

II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2018/1974

of 14 December 2018

amending Regulation (EU) No 1178/2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EU) 2018/1139 of the European Parliament and of the Council

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulation (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 ⁽¹⁾, and in particular Article 23 thereof,

Whereas:

- (1) Commission Regulation (EU) No 1178/2011 ⁽²⁾ lays down technical requirements for the certification of flight simulation training devices, the certification of pilots involved in the operation of certain aircraft, and the certification of persons and organisations involved in the pilot training, testing and checking.
- (2) Since the last decade, aeroplane upset or loss of control have been identified among the major risk factors that could lead to fatal accidents in commercial air transport operations and its prevention became a strategic priority in Europe ⁽³⁾ and at a global level. This included new training requirements to better prepare pilots for adverse situations of aircraft upset and loss of control.
- (3) By Commission Regulation (EU) 2015/445 ⁽⁴⁾, the existing training requirements for commercial pilots were updated to include upset prevention and recovery training (UPRT) as a mandatory constituent of the theoretical knowledge of pilots. Further detailed training elements and training objectives are needed to improve pilot competencies for both prevention of and recovery from aeroplane upsets that can lead to a loss of control and, eventually, to a fatal accident.
- (4) UPRT needs to be integrated at various stages of a professional pilot's career and should be reflected in the privileges stated in the individual pilot licence. A well-developed and well-maintained competence of professional

⁽¹⁾ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1).

⁽²⁾ Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1).

⁽³⁾ European Plan for Aviation Safety 2018-2022, pt. 5.3.1, p. 33.

⁽⁴⁾ Commission Regulation (EU) 2015/445 of 17 March 2015 amending Regulation (EU) No 1178/2011 as regards technical requirements and administrative procedures related to civil aviation aircrew (OJ L 74, 18.3.2015, p. 1).

pilots in upset prevention and recovery should be ensured. UPRT should become a mandatory part of the multi-crew pilot licence (MPL) training course and the integrated training course for airline transport pilots for aeroplanes (ATP(A)) and a training course for a commercial pilot licence for aeroplanes (CPL(A)) as well as for class and type-ratings for single-pilot aeroplanes operated in multi-pilot operations, single-pilot non-high-performance complex, high-performance complex aeroplanes and multi-pilot aeroplanes ratings. In order to allow pilots to develop advanced competencies in upset prevention and recovery, the relevant training course should include related air exercises in an aeroplane.

- (5) Further to the introduction of the new course related to the development of advanced pilot competencies in upset prevention and recovery, the requirements for instructor certificates should be revised in order to ensure that persons instructing on this course are appropriately qualified.
- (6) This Regulation reflects the provisions adopted by the International Civil Aviation Organisation (ICAO) in 2014 on UPRT for multi-crew pilot licences and for multi-pilot aeroplane type ratings through the amendment to Annex 1 to the Chicago Convention on Personnel Licensing.
- (7) It is in the interest of aviation safety that the new UPRT elements should be implemented as soon as possible. Transitional provisions should be put in place to allow training courses that have started before these UPRT-related amendments to the requirements on pilot training become effective, to be completed without any further adaptation. In this context, it should be considered that pilots flying for commercial air operators in accordance with Commission Regulation (EU) No 965/2012 ⁽¹⁾ need to undergo regular operator training which already today contains UPRT elements. Additionally, pilot training organisations should be given a transitional period to adapt their training programmes to comply with the new UPRT requirements. At the end of that transitional period, all relevant training courses should be conducted in accordance with the new UPRT requirements.
- (8) Negotiations between the Union and certain third countries are currently still ongoing, including on the conversion of pilot licences and associated medical certificates. In order to ensure that Member States may continue to recognise third country licences and medical certificates for an interim period in light of those negotiations, it is necessary to prolong the period during which Member States may decide not to apply the provisions of Regulation (EU) No 1178/2011 in their territory to pilots holding a licence and associated medical certificate issued by a third country involved in the non-commercial operation of certain aircraft.
- (9) The European Union Aviation Safety Agency submitted draft implementing rules to the European Commission together with its Opinion No 06/2017.
- (10) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 127 of Regulation (EU) 2018/1139,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EU) No 1178/2011 is amended as follows:

- (1) after Article 4a, the following Article 4b is inserted:

'Article 4b

Upset prevention and recovery training

1. Upset prevention and recovery training shall become a mandatory part of a training course for a multi-crew pilot licence (MPL), an integrated training course for airline transport pilots for aeroplanes (ATP(A)), a training course for a commercial pilot licence for aeroplanes (CPL(A)) and training courses for a class or type rating for:

- (a) single-pilot aeroplanes operated in multi-pilot operations;
- (b) single-pilot non-high-performance complex aeroplanes;
- (c) single-pilot high-performance complex aeroplanes; or
- (d) multi-pilot aeroplanes;

in accordance with Annex I (Part-FCL).

⁽¹⁾ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).

2. For training courses referred to in paragraph 1 that commence before 20 December 2019 at an approved training organisation (ATO), upset prevention and recovery training shall not be mandatory provided that:

- (a) CPL(A), ATP(A) or MPL training course is otherwise completed in accordance with Annex I (Part-FCL) and the skill test is completed in compliance with points FCL.320 (CPL), FCL.620 (IR) or FCL.415.A (MPL) of Annex I (Part-FCL) by 20 December 2021 at the latest; or
- (b) class or type rating training course for the aeroplanes is otherwise completed in accordance with Annex I (Part-FCL) and the skill test is completed in compliance with the second subparagraph of paragraph (c) of point FCL.725 of Annex I (Part-FCL) to this Regulation by 20 December 2021 at the latest.

For the purpose of paragraph 1, the competent authority may on its own assessment and pursuant to a recommendation from an ATO give credit for any upset prevention and recovery training completed before 20 December 2019 under national training requirements.;

(2) in Article 12, paragraph 4 is replaced by the following:

'4. By way of derogation from paragraph 1, Member States may decide not to apply the provisions of this Regulation until 20 June 2020, to pilots holding a licence and associated medical certificate issued by a third country involved in the non-commercial operation of aircraft as specified in Article 2(1)(b), points (i) or (ii), of Regulation (EU) 2018/1139. Member States shall make those decisions publicly available.;

(3) Article 12, paragraph 8, is replaced by the following:

'8. By way of derogation from paragraph 1, point FCL.315.A, the second sentence of paragraph (a) of point FCL.410.A and paragraph (c) of point FCL.725.A of Annex I (Part-FCL) shall apply from 20 December 2019.;

(4) Annex I to Regulation (EU) No 1178/2011 is amended in accordance with the Annex to this Regulation.

Article 2

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

However:

- (a) Article 1(1) shall apply from 20 December 2019.
- (b) Article 1(4) shall apply from 20 December 2019.
- (c) Notwithstanding point (b) above, points (2), (4), (5) and (12) of the Annex to this Regulation shall apply from 31 January 2022.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 14 December 2018.

