMPETENCE

APPLICATION AND REPORT FORM FOR THE FI(S) ASSESSMENT OF COMPETENCE		
I hereby apply for the issue of a flight instructor certificate for sailplanes (FI(S)) in accordance with Annex III (Part-SFCL) to Regulation (EU) 2018/1976.		
<b>1 Applicant's personal particulars</b>		
Applicant's last name(s):		First name(s):
Date of birth:	Telephone:	Email:
Address:		Country:
Date:	Signature of the applicant:	
<b>2 Licence details</b>		
Licence number (SPL):		
Additional privileges: (tick as applicable)	<input type="checkbox"/> TMG extension <input type="checkbox"/> TMG night rating <input type="checkbox"/> Advanced aerobatic privileges	<input type="checkbox"/> Sailplane cloud flying privileges <input type="checkbox"/> Sailplane towing rating <input type="checkbox"/> Banner towing rating
Launching methods: (tick as applicable)	<input type="checkbox"/> Aero tow launch <input type="checkbox"/> Winch launch	<input type="checkbox"/> Bungee launch <input type="checkbox"/> Self-launch
<b>3 Pre-course flying experience</b>		
	Sailplanes	TMG
PIC hours:		
Total hours:		

Number of launches / take-offs:	Aero tow launch:		
	Winch launch:		
<b>4 Pre-entry assessment</b>			
<i>I recommend .....for the FI(S) course.</i>			
Name of ATO/DTO:		Date of pre-entry assessment:	
Name (capital letters) of HT of the ATO/DTO:			
Name (capital letters), licence number and signature of the FI(S) conducting the flight assessment (if applicable):			
<b>5 Declaration by the ATO/DTO</b>			
<i>I certify that ..... has satisfactorily completed an approved course of training for the FI(S) certificate in accordance with the relevant syllabus.</i>			
Flying hours during the course:		Take-offs during the course:	
Sailplanes, powered sailplanes or TMGs used:			
Name(s) of HT:			
Signature:			
Name of ATO/DTO:			
<b>FROM HERE TO BE COMPLETED BY THE EXAMINER</b>			
<b>6 Result of the assessment of competence</b>			
Oral theoretical knowledge examination:	<input type="checkbox"/> Passed <input type="checkbox"/> Partially passed <input type="checkbox"/> Failed	Practical part:	<input type="checkbox"/> Passed <input type="checkbox"/> Partially passed <input type="checkbox"/> Failed
Reasons and details in case of fail or partial pass/other remarks as necessary:			
In case of fail: (tick as applicable)	<input type="checkbox"/> <i>I recommend further ground training before retest.</i> <input type="checkbox"/> <i>I recommend further flight training with an FI(S) before retest.</i> <input type="checkbox"/> <i>I do not consider further flight or theoretical instruction necessary before retest.</i>		
I, the undersigning examiner: <ul style="list-style-type: none"> <li>- have received information from the applicant regarding their experience and instruction, and found that experience and instruction comply with the applicable requirements of Annex III (Part-SFCL) to Regulation (EU) 2018/1976;</li> <li>- confirm that all the required manoeuvres and exercises have been completed, unless specified otherwise above in the case of fail; and</li> <li>- where applicable, have reviewed and applied the national procedures and requirements of the applicant's competent authority which is different from the competent authority that issued my examiner certificate.</li> </ul>			

Examiner's certificate number:	Examiner's SPL number:
Examiner's name (capital letters):	Date and examiner's signature:
<b>7 Attachments</b>	
Detailed report as per AMC2 SFCL.345 to be attached	
Copy of the FE(S) certificate (in cases where the competent authority of the applicant is different from the competent authority of the examiner)	

## AMC1 SFCL.360(a)(1)(i) FI(S) certificate — Recency requirements

### INSTRUCTOR REFRESHER TRAINING

- (a) The FI(S) refresher training should be held in the form of a seminar. Such seminars made available in Member States should have due regard to geographical location, number of participants, and frequency throughout the territory of the Member State concerned.
- (b) Such seminars should run for at least 1 day (with a minimum of 6 hours of teaching time), and attendance from participants will be required for the whole duration of the seminar including breakout groups and workshops. Different aspects, such as inclusion of participants holding certificates in other categories of aircraft should be considered.
- (c) Some experienced FI(S)s currently involved with flying training and with a practical understanding of the recency requirements and the current instructional techniques should be included as speakers at these seminars.
- (d) The attendance form will be completed and signed by the organiser of the seminar as approved by the competent authority, following attendance and satisfactory participation by the FI(S).
- (e) The content of the FI(S) refresher seminar should be selected from the following:
  - (1) new or current rules or regulations, with emphasis on knowledge of Part-SFCL and operational requirements;
  - (2) teaching and learning;
  - (3) instructional techniques;
  - (4) the role of the instructor;
  - (5) national regulations (as applicable);
  - (6) human factors;
  - (7) flight safety, incident and accident prevention;
  - (8) airmanship;
  - (9) legal aspects and enforcement procedures;
  - (10) navigational skills including new or current radio navigation aids;
  - (11) teaching sailplane cloud flying (if applicable);
  - (12) weather-related topics including methods of distribution; and
  - (13) any additional topic selected by the competent authority.

- (f) Formal sessions should allow for a presentation time of 45 minutes, with 15 minutes for questions. The use of visual aids is recommended, with interactive video and other teaching aids (where available) for breakout groups and workshops.

### **GM1 SFCL.360(a)(1)(i) FI(S) certificate — Recency requirements**

#### **FREQUENCY OF INSTRUCTOR REFRESHER TRAINING**

In order to maintain instructor privileges, point SFCL.360(a)(1)(i) requires FI(S) certificate holders to complete instructor refresher training once in 3 years. However, ATOs or DTOs may decide to provide more frequent internal standardisation/refresher training to their instructors.

### **AMC1 SFCL.360(a)(2) FI(S) certificate — Recency requirements**

#### **DEMONSTRATION OF ABILITY TO INSTRUCT**

- (a) The aim of the demonstration flight as per point SFCL.360(a)(2) is to confirm continued instructor competency.
- (b) The demonstration flight should be arranged to ensure that the FI(S) being checked demonstrates, on the ground and during at least one flight, knowledge, skills and attitudes relevant to the FI(S) task including at least all of the following:
- (1) technical knowledge;
  - (2) ability to teach a sample of the ground course subjects and air exercises from the SPL training course;
  - (3) a sufficiently high standard of flying;
  - (4) application of instructing principles; and
  - (5) application of TEM.
- (c) The checking instructor should enter the successful completion of the demonstration flight into the logbook of the applicant.

### **GM1 SFCL.405 Limitation of privileges in case of vested interests**

Examples of a situation where the examiner should consider if their objectivity is affected are when the applicant is a relative or a friend of the examiner, or when they are linked by economic interests or political affiliations, etc.

### **GM1 SFCL.405(a) Limitation of privileges in case of vested interests**

#### **EXAMINERS WHO PROVIDED INSTRUCTION TO THE CANDIDATE**

Point SFCL.405(a) allows an examiner to have been involved, as flight instructor, into 50 % of the candidate's flight instruction. It is recommended that in such cases that 50 % should be spread

throughout the course, and not performed towards the end of the course. ATOs and DTOs should plan and arrange assignments between instructors and students appropriately.

## AMC1 SFCL.410(b)(3) Conduct of skill tests, proficiency checks and assessments of competence

### APPLICATION AND REPORT FORM FOR THE SPL SKILL TEST OR PROFICIENCY CHECK

APPLICATION AND REPORT FORM FOR THE SPL SKILL TEST OR PROFICIENCY CHECK			
<i>Tick as applicable</i>	I hereby, in accordance with Annex III (Part-SFCL) to Regulation (EU) 2018/1976: <ul style="list-style-type: none"> <li><input type="checkbox"/> apply for the issue of a sailplane pilot licence (SPL).</li> <li><input type="checkbox"/> report the completion of a proficiency check for SPL — recency.</li> <li><input type="checkbox"/> report the completion of a proficiency check for sailplane cloud flying — recency.</li> </ul>		
<b>1 Applicant's personal particulars:</b>			
Applicant's last name(s):		First name(s):	
Date of birth:	Telephone:	Email:	
Address:		Country:	
Date:		Signature:	
<b>2 Licence details</b>			
Licence number (if applicable):			
Privileges: <i>(tick as applicable)</i>	<input type="checkbox"/> Sailplanes <input type="checkbox"/> TMGs		
<b>FROM HERE TO BE COMPLETED BY THE EXAMINER</b>			
<b>3 Details of the skill test/proficiency check flight</b>			
Date:		Sailplane/powered sailplane/TMG:	Registration:
<u>Aerodrome or site:</u>	<u>Take-off time:</u>	<u>Landing time:</u>	<u>Flight time:</u>