For the Commission
Violeta BULC
Member of the Commission

ANNEX

Annex I to Regulation (EU) No 1178/2011 (Part-FCL) is amended as follows:

(1) Point FCL.010 is amended as follows:

(a) the introductory sentence is replaced by the following:

‘For the purposes of this Annex (Part-FCL), the following definitions shall apply.’;

(b) a new definition of ‘Accessible’ is inserted before the definition of ‘Aerobatic flight’ as follows:

“Accessible” means that a device can be used by:

- the approved training organisation (ATO) under whose approval a training course for a class or type rating is being conducted; or
- the examiner conducting the assessment of competence, skill test or proficiency check for the purpose of assessing, testing or checking.’;

(c) the definition of ‘Aerobatic flight’ is replaced by the following:

“Aerobatic flight” means an intentional manoeuvre involving an abrupt change in an aircraft’s attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight or for instruction for licences, certificates, or ratings other than the aerobatic rating.’;

(d) After the definition of ‘Aeroplane required to be operated with a co-pilot’, a new definition of ‘Aeroplane upset prevention and recovery training’ is inserted as follows:

“Aeroplane upset prevention and recovery training” (UPRT) means training consisting of:

- aeroplane upset prevention training: a combination of theoretical knowledge and flying training with the aim of providing flight crew with the required competencies to prevent aeroplane upsets; and
- aeroplane upset recovery training: a combination of theoretical knowledge and flying training with the aim of providing flight crew with the required competencies to recover from aeroplane upsets.’;

(e) After the definition of ‘Airship’, a new definition of ‘Available FSTD’ is inserted as follows:

“Available FSTD’ means any flight simulation training device (FSTD) that is vacant for use of the FSTD operator or of the customer irrespective of any time considerations.’;

(2) Point FCL.310 is replaced by the following:

‘FCL.310 CPL — Theoretical knowledge examinations

Applicants for the issue of a CPL shall demonstrate a level of knowledge appropriate to the privileges granted in the following subjects:

- (a) air law;
- (b) aircraft general knowledge — airframe/systems/power plant;
- (c) aircraft general knowledge — instrumentation;
- (d) mass and balance;
- (e) performance;
- (f) flight planning and monitoring;
- (g) human performance;
- (h) meteorology;
- (i) general navigation;
- (j) radio navigation;
- (k) operational procedures;

- (l) principles of flight; and
- (m) communications.;

(3) Point FCL.410.A is replaced by the following:

‘FCL.410.A MPL – Training course and theoretical knowledge examinations

(a) Course

Applicants for the issue of an MPL shall have completed a training course of theoretical knowledge and flight instruction at an ATO in accordance with Appendix 5 to this Annex (Part-FCL).

(b) Examination

Applicants for the issue of an MPL shall demonstrate a level of theoretical knowledge appropriate to the holders of an ATPL(A), in accordance with FCL.515, and to a multi-pilot type rating.;

(4) Point FCL.515 is replaced by the following:

‘FCL.515 ATPL — Training course and theoretical knowledge examinations

(a) Course

Applicants for an ATPL shall have completed a training course at an ATO. The course shall be either an integrated training course or a modular course, in accordance with Appendix 3 to this Annex (Part-FCL).

(b) Examination

Applicants for the issue of an ATPL shall demonstrate a level of knowledge appropriate to the privileges granted in the following subjects:

- (1) air law;
- (2) aircraft general knowledge — airframe/systems/power plant;
- (3) aircraft general knowledge — instrumentation;
- (4) mass and balance;
- (5) performance;
- (6) flight planning and monitoring;
- (7) human performance;
- (8) meteorology;
- (9) general navigation;
- (10) radio navigation;
- (11) operational procedures;
- (12) principles of flight; and
- (13) communications.;

(5) Point FCL.615 is replaced by the following:

‘FCL.615 IR — Theoretical knowledge and flight instruction

(a) Course

Applicants for an IR shall have completed a course of theoretical knowledge and flight instruction at an ATO. The course shall be:

- (1) an integrated training course which includes training for the IR, in accordance with Appendix 3 to this Annex (Part-FCL); or
- (2) a modular course in accordance with Appendix 6 to this Annex (Part-FCL).

(b) Examination

Applicants shall demonstrate a level of theoretical knowledge appropriate to the privileges granted in the following subjects:

- (1) air law;
- (2) aircraft general knowledge — instrumentation;

- (3) flight planning and monitoring;
 - (4) human performance;
 - (5) meteorology;
 - (6) radio navigation; and
 - (7) communications.’;
- (6) Point FCL.725 paragraph (d) is replaced by the following:
- ‘(d) An applicant who already holds a type rating for an aircraft type, with the privilege for either single-pilot or multi-pilot operations, shall be considered to have already fulfilled the theoretical requirements when applying to add the privilege for the other form of operation on the same aircraft type. Such an applicant shall complete additional flight training for the other form of operation at an ATO or an AOC holder specifically authorised for such training by the competent authority. The form of operation shall be entered in the licence.’
- (7) Point FCL.720.A is replaced by the following:

‘FCL.720.A Experience requirements and prerequisites for the issue of class or type ratings — aeroplanes

Unless otherwise determined in the operational suitability data established in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012 (OSD), applicants for the issue of a class or type rating shall comply with the following experience requirements and prerequisites for the issue of the relevant rating:

(a) Single-pilot aeroplanes

Applicants for the issue of a first class or type rating on a single-pilot aeroplane seeking the privilege to operate the aeroplane in multi-pilot operations shall meet the requirements in points (b)(4) and (b)(5).

Additionally, for:

(1) Single-pilot multi-engine aeroplanes

Applicants for the issue of a first class or type rating on a single-pilot multi-engine aeroplane shall have completed at least 70 hours as PIC in aeroplanes.

(2) Single-pilot high-performance non-complex aeroplanes

Before starting flight training, applicants for the issue of a class or type rating for a single-pilot aeroplane classified as a high-performance aeroplane shall:

- (i) have at least 200 hours of total flying experience, of which 70 hours as PIC in aeroplanes; and
- (ii) comply with one of the following requirements:

- (A) hold a certificate of satisfactory completion of a course for additional theoretical knowledge undertaken at an ATO; or
- (B) have passed the ATPL(A) theoretical knowledge examinations in accordance with this Annex (Part-FCL); or
- (C) hold, in addition to a licence issued in accordance with this Annex (Part-FCL), an ATPL(A) or CPL(A)/IR with theoretical knowledge credit for ATPL(A), issued in accordance with Annex 1 to the Chicago Convention.

(3) Single-pilot high-performance complex aeroplanes

Applicants for the issue of a type rating for a complex single-pilot aeroplane classified as a high-performance aeroplane shall, in addition to meeting the requirements in point (2), hold or have held a single- or multi-engine IR(A), as appropriate and as established in Subpart G and shall meet the requirements in point (b)(5).

(b) Multi-pilot aeroplanes

Applicants for the issue of the first type rating course for a multi-pilot aeroplane shall be student pilots currently undergoing training on an MPL training course or comply with the following requirements:

- (1) have at least 70 hours of flight experience as PIC in aeroplanes;
- (2) hold or have held a multi-engine IR(A);

- (3) have passed the ATPL(A) theoretical knowledge examinations in accordance with this Annex (Part-FCL);
 - (4) except when the type rating course is combined with an MCC course:
 - (i) hold a certificate of satisfactory completion of an MCC course in aeroplanes; or
 - (ii) hold a certificate of satisfactory completion of MCC in helicopters and have more than 100 hours of flight experience as pilots of multi-pilot helicopters; or
 - (iii) have at least 500 hours as pilots of multi-pilot helicopters; or
 - (iv) have at least 500 hours as pilots in multi-pilot operations on single-pilot multi-engine aeroplanes, in commercial air transport in accordance with the applicable air operations requirements; and
 - (5) have completed the training course specified in FCL.745.A.
 - (c) Notwithstanding point (b), a Member State may issue a type rating with restricted privileges for a multi-pilot aeroplane that allows holders of such a rating to act as cruise relief co-pilots above Flight Level 200, provided that two other members of the crew have a type rating in accordance with point (b).
 - (d) When so determined in the OSD, the exercise of the privileges of a type rating may be initially limited to flight under the supervision of an instructor. The flight hours under supervision shall be entered in the pilots' logbook or equivalent record and signed by the instructor. The limitation shall be removed when pilots demonstrate that the hours of flight under supervision required in the OSD have been completed.;
- (8) Point FCL.725.A is replaced by the following:

'FCL.725.A Theoretical knowledge and flight instruction for the issue of class and type ratings — aeroplanes

Unless otherwise determined in the operational suitability data established in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012:

- (a) for single-pilot multi-engine aeroplanes:
 - (1) the theoretical knowledge course for a single-pilot multi-engine class rating shall include at least 7 hours of instruction in multi-engine aeroplane operations; and
 - (2) the flight training course for a single-pilot multi-engine class or type rating shall include at least 2 hours and 30 minutes of dual flight instruction under normal conditions of multi-engine aeroplane operations, and not less than 3 hours 30 minutes of dual flight instruction in engine failure procedures and asymmetric flight techniques.
 - (b) for single-pilot aeroplanes (sea):
 - (1) the training course for single-pilot aeroplane (sea) ratings shall include theoretical knowledge and flight instruction; and
 - (2) the flight training for a class or type rating (sea) for single-pilot aeroplanes (sea) shall include at least 8 hours of dual flight instruction if applicants hold the land version of the relevant class or type rating, or 10 hours if applicants do not hold such a rating; and
 - (c) for single-pilot non-high-performance complex aeroplanes, single-pilot high-performance complex aeroplanes and multi-pilot aeroplanes, the training courses shall include UPRT theoretical knowledge and flight instruction related to the specificities of the relevant class or type.;
- (9) A new point FCL.745.A is inserted as follows:

'FCL.745.A Advanced UPRT course — aeroplanes

- (a) The advanced UPRT course shall be completed at an ATO and shall comprise at least:
 - (1) 5 hours of theoretical knowledge instruction;
 - (2) preflight briefings and postflight debriefings; and
 - (3) 3 hours of dual flight instruction with a flight instructor for aeroplanes FI(A) qualified in accordance with point FCL.915 (e) and consisting of advanced UPRT in an aeroplane qualified for the training task.

(b) Upon completion of the UPRT course, applicants shall be issued with a certificate of completion by the ATO.;

(10) Point (b)(1) of point FCL.900 is replaced by the following:

'(1) The competent authority may issue a specific certificate granting privileges for flight instruction when compliance with the requirements established in this Subpart is not possible in the case of the introduction of:

- (i) new aircraft in the Member States or in an operator's fleet; or
- (ii) new training courses in this Annex (Part-FCL).

Such a certificate shall be limited to the training flights necessary for the introduction of the new type of aircraft or the new training course and its validity shall not, in any case, exceed 1 year.;

(11) Point FCL.915 is amended as follows:

'FCL.915 General prerequisites and requirements for instructors

(a) General

Applicants for the issue of an instructor certificate shall be at least 18 years of age.

(b) Additional requirements for instructors providing flight instruction in aircraft

Applicants for the issue of or holders of an instructor certificate with privileges to conduct flight instruction in an aircraft shall:

- (1) for licence training, hold at least the licence or, in the case of point FCL.900(c), the equivalent licence, for which flight instruction is to be given;
- (2) for a rating training, hold the relevant rating or, in the case of point FCL.900(c), the equivalent rating, for which flight instruction is to be given;
- (3) except in the case of flight test instructors (FTIs), have:
 - (i) completed at least 15 hours of flight time as pilots of the class or type of aircraft on which flight instruction is to be given, of which a maximum of 7 hours may be in an FSTD representing the class or type of aircraft, if applicable; or
 - (ii) passed an assessment of competence for the relevant category of instructor on that class or type of aircraft; and
- (4) be entitled to act as PIC in the aircraft during such flight instruction.

(c) Credit towards further ratings and for the purpose of revalidation

- (1) Applicants for further instructor certificates may be credited with the teaching and learning skills already demonstrated for the instructor certificate held.
- (2) Hours flown as an examiner during skill tests or proficiency checks shall be credited in full towards revalidation requirements for all instructor certificates held.

(d) Credit for extension to further types shall take into account the relevant elements as defined in the operational suitability data established in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012 (OSD).

(e) Additional requirements for instructing in a training course in accordance with FCL.745.A:

- (1) In addition to (b), before acting as instructors for a training course according to FCL.745.A, holders of an instructor certificate shall:
 - (i) have at least 500 hours of flight time as pilots of aeroplanes, including 200 hours of flight instruction;
 - (ii) after complying with the experience requirements in point (e)(1)(i), have completed a UPRT instructor training course at an ATO, during which the competence of applicants shall have been assessed continuously; and
 - (iii) upon completion of the course, have been issued with a certificate of course completion by the ATO, whose Head of Training (HT) shall have entered the privileges specified in point (e)(1) in the logbook of the applicants.