			Total flight time:
<b>4</b>	<b>Result of the test or check</b>		
Skill test/proficiency check details (including information on oral theoretical knowledge examination, where applicable):			
Passed <input type="checkbox"/>		Partially passed <input type="checkbox"/>	Failed <input type="checkbox"/>
<b>5</b>	<b>Remarks</b>		
Reasons and details in case of fail or partial pass/other remarks as necessary:			
<b>6</b>	<b>Examiner's declarations and details</b>		
I, the undersigning examiner:			
<ul style="list-style-type: none"> <li>- have received information from the applicant regarding their experience and instruction, and found that experience and instruction comply with the applicable requirements of Annex III (Part-SFCL) to Regulation (EU) 2018/1976;</li> <li>- confirm that all the required manoeuvres and exercises have been completed, unless specified otherwise above in the case of fail or partial pass;</li> <li>- where applicable, have reviewed and applied the national procedures and requirements of the applicant's competent authority which is different from the competent authority that issued my examiner certificate.</li> </ul>			
Examiner's certificate number:		Examiner's SPL number:	
Examiner's name (capital letters):		Date and examiner's signature:	
<b>7</b>	<b>Attachments</b>		
Detailed report of skill test or proficiency check as per AMC1 SFCL.145 to be attached			
Copy of the FE(S) certificate (in cases where the competent authority of the applicant is different from the competent authority of the examiner)			

## AMC1 SFCL.415(c)(2) FE(S) certificate — Privileges and conditions

### SPECIFIC TRAINING FOR EXAMINER PRIVILEGES RELATED TO THE FI(S) CERTIFICATE

Specific training for examiner privileges related to the FI(S) certificate should:

- (a) be completed under the supervision of an FE(S) who holds the privileges in accordance with point SFCL.415(c); and
- (b) include at least all of the following:
  - (1) the requirements of Part-SFCL for the FI(S) certificate;
  - (2) the contents of AMC1 SFCL.345, AMC2 SFCL.345 and AMC3 SFCL.345; and

- (3) the conduct of one assessment of competence for the FI(S) certificate which, if conducted during an initial examiner standardisation course in accordance with point SFCL.430, should be completed in addition to the skill test or proficiency check for the SPL, as required by point SFCL.430(b)(1).

## AMC1 SFCL.420(d) FE(S) certificate — Prerequisites and requirements

### EVALUATION OF THE RELEVANT BACKGROUND OF AN APPLICANT

When evaluating the applicant's background, the competent authority should evaluate the personality and character of the applicant, and their cooperation with the competent authority. The competent authority may also take into account whether the applicant has been convicted of any relevant criminal or other offenses, taking into account national law and principles of non-discrimination.

## AMC1 SFCL.430 FE(S) certificate — Standardisation course

### (a) GENERAL

- (1) When issuing an approval for the conduct of FE(S) standardisation courses to an ATO or a DTO, the competent authority should monitor the execution of these courses through appropriate oversight measures.
- (2) An FE(S) standardisation course should last at least 1 day, divided into theoretical and practical training.
- (3) The competent authority, the ATO or the DTO should determine any further training required before presenting the candidate for the examiner assessment of competence.

### (b) CONTENT

- (1) Theoretical training
  - (i) The theoretical training should cover at least:
    - (A) the contents of AMC2 SFCL.430 and the flight examiner manual (FEM);
    - (B) Part-SFCL and the related AMC and GM that are relevant to their duties;
    - (C) operational requirements and the related AMC and GM that are relevant to their duties;
    - (D) national requirements that are relevant to their examination duties;
    - (E) fundamentals of human performance and limitations that are relevant to flight examination;
    - (F) fundamentals of evaluation that are relevant to an applicant's performance; and
    - (G) the management system of ATOs and the organisational structure of DTOs;
  - (ii) Examiners should also be briefed on the protection requirements for personal data, liability, accident insurance and fees, as applicable in the Member State concerned.



- (iii) All items above are the core knowledge requirements for an examiner and are recommended as the core course material. This core course material may be studied before the recommended examiner training is commenced. The core course may utilise any suitable training format.
- (2) Practical training
  - (i) Practical training should include at least:
    - (A) knowledge and management of the test for which the certificate is to be sought. These are described in the relevant modules in the FEM; and
    - (B) knowledge of the administrative procedures pertaining to that test or check.
  - (ii) For an initial examiner certificate, practical training should include the examination of the test profile sought, consisting of the conduct of at least two test or check profiles in the role of an examiner, including briefing, conduct of the skill test and proficiency check, assessment of the applicant to whom the test or check is given, debriefing and recording or documentation under the supervision of an examiner.