- (2) The privileges referred to in point (e)(1) shall only be exercised if instructors have, during the last year, received refresher training at an ATO during which the competence required to instruct on a course in accordance with point FCL.745.A is assessed to the satisfaction of the HT.
- (3) Instructors holding the privileges specified in point (e)(1) may act as instructors for a course as specified in point (e)(1)(ii), provided that they:
- (i) have 25 hours of flight instruction experience during training according to FCL745.A;
 - (ii) have completed an assessment of competence for this privilege; and
 - (iii) comply with the recency requirements in point (e)(2).
- (4) These privileges shall be entered in the logbook of the instructors and signed by the examiner.;
- (12) Appendix 1 is replaced by the following:

Appendix 1

Crediting of theoretical knowledge

**CREDITING OF THEORETICAL KNOWLEDGE IN THE SAME OR ANOTHER CATEGORY OF AIRCRAFT —
BRIDGE INSTRUCTION AND EXAMINATION REQUIREMENTS**

1. LAPL, PPL, BPL and SPL

- 1.1. For the issue of an LAPL, holders of an LAPL in another category of aircraft shall be fully credited with theoretical knowledge on the common subjects established in FCL.120(a).
- 1.2. Without prejudice to paragraph 1.1., for the issue of an LAPL, a PPL, a BPL or an SPL, holders of a licence in another category of aircraft shall receive theoretical knowledge instruction and pass theoretical knowledge examinations to the appropriate level in the following subjects:
- principles of flight;
 - operational procedures;
 - flight performance and planning;
 - aircraft general knowledge; and
 - navigation.
- 1.3. For the issue of a PPL, a BPL or an SPL, holders of an LAPL in the same category of aircraft shall be credited in full towards the theoretical knowledge instruction and examination requirements.
- 1.4. Notwithstanding point 1.2, for the issue of an LAPL(A), holders of an LAPL(S) with TMG extension shall demonstrate an adequate level of theoretical knowledge for the SEP(land) class in accordance with FCL.135.A(a)(2).

2. CPL

- 2.1. Applicants for the issue of a CPL holding a CPL in another category of aircraft shall have received theoretical knowledge bridge instruction at an ATO on an approved course according to the differences identified between the CPL syllabi for different aircraft categories.
- 2.2. Applicants shall pass theoretical knowledge examinations as defined in this Annex (Part-FCL) for the following subjects in the appropriate aircraft category:
- 021 — Aircraft general knowledge: airframe and systems, electrics, power plant and emergency equipment;
 - 022 — Aircraft general knowledge: instrumentation;
 - 032/034 — Performance aeroplanes or helicopters, as applicable;
 - 070 — Operational procedures; and
 - 080 — Principles of flight.
- 2.3. Applicants for the issue of a CPL having passed the relevant theoretical knowledge examinations for an IR in the same category of aircraft are credited towards the theoretical knowledge requirements in human performance and meteorology unless they have completed the IR training course in accordance with Appendix 6, Section Aa, to this Annex (Part-FCL).

2.4. Applicants for a CPL having passed the relevant theoretical knowledge examinations for an IR or EIR in the same category of aircraft are credited towards the theoretical knowledge requirements in the communications subject.

3. **ATPL**

3.1. Applicants for the issue of an ATPL holding an ATPL in another category of aircraft shall have received theoretical knowledge bridge instruction at an ATO on an approved course according to the differences identified between the ATPL syllabi for different aircraft categories.

3.2. Applicants shall pass theoretical knowledge examinations as defined in this Annex (Part-FCL) for the following subjects in the appropriate aircraft category:

021 — Aircraft general knowledge: airframe and systems, electrics, power plant and emergency equipment;

022 — Aircraft general knowledge: instrumentation;

032/034 — Performance aeroplanes or helicopters, as applicable;

070 — Operational procedures; and

080 — Principles of flight.

3.3. Applicants for the issue of an ATPL(A) having passed the relevant theoretical examination for a CPL(A) are credited towards the theoretical knowledge requirements in the subject 'communications'.

3.4. Applicants for the issue of an ATPL(H) having passed the relevant theoretical examinations for a CPL(H) are credited towards the theoretical knowledge requirements in the following subjects:

— air law;

— principles of flight (helicopter); and

— communications.

3.5. Applicants for the issue of an ATPL(A) having passed the relevant theoretical examination for an IR(A) are credited towards the theoretical knowledge requirements in the subject 'communications'.

3.6. Applicants for the issue of an ATPL(H) with an IR(H) having passed the relevant theoretical examinations for a CPL(H) are credited towards the theoretical knowledge requirements in the following subjects:

— principles of flight (helicopter); and

— communications.

4. **IR**

4.1. Applicants for the issue of an IR or an EIR having passed the relevant theoretical examinations for a CPL in the same aircraft category are credited towards the theoretical knowledge requirements in the following subjects:

— human performance;

— meteorology; and

— communications.

4.2. Applicants for the issue of an IR(H) having passed the relevant theoretical examinations for an ATPL(H) VFR are required to pass the following examination subjects:

— air law;

— flight planning and flight monitoring; and

— radio navigation.';

(13) Appendix 3, Section A is amended as follows:

(a) point (4) is replaced by the following:

'4. The course shall comprise:

(a) theoretical knowledge instruction to the ATPL(A) knowledge level;

(b) visual and instrument flying training;

(c) training in MCC for the operation of multi-pilot aeroplanes; and

(d) UPRT in accordance with FCL.745.A unless applicants have already completed this training course before starting the ATP integrated course.';

(b) point (5) is replaced by the following:

'5. Applicants failing or being unable to complete the entire ATP(A) course may apply to the competent authority for the theoretical knowledge examination and skill test for a licence with lower privileges and an IR if the applicable requirements are met.';

(c) point 7 is renamed '7.1.' and a new point (7.2.) is inserted as follows:

'7.2. The theoretical knowledge instruction in UPRT shall be conducted in accordance with FCL.745.A.';

(d) point (9) is replaced by the following:

'9. The flying training, not including type rating training, shall comprise a total of at least 195 hours, including all progress tests, of which up to 55 hours for the entire course may be instrument ground time. Within the total of 195 hours, applicants shall complete at least:

- (a) 95 hours of dual instruction, of which up to 55 hours may be instrument ground time;
- (b) 70 hours as PIC including VFR flight, and instrument flight time as SPIC. The instrument flight time as SPIC shall only be counted as PIC flight time up to a maximum of 20 hours;
- (c) 50 hours of cross-country flight as PIC, including one VFR cross-country flight of at least 540 km (300 NM), in the course of which full-stop landings at two aerodromes different from the aerodrome of departure shall be made; and
- (d) 5 hours of flight time at night, comprising 3 hours of dual instruction, which shall include at least:
 - (1) 1 hour of cross-country navigation;
 - (2) five solo take-offs; and
 - (3) five solo full-stop landings;
- (e) UPRT flight instruction in accordance with FCL.745.A;
- (f) 115 hours of instrument time comprising, at least:
 - (1) 20 hours as SPIC;
 - (2) 15 hours of MCC, for which an FFS or an FNPT II may be used;
 - (3) 50 hours of instrument flight instruction, of which up to:
 - (i) 25 hours may be instrument ground time in an FNPT I; or
 - (ii) 40 hours may be instrument ground time in an FNPT II, an FTD 2 or an FFS, of which up to 10 hours may be conducted in an FNPT I.

Applicants holding a module completion certificate for the Basic Instrument Flight Module shall be credited with up to 10 hours towards the required instrument instruction time. Hours done in a BITD shall not be credited; and

(g) 5 hours in an aeroplane which:

- (1) is certificated for the carriage of at least 4 persons; and
- (2) has a variable pitch propeller and retractable landing gear.';

(14) Appendix 5 is amended as follows:

(a) point (7) is replaced by the following:

'7. An approved MPL theoretical knowledge course shall comprise at least 750 hours of instruction for the ATPL(A) knowledge level, as well as the hours required for:

- (a) theoretical knowledge instruction for the relevant type rating, in accordance with Subpart H; and
- (b) UPRT theoretical knowledge instruction in accordance with FCL.745.A.';

(b) point (8) is replaced by the following:

‘8. The flying training shall comprise a total of at least 240 hours, composed of hours as PF and PM, in actual and simulated flight, and covering the following four phases of training:

(a) Phase 1 — Core flying skills

Specific basic single-pilot training in an aeroplane

(b) Phase 2 — Basic

Introduction of multi-crew operations and instrument flight

(c) Phase 3 — Intermediate

Application of multi-crew operations to a multi-engine turbine aeroplane certified as a high-performance aeroplane in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012

(d) Phase 4 — Advanced

Type rating training within an airline-oriented environment.

MCC requirements shall be incorporated into the relevant phases above.

Training in asymmetric flight shall be given either in an aeroplane or an FFS.’

(c) a new point (8a) is inserted as follows:

‘8a. Flight experience in actual flight shall include:

(a) all the experience requirements of Subpart H;

(b) UPRT flight instruction in accordance with FCL.745.A;

(c) aeroplane UPRT exercises related to the specificities of the relevant type in accordance with FCL.725.A(c);

(d) night flying;

(e) flight solely by reference to instruments; and

(f) the experience required to achieve the relevant airmanship.’;

(15) Appendix 9 is replaced by the following:

‘Appendix 9

Training, skill test and proficiency check for MPL, ATPL, type and class ratings, and proficiency check for IRs

A. General

1. Applicants for a skill test shall have received instruction in the same class or type of aircraft to be used in the test.

The training for MPA and PL type ratings shall be conducted in an FFS or in a combination of FSTD(s) and FFS. The skill test or proficiency check for MPA and PL type ratings and the issue of an ATPL and an MPL, shall be conducted in an FFS, if available.

The training, skill test or proficiency check for class or type ratings for SPA and helicopters shall be conducted in:

(a) an available and accessible FFS, or

(b) a combination of FSTD(s) and the aircraft if an FFS is not available or accessible; or

(c) the aircraft if no FSTD is available or accessible.

If FSTDs are used during training, testing or checking, the suitability of the FSTDs used shall be verified against the applicable ‘Table of functions and subjective tests’ and the applicable ‘Table of FSTD validation tests’ contained in the primary reference document applicable for the device used. All restrictions and limitations indicated on the device’s qualification certificate shall be considered.

2. Failure to achieve a pass in all sections of the test in two attempts will require further training.
3. There is no limit to the number of skill tests that may be attempted.

CONTENT OF THE TRAINING/SKILL TEST/PROFICIENCY CHECK

4. Unless otherwise determined in the operational suitability data established in accordance with Annex I (Part-21) to Regulation (EU) No 748/2012 (OSD), the syllabus of flight instruction, the skill test and the proficiency check shall comply with this Appendix. The syllabus, skill test and proficiency check may be reduced to give credit for previous experience on similar aircraft types, as determined in the OSD.
5. Except in the case of skill tests for the issue of an ATPL, when so defined in the OSD for the specific aircraft, credit may be given for skill test items common to other types or variants where the pilots are qualified.

CONDUCT OF THE TEST/CHECK

6. The examiner may choose between different skill test or proficiency check scenarios containing simulated relevant operations. Full-flight simulators and other training devices shall be used, as established in this Annex (Part-FCL).
7. During the proficiency check, the examiner shall verify that holders of the class or type rating maintain an adequate level of theoretical knowledge.
8. Should applicants choose to terminate a skill test for reasons considered inadequate by the examiner, they shall retake the entire skill test. If the test is terminated for reasons considered adequate by the examiner, only those sections not completed shall be tested in a further flight.
9. At the discretion of the examiner, any manoeuvre or procedure of the test may be repeated once by the applicants. The examiner may stop the test at any stage if it is considered that the applicants' demonstration of flying skill requires a complete retest.
10. Applicants shall be required to fly the aircraft from a position where the PIC or co-pilot functions, as relevant, can be performed. Under single-pilot conditions, the test shall be performed as if there was no other crew member present.
11. During preflight preparation for the test, applicants are required to determine power settings and speeds. Applicants shall indicate to the examiner the checks and duties carried out, including the identification of radio facilities. Checks shall be completed in accordance with the checklist for the aircraft on which the test is being taken and, if applicable, with the MCC concept. Performance data for take-off, approach and landing shall be calculated by applicants in compliance with the operations manual or flight manual for the aircraft used. Decision heights/altitudes, minimum descent heights/altitudes and missed approach point shall be agreed upon with the examiner.
12. The examiner shall take no part in the operation of the aircraft except where intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic.

SPECIFIC REQUIREMENTS FOR THE SKILL TEST/PROFICIENCY CHECK FOR MULTI-PILOT AIRCRAFT TYPE RATINGS, FOR SINGLE-PILOT AEROPLANE TYPE RATINGS WHEN OPERATED IN MULTI-PILOT OPERATIONS, FOR MPL AND ATPL

13. The skill test for a multi-pilot aircraft or a single-pilot aeroplane when operated in multi-pilot operations shall be performed in a multi-crew environment. Another applicant or another type rated qualified pilot may function as the second pilot. If an aircraft is used, the second pilot shall be the examiner or an instructor.
14. Applicants shall operate as PF during all sections of the skill test, except for abnormal and emergency procedures, which may be conducted as PF or PM in accordance with MCC. Applicants for the initial issue of a multi-pilot aircraft type rating or ATPL shall also demonstrate the ability to act as PM. Applicants may choose either the left-hand or the right-hand seat for the skill test if all items can be executed from the selected seat.

15. The following matters shall be specifically checked by the examiner for applicants for the ATPL or a type rating for multi-pilot aircraft or for multi-pilot operations in a single-pilot aeroplane extending to the duties of a PIC, irrespective of whether the applicants act as PF or PM:
 - (a) managing crew cooperation;
 - (b) maintaining a general survey of the aircraft operation by appropriate supervision; and
 - (c) setting priorities and making decisions in accordance with safety aspects and relevant rules and regulations appropriate to the operational situation, including emergencies.
16. The test or check should be accomplished under IFR, if the IR rating is included, and as far as possible be accomplished in a simulated commercial air transport environment. An essential element to be checked is the ability to plan and conduct the flight from routine briefing material.
17. When the type rating course has included less than 2 hours of flight training in the aircraft, the skill test may be conducted in an FFS and may be completed before the flight training in the aircraft.