## AMC2 SFCL.430 FE(S) certificate — Standardisation course

### STANDARDISATION ARRANGEMENTS FOR EXAMINERS

- (a) General
  - (1) An examiner should allow an applicant adequate time to prepare for a test or check.
  - (2) An examiner should plan a test or check flight so that all required exercises can be performed while allowing sufficient time for each of the exercises and with due regard to the weather conditions, traffic situation, ATC requirements and local procedures.
- (b) Purpose of a test or check
  - (1) Determination through practical demonstration during a test or check that an applicant has acquired or maintained the required level of knowledge and skill or proficiency.
  - (2) Improvement of training and flight instruction in ATOs or DTOs through feedback from examiners about items or sections of tests or checks that are most frequently failed.
  - (3) Assistance in maintaining and, where possible, improving air safety standards by having examiners display good airmanship and flight discipline during tests or checks.
- (c) Conduct of a test or check
  - (1) An examiner will ensure that an applicant completes a test or check in accordance with the Part-SFCL requirements and is assessed against the required test or check standards.
  - (2) Each item within a test or check section should be completed and assessed separately. The test or check schedule, as briefed, should normally not be altered by an examiner.
  - (3) A marginal or questionable performance of a test or check item should not influence an examiner's assessment of any subsequent items.
  - (4) An examiner should verify the requirements and limitations of a test or check with an applicant during the pre-flight briefing.
  - (5) When a test or check is completed or discontinued, an examiner should debrief the applicant and give reasons for items or sections failed. In case of a failed or discontinued

skill test and proficiency check, the examiner should provide appropriate advice to assist the applicant in retests or rechecks.

- (6) Any comment on, or disagreement with, an examiner's test or check evaluation or assessment made during a debriefing will be recorded by the examiner on the test or check report, and will be signed by the examiner and countersigned by the applicant.

(d) Examiner preparation

- (1) An examiner should supervise all aspects of the test or check flight preparation, including, where necessary, obtaining or assuring an ATC clearance/liaison.
- (2) An examiner will plan a test or check in accordance with the Part-SFCL requirements. Only the manoeuvres and procedures set out in the appropriate test or check form will be undertaken. The same examiner should not re-examine a failed applicant without the agreement of the applicant.

(e) Examiner approach

An examiner should encourage a friendly and relaxed atmosphere both before and during a test or check flight. A negative or hostile approach should not be used. During the test or check flight, the examiner should avoid negative comments or criticisms and all assessments should be reserved for the debriefing.

(f) Assessment system

Although test or checks may specify flight test tolerances, an applicant should not be expected to achieve these at the expense of smoothness or stable flight. An examiner should make due allowance for unavoidable deviations due to turbulence, ATC instructions, etc. An examiner should terminate a test or check only either when it is clear that the applicant has not been able to demonstrate the required level of knowledge, skill or proficiency and that a full retest will be necessary or for safety reasons. An examiner will use one of the following terms for assessment:

- (1) a 'pass' provided that the applicant demonstrates the required level of knowledge, skill or proficiency and, where applicable, remains within the flight test tolerances for the licence or rating;
- (2) a 'fail' provided that any of the following apply:
  - (i) the flight test tolerances have been exceeded after the examiner has made due allowance for turbulence or ATC instructions;
  - (ii) the aim of the test or check is not met;
  - (iii) the aim of exercise is met but at the expense of safe flight, violation of a rule or regulation, poor airmanship or rough handling;
  - (iv) an acceptable level of knowledge is not demonstrated;
  - (v) an acceptable level of flight management is not demonstrated; and
  - (vi) the intervention of the examiner is required in the interest of safety; and
- (3) a 'partial pass' in accordance with the criteria shown in the relevant skill test appendix to Part-SFCL.

(g) Method and contents of the test or check

- (1) Before undertaking a test or check, an examiner will verify that the sailplane intended to be used is suitable and appropriately equipped for the test or check. Aircraft that fall under points (a), (b), (c), or (d) of Annex I to the Basic Regulation can be used, provided

that they are subject to an authorisation as per point ORA.ATO.135 of Annex VII (Part-ORA) or point DTO.GEN.240 of Annex VIII (Part-DTO) to Regulation (EU) No 1178/2011.