The approved flight training shall be performed by a qualified instructor under the responsibility of:

- (a) an ATO; or
- (b) an organisation holding an AOC issued in accordance with Annex III (Part-ORO) to Regulation (EU) No 965/2012 and specifically approved for such training; or
- (c) the instructor, in cases where no aircraft flight training for SP aircraft at an ATO or AOC holder is approved, and the aircraft flight training was approved by the applicants' competent authority.

A certificate of completion of the type rating course including the flight training in the aircraft shall be forwarded to the competent authority before the new type rating is entered in the applicants' licence.

18. For the upset recovery training, 'stall event' means either an approach-to-stall or a stall. An FFS can be used by the ATO to either train recovery from a stall or demonstrate the type-specific characteristics of a stall, or both, provided that:
 - (a) the FFS has been qualified in accordance with the special evaluation requirements in CS-FSTD(A); and
 - (b) the ATO has successfully demonstrated to the competent authority that any negative transfer of training is mitigated.

B. Specific requirements for the aeroplane category

PASS MARKS

1. In the case of single-pilot aeroplanes, with the exception of single-pilot high-performance complex aeroplanes, applicants shall pass all sections of the skill test or proficiency check. Failure in any item of a section will cause applicants to fail the entire section. If they fail only one section, they shall repeat only that section. Failure in more than one section will require applicants to repeat the entire test or check. Failure in any section in the case of a retest or recheck, including those sections that have been passed on a previous attempt, will require applicants to repeat the entire test or check again. For single-pilot multi-engine aeroplanes, Section 6 of the relevant test or check, addressing asymmetric flight, shall be passed.
2. In the case of multi-pilot and single-pilot high-performance complex aeroplanes, applicants shall pass all sections of the skill test or proficiency check. Failure in more than five items will require applicants to take the entire test or check again. Applicants failing 5 or fewer items shall take the failed items again. Failure in any item on the retest or recheck, including those items that have been passed on a previous attempt, will require applicants to repeat the entire check or test again. Section 6 is not part of the ATPL or MPL skill test. If applicants only fail or do not take Section 6, the type rating will be issued without CAT II or CAT III privileges. To extend the type rating privileges to CAT II or CAT III, applicants shall pass the Section 6 on the appropriate type of aircraft.

FLIGHT TEST TOLERANCE

3. Applicants shall demonstrate the ability to:
 - (a) operate the aeroplane within its limitations;

- (b) complete all manoeuvres with smoothness and accuracy;
 - (c) exercise good judgement and airmanship;
 - (d) apply aeronautical knowledge;
 - (e) maintain control of the aeroplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is never in doubt;
 - (f) understand and apply crew coordination and incapacitation procedures, if applicable; and
 - (g) communicate effectively with the other crew members, if applicable.
4. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the aeroplane used:

Height

Generally	± 100 ft
Starting a go-around at decision height/altitude	+ 50 ft/- 0 ft
Minimum descent height/MAPt/altitude	+ 50 ft/- 0 ft

Tracking

On radio aids	± 5°
For 'angular' deviations	Half-scale deflection, azimuth and glide path (e.g. LPV, ILS, MLS, GLS)
2D (LNAV) and 3D (LNAV/VNAV) 'linear' lateral deviations	cross-track error/deviation shall normally be limited to ± ½ of the RNP value associated with the procedure. Brief deviations from this standard up to a maximum of one time the RNP value are allowable.
3D linear vertical deviations (e.g. RNP APCH (LNAV/VNAV) using BaroVNAV)	not more than - 75 ft below the vertical profile at any time, and not more than + 75 ft above the vertical profile at or below 1 000 ft above aerodrome level.

Heading

all engines operating	± 5°
with simulated engine failure	± 10°

Speed

all engines operating	± 5 knots
with simulated engine failure	+ 10 knots/- 5 knots

CONTENT OF THE TRAINING/SKILL TEST/PROFICIENCY CHECK

5. Single-pilot aeroplanes, except for high-performance complex aeroplanes
- (a) The following symbols mean:
 - P = Trained as PIC or co-pilot and as PF and PM
 - OTD = Other training devices may be used for this exercise
 - X = An FFS shall be used for this exercise; otherwise, an aeroplane shall be used if appropriate for the manoeuvre or procedure
 - P# = The training shall be complemented by supervised aeroplane inspection
 - (b) The practical training shall be conducted at least at the training equipment level shown as (P), or may be conducted on any higher level of equipment shown by the arrow (—>).

The following abbreviations are used to indicate the training equipment used:

A =	aeroplane
FFS =	full-flight simulator
FSTD =	flight simulation training device

- (c) The starred (*) items of Section 3B and, for multi-engine, Section 6, shall be flown solely by reference to instruments if revalidation/renewal of an IR is included in the skill test or proficiency check. If the starred (*) items are not flown solely by reference to instruments during the skill test or proficiency check, and when there is no crediting of IR privileges, the class or type rating will be restricted to VFR only.
- (d) Section 3A shall be completed to revalidate a type or multi-engine class rating, VFR only, where the required experience of 10 route sectors within the previous 12 months has not been completed. Section 3A is not required if Section 3B is completed.
- (e) Where the letter 'M' appears in the skill test or proficiency check column, this will indicate a mandatory exercise or a choice where more than one exercise appears.
- (f) An FSTD shall be used for practical training for type or ME class ratings if they form part of an approved class or type rating course. The following considerations will apply to the approval of the course:
- (i) the qualification of the FSTD as set out in the relevant requirements of Annex VI (Part-ARA) and Annex VII (Part-ORA);
 - (ii) the qualifications of the instructors;
 - (iii) the amount of FSTD training provided on the course; and
 - (iv) the qualifications and previous experience on similar types of the pilots under training.
- (g) If privileges for multi-pilot operation are sought for the first time, pilots holding privileges for single-pilot operations shall:
- (1) complete a bridge course containing manoeuvres and procedures including MCC as well as the exercises of Section 7 using threat and error management (TEM), CRM and human factors at an ATO; and
 - (2) pass a proficiency check in multi-pilot operations.
- (h) If privileges for single-pilot operations are sought for the first time, pilots holding privileges for multi-pilot operations shall be trained at an ATO and checked for the following additional manoeuvres and procedures in single-pilot operations:
- (1) for SE aeroplanes, 1.6, 4.5, 4.6, 5.2 and, if applicable, one approach from Section 3.B; and
 - (2) for ME aeroplanes, 1.6, Section 6 and, if applicable, one approach from Section 3.B.
- (i) Pilots holding privileges for both single-pilot and multi-pilot operations in accordance with points (g) and (h) may revalidate privileges for both types of operations by completing a proficiency check in multi-pilot operations in addition to the exercises referred to in points (h)(1) or (h)(2), as applicable, in single-pilot operations.
- (j) If a skill test or a proficiency check is completed in multi-pilot operations only, the type rating shall be restricted to multi-pilot operations. The restriction shall be removed when pilots comply with point (h).
- (k) The training, testing and checking shall follow the table mentioned below.
- (1) Training at an ATO, testing and checking requirements for single-pilot privileges
 - (2) Training at an ATO, testing and checking requirements for multi-pilot privileges
 - (3) Training at an ATO, testing and checking requirements for pilots holding single-pilot privileges seeking multi-pilot privileges for the first time (bridge course)
 - (4) Training at an ATO, testing and checking requirements for pilots holding multi-pilot privileges seeking single-pilot privileges for the first time (bridge course)
 - (5) Training at an ATO and checking requirements for combined revalidation and renewal of single and multi-pilot privileges

	(1)		(2)		(3)		(4)		(5)	
Type of operation	SP		MP		SP → MP (initial)		MP → SP (initial)		SP + MP	
	Training	Test- ing/checking	Training	Test- ing/checking	Training	Test- ing/checking	Training, testing and checking (SE aero- planes)	Training, testing and checking (ME aero- planes)	SE aeroplanes	ME aeroplanes
Initial issue	Sections 1-6	Sections 1-6	Sections 1-7	Sections 1-7	MCC CRM Human factors	Sections 1-7	1.6, 4.5, 4.6, 5.2 and, if applicable, one approach from Section 3.B	1.6, Section 6 and, if applicable, one approach from Section 3.B		
SP complex	1-7	1-7			TEM Section 7					
Revalidation	n/a	Sections 1-6	n/a	Sections 1-7	n/a	n/a	n/a	n/a	MPO: Sections 1-7	MPO: Sections 1-7
SP complex	1-7	1-7							SPO: 1.6, 4.5, 4.6, 5.2 and, if applicable, one approach from Section 3.B	SPO: 1.6, Section 6 and, if applicable, one ap- proach from Sec- tion 3.B
Renewal	FCL.740	Sections 1-6	FCL.740	Sections 1-6	n/a	n/a	n/a	n/a	Training: FCL.740	Training: FCL.740
SP complex	1-7	1-7							Check: as for the revalidation	Check: as for the revalidation

- (l) To establish or maintain PBN privileges, one approach shall be an RNP APCH. Where an RNP APCH is not practicable, it shall be performed in an appropriately equipped FSTD.

TMGs AND SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			CLASS OR TYPE RATING SKILL TEST OR PROFICIENCY CHECK	
		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
SECTION 1						
1	Departure	OTD				
1.1	Preflight including: — documentation; — mass and balance; — weather briefing; and — NOTAM.					
1.2	Pre-start checks					
1.2.1	External	OTD P#	P		M	
1.2.2	Internal	OTD P#	P		M	
1.3	Engine starting: normal malfunctions.	P—>	—>		M	
1.4	Taxiing	P—>	—>		M	
1.5	Pre-departure checks: engine run-up (if applicable)	P—>	—>		M	
1.6	Take-off procedure: — normal with flight manual flap settings; and — crosswind (if conditions are available).	P—>	—>		M	
1.7	Climbing: — V _x /V _y ; — turns onto headings; and — level off.	P—>	—>		M	
1.8	ATC liaison — compliance, R/T procedures	P—>			M	
SECTION 2						
2	Airwork (visual meteorological conditions (VMC))	P—>	—>			
2.1	Straight and level flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to V _{mca} when applicable)					

TMGs AND SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			CLASS OR TYPE RATING SKILL TEST OR PROFICIENCY CHECK		
	Manoeuvres/procedures	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
2.2	Steep turns (360° left and right at 45° bank)	P—>	—>		M	
2.3	Stalls and recovery: (i) clean stall; (ii) approach to stall in descending turn with bank with approach configuration and power; (iii) approach to stall in landing configuration and power; and (iv) approach to stall, climbing turn with take-off flap and climb power (single-engine aeroplanes only)	P—>	—>		M	
2.4	Handling using autopilot and flight director (may be conducted in Section 3), if applicable	P—>	—>		M	
2.5	ATC liaison — compliance, R/T procedures	P—>	—>		M	
SECTION 3A						
3A	En route procedures VFR	P—>	—>			
3A.1	(see B.5 (c) and (d)) Flight plan, dead reckoning and map reading					
3A.2	Maintenance of altitude, heading and speed	P—>	—>			
3A.3	Orientation, timing and revision of ETAs	P—>	—>			
3A.4	Use of radio navigation aids (if applicable)	P—>	—>			
3A.5	Flight management (flight log, routine checks including fuel, systems and icing)	P—>	—>			
3A.6	ATC liaison — compliance, R/T procedures	P—>	—>			
SECTION 3B						
3B	Instrument flight	P—>	—>		M	
3B.1*	Departure IFR					

TMGs AND SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			CLASS OR TYPE RATING SKILL TEST OR PROFICIENCY CHECK		
	Manoeuvres/procedures	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
3B.2* En route IFR	P—>	—>			M	
3B.3* Holding procedures	P—>	—>			M	
3B.4* 3D operations to decision height/altitude (DH/A) of 200 ft (60 m) or to higher minima if required by the approach procedure (autopilot may be used to the final approach segment vertical path intercept)	P—>	—>			M	
3B.5* 2D operations to minimum descent height/altitude (MDH/A)	P—>	—>			M	
3B.6* Flight exercises including simulated failure of the compass and attitude indicator: — rate 1 turns; and — recoveries from unusual attitudes.	P—>	—>			M	
3B.7* Failure of localiser or glideslope	P—>	—>				
3B.8* ATC liaison — compliance, R/T procedures	P—>	—>			M	
Intentionally left blank						
SECTION 4						
4 Arrival and landings	P—>	—>			M	
4.1 Aerodrome arrival procedure						
4.2 Normal landing	P—>	—>			M	
4.3 Flapless landing	P—>	—>			M	
4.4 Crosswind landing (if suitable conditions)	P—>	—>				
4.5 Approach and landing with idle power from up to 2 000 ft above the runway (single-engine aeroplanes only)	P—>	—>				
4.6 Go-around from minimum height	P—>	—>			M	
4.7 Night go-around and landing (if applicable)	P—>	—>				
4.8 ATC liaison — compliance, R/T procedures	P—>	—>			M	
SECTION 5						
5 Abnormal and emergency procedures (This section may be combined with Sections 1 through 4.)						