- (2) A test or check flight will be conducted in accordance with the AFM.
- (3) A test or check flight will be conducted within the limitations contained in the operations manual of an ATO, or, if available, within the limitations placed by the DTO.
- (4) Contents

A test or check is comprised of:

  - (i) oral examination on the ground (where applicable) which should include:
    - (A) sailplane general knowledge and performance;
    - (B) planning and operational procedures;
    - (C) theoretical knowledge in the common subjects as per point SFCL.135(a)(1) in cases where the applicant receives a credit in accordance with point SFCL.140(a), based on a licence the privileges of which were not exercised for more than 2 years; and
    - (D) other relevant items or sections of the test or check;
  - (ii) pre-flight briefing which should include:
    - (A) test or check sequence;
    - (B) safety considerations.
  - (iii) in-flight exercises which should include each relevant item or section of the test or check; and
  - (iv) post-flight debriefing which should include:
    - (A) assessment or evaluation of the applicant;
    - (B) documentation of the test or check with the applicant's FI(S) present, if possible.
- (5) A test or check is intended to simulate a practical flight. Thus, an examiner may set practical scenarios for an applicant while ensuring that the applicant is not confused and air safety is not compromised.
- (6) When manoeuvres are to be flown by sole reference to instruments (proficiency check for sailplane cloud flying privileges), the examiner should ensure that a suitable method of screening is used to simulate flying in cloud.
- (7) An examiner should maintain a flight log and assessment record during the test or check for reference during the post-flight debriefing.
- (8) An examiner should be flexible with regard to the possibility of changes arising to pre-flight briefings due to ATC instructions, or other circumstances affecting the test or check.
- (9) Where changes arise to a planned test or check, an examiner should be satisfied that the applicant understands and accepts the changes. Otherwise, the test or check flight should be terminated.
- (10) Should an applicant choose not to continue a test or check for reasons considered inadequate by an examiner, the applicant will be assessed as having failed those items or sections not attempted. If the test or check is terminated for reasons considered adequate by the examiner, only these items or sections not completed will be tested during a subsequent test or check.

- (11) An examiner may terminate a test or check at any stage, if it is considered that the applicant's competency requires a complete retest or recheck.

## GM1 SFCL.430 FE(S) certificate — Standardisation course

### PLANNING OF TESTS AND CHECKS

- (a) An FE(S) should plan per day not more than:
- (1) a total of four skill tests or proficiency checks for the SPL; or
  - (2) a total of two assessments of competence for the FI(S) or FE(S) certificate.
- (b) An FE(S) should plan at least 2 hours for a skill test, proficiency check or assessment of competence, including pre-flight briefing and preparation, conduct of the test, check or assessment of competence, de-briefing, evaluation of the applicant and documentation.
- (c) The flight time for the skill test, proficiency check or assessment of competence must be sufficient to allow that all the test, check or assessment items can be completed. If this is not possible in one flight, additional flights have to be conducted. For the total duration of the flight time for the skill test, proficiency check or assessment of competence, the following values may be used as guidance:
- (1) 30 minutes or three launches or take-offs, as applicable, for an SPL skill test or proficiency check;
  - (2) 45 minutes or four launches or take-offs, as applicable, for an FI(S) assessment of competence.

## AMC1 SFCL.445 FE(S) certificate — Assessment of competence

(a) GENERAL

The competent authority may nominate either one of its inspectors or a senior examiner to assess the competence of applicants for the FE(S) certificate.

(b) DEFINITIONS

- (1) 'Inspector/senior examiner': the inspector of the competent authority or the senior examiner who is conducting the examiner competence assessment.
- (2) 'Examiner applicant': the person seeking certification as an examiner.
- (3) 'Candidate': the inspector/senior examiner who, for the purpose of conducting the assessment of competence, plays the role of a person being tested or checked by the examiner applicant.

(c) CONDUCT OF THE ASSESSMENT

An inspector/senior examiner will observe all examiner applicants conducting a test on a 'candidate' in a sailplane for which examiner certificate is sought. Items from the related training course and test or check schedule will be selected by the inspector/senior examiner for examination of the 'candidate' by the examiner applicant. Having agreed with the inspector/senior examiner the content of the test, the examiner applicant will be expected to manage the entire test. This will include briefing, the conduct of the flight, assessment and debriefing of the 'candidate'. The inspector/senior examiner will discuss the assessment with the examiner applicant before the 'candidate' is debriefed and informed of the result.

(d) BRIEFING THE 'CANDIDATE'

- (1) The 'candidate' should be given time and facilities to prepare for the test flight. The briefing should cover the following:
- (i) the objective of the flight;
  - (ii) licensing checks, as necessary;
  - (iii) freedom for the 'candidate' to ask questions;
  - (iv) operating procedures to be followed;
  - (v) weather assessment;
  - (vi) operating capacity of 'candidate' and examiner;
  - (vii) aims to be identified by 'candidate';
  - (viii) simulated weather assumptions (for example, wind speed and visibility cloud base);
  - (ix) use of screens (if applicable);
  - (x) contents of the exercise to be performed;
  - (xi) agreed speed and handling parameters (e.g. maximum launch speeds);
  - (xii) use of R/T;
  - (xiii) respective roles of 'candidate' and examiner (for example, during emergency); and
  - (xiv) administrative procedures (for example, submission of a flight plan).
- (2) The examiner applicant should maintain the necessary level of communication with the 'candidate'. The following check details should be followed by the examiner applicant:
- (i) the need to give the 'candidate' precise instructions;
  - (ii) responsibility for the safe conduct of the flight;
  - (iii) intervention by the examiner, when necessary;
  - (iv) use of screens;
  - (v) liaison with ATC (where required) and the need for concise, easily understood intentions;
  - (vi) prompting the 'candidate' about required sequence of events (for example, following a launch failure); and
  - (vii) keeping brief, factual and unobtrusive notes.

(e) ASSESSMENT

The examiner applicant should refer to the flight test tolerances given in the relevant skill test. Attention should be paid to the following points:

- (1) questions from the 'candidate';
- (2) giving the results of the test and any sections failed; and
- (3) giving the reasons for failure.

(f) DEBRIEFING

The examiner applicant should demonstrate to the inspector the ability to conduct a fair, unbiased debriefing of the 'candidate' based on identifiable factual items. A balance between

friendliness and firmness should be evident. The following points should be discussed with the 'candidate', at the applicant's discretion:

- (1) advising the candidate on how to avoid or correct mistakes;
- (2) mentioning any other points of criticism noted;
- (3) giving any advice considered helpful.

(g) **RECORDING OR DOCUMENTATION**

The examiner applicant should demonstrate to the inspector the ability to complete the relevant records correctly. These records may be:

- (1) the relevant test or check form;
- (2) the licence entry; and
- (3) the notification of failure form.

(h) **DEMONSTRATION OF THEORETICAL KNOWLEDGE**

The examiner applicant should demonstrate to the inspector a satisfactory knowledge of the regulatory requirements associated with the function of an examiner.

## **AMC1 SFCL.445; SFCL.460 FE(S) certificate — Assessment of competence; FE(S) certificate — Validity, revalidation and renewal**

### **QUALIFICATION OF SENIOR EXAMINERS**

- (a) A senior examiner specifically tasked by the competent authority to observe skill tests or proficiency checks for the revalidation of examiner certificates should:
  - (1) hold a valid or current examiner certificate appropriate to the privileges being granted;
  - (2) have examiner experience level acceptable to the competent authority;
  - (3) have conducted a number of skill tests or proficiency checks as an FE(S).
- (b) The competent authority may conduct a pre-assessment of the applicant or candidate carrying out a skill test and proficiency check under the supervision of an inspector of the competent authority.
- (c) Applicants should be required to attend a senior examiner briefing, course or seminar arranged by the competent authority. The content and duration will be determined by the competent authority and should include:
  - (1) pre-course self-study;
  - (2) legislation;
  - (3) the role of the senior examiner;
  - (4) an examiner assessment; and
  - (5) national administrative requirements.
- (d) The validity of the authorisation should not exceed the validity of the examiner's certificate, and in any case should not exceed 5 years. The authorisation may be revalidated in accordance with procedures established by the competent authority.

## AMC1 SFCL.460(b)(1) FE(S) certificate — Validity, revalidation and renewal

### EXAMINER REFRESHER COURSE

An FE(S) refresher course should be organised as a seminar that follows the content of the examiner standardisation course set out in AMC1 SFCL.430.

## AMC1 SFCL.460(b)(2) FE(S) certificate — Validity, revalidation and renewal

### DEMONSTRATION OF ABILITY TO CONDUCT SKILL TESTS, PROFICIENCY CHECKS AND ASSESSMENTS OF COMPETENCE

For the demonstration of the ability to conduct skill tests, proficiency checks and assessments of competence during a sailplane flight, the supervision by the senior examiner or the inspector from the competent authority may consist of:

- (a) monitoring of briefing, de-briefing as well as observing the flight from the ground; or
- (b) a role-played event where the senior examiner or the inspector from the competent authority will act as an 'examiner applicant' who is assessed by the applicant for revalidation or renewal of the examiner certificate.