TMGs AND SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			CLASS OR TYPE RATING SKILL TEST OR PROFICIENCY CHECK	
		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
Manoeuvres/procedures						
5.1	Rejected take-off at a reasonable speed	P—>	—>		M	
5.2	Simulated engine failure after take-off (single-engine aeroplanes only)		P		M	
5.3	Simulated forced landing without power (single-engine aeroplanes only)		P		M	
5.4	Simulated emergencies: (i) fire or smoke in flight; and (ii) systems' malfunctions as appropriate	P—>	—>			
5.5	ME aeroplanes and TMG training only: engine shutdown and restart (at a safe altitude if performed in the aircraft)	P—>	—>			
5.6	ATC liaison — compliance, R/T procedures					
SECTION 6						
6	Simulated asymmetric flight	P—>	—>X		M	
6.1*	(This section may be combined with Sections 1 through 5.) Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS or an FNPT II)					
6.2*	Asymmetric approach and go-around	P—>	—>		M	
6.3*	Asymmetric approach and full-stop landing	P—>	—>		M	
6.4	ATC liaison — compliance, R/T procedures	P—>	—>		M	
SECTION 7						
7	UPRT					
7.1	Flight manoeuvres and procedures					
7.1.1	Manual flight with and without flight directors (no autopilot, no autothrust/autothrottle, and at different control laws, where applicable)	P—>	—>			

TMGs AND SINGLE-PILOT AEROPLANES, EXCEPT FOR HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			CLASS OR TYPE RATING SKILL TEST OR PROFICIENCY CHECK	
	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
Manoeuvres/procedures					
7.1.1.1 At different speeds (including slow flight) and altitudes within the FSTD training envelope.	P—>	—>			
7.1.1.2 Steep turns using 45° bank, 180° to 360° left and right	P—>	—>			
7.1.1.3 Turns with and without spoilers	P—>	—>			
7.1.1.4 Procedural instrument flying and manoeuvring including instrument departure and arrival, and visual approach	P—>	—>			
7.2 Upset recovery training	P—>	—>			
7.2.1 Recovery from stall events in: — take-off configuration; — clean configuration at low altitude; — clean configuration near maximum operating altitude; and — landing configuration					
7.2.2 The following upset exercises: — recovery from nose-high at various bank angles; and — recovery from nose-low at various bank angles.	P FFS qualified for the training task only	X An aeroplane shall not be used for this exercise		FFS only	
7.3 Go-around with all engines operating* from various stages during an instrument approach	P—>	—>			
7.4 Rejected landing with all engines operating: — from various heights below DH/MDH 15 m (50 ft) above the runway threshold — after touchdown (balked landing) — In aeroplanes which are not certificated as transport category aeroplanes (JAR/FAR 25) or as commuter category aeroplanes (SFAR 23), the rejected landing with all engines operating shall be initiated below MDH/A or after touchdown.	P—>	—>			

6. Multi-pilot aeroplanes and single-pilot high-performance complex aeroplanes

(a) The following symbols mean:

P = Trained as PIC or co-pilot and as PF and PM for the issue of a type rating as applicable.

OTD = Other training devices may be used for this exercise

X = An FFS shall be used for this exercise; otherwise an aeroplane shall be used if appropriate for the manoeuvre or procedure

P# = The training shall be complemented by supervised aeroplane inspection

- (b) The practical training shall be conducted at least at the training equipment level shown as (P), or may be conducted up to any higher equipment level shown by the arrow (————>).

The following abbreviations are used to indicate the training equipment used:

A = aeroplane

FFS = full-flight simulator

FSTD = flight simulation training device

- (c) The starred items (*) shall be flown solely by reference to instruments.
- (d) Where the letter 'M' appears in the skill test or proficiency check column, this will indicate a mandatory exercise.
- (e) An FFS shall be used for practical training and testing if the FFS forms part of an approved type rating course. The following considerations will apply to the approval of the course:
- (i) the qualifications of the instructors;
 - (ii) the qualification and the amount of training provided on the course in an FSTD; and
 - (iii) the qualifications and previous experience on similar types of the pilots under training.
- (f) Manoeuvres and procedures shall include MCC for multi-pilot aeroplane and for single-pilot high-performance complex aeroplanes in multi-pilot operations.
- (g) Manoeuvres and procedures shall be conducted in single-pilot role for single-pilot high-performance complex aeroplanes in single-pilot operations.
- (h) In the case of single-pilot high-performance complex aeroplanes, when a skill test or proficiency check is performed in multi-pilot operations, the type rating shall be restricted to multi-pilot operations. If privileges of single-pilot are sought, the manoeuvres/procedures in 2.5, 3.8.3.4, 4.4, 5.5 and at least one manoeuvre/procedure from Section 3.4 have to be completed in addition as single-pilot.
- (i) In the case of a restricted type rating issued in accordance with FCL.720.A(e), applicants shall fulfil the same requirements as other applicants for the type rating except for the practical exercises relating to the take-off and landing phases.
- (j) To establish or maintain PBN privileges, one approach shall be an RNP APCH. Where an RNP APCH is not practicable, it shall be performed in an appropriately equipped FSTD.

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
SECTION 1						
1	Flight preparation	OTD				
1.1.	Performance calculation	P				
1.2.	Aeroplane external visual inspection; location of each item and purpose of inspection	OTD P#	P			
1.3.	Cockpit inspection	P————>	————>			
1.4.	Use of checklist prior to starting engines, starting procedures, radio and navigation equipment check, selection and setting of navigation and communication frequencies	P————>	————>		M	

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
1.5.	Taxiing in compliance with ATC instructions or instructions of instructor	P————>	————>			
1.6.	Before take-off checks	P————>	————>		M	
SECTION 2						
2	Take-offs	P————>	————>			
2.1.	Normal take-offs with different flap settings, including expedited take-off					
2.2*	Instrument take-off; transition to instrument flight is required during rotation or immediately after becoming airborne	P————>	————>			
2.3.	Crosswind take-off	P————>	————>			
2.4.	Take-off at maximum take-off mass (actual or simulated maximum take-off mass)	P————>	————>			
2.5.	Take-offs with simulated engine failure:	P————>	————>			
2.5.1*	shortly after reaching V2					
	(In aeroplanes which are not certificated as transport category or commuter category aeroplanes, the engine failure shall not be simulated until reaching a minimum height of 500 ft above the runway end. In aeroplanes having the same performance as a transport category aeroplane regarding take-off mass and density altitude, the instructor may simulate the engine failure shortly after reaching V2)					
2.5.2*	between V1 and V2	P	X		M FFS only	
2.6.	Rejected take-off at a reasonable speed before reaching V1	P————>	——>X		M	
SECTION 3						
3	Flight manoeuvres and procedures	P————>	——>			
3.1.	Manual flight with and without flight directors (no autopilot, no autothrust/autothrottle, and at different control laws, where applicable)					
3.1.1.	At different speeds (including slow flight) and altitudes within the FSTD training envelope	P————>	——>			
3.1.2.	Steep turns using 45° bank, 180° to 360° left and right	P————>	——>			
3.1.3.	Turns with and without spoilers	P————>	——>			
3.1.4.	Procedural instrument flying and manoeuvring including instrument departure and arrival, and visual approach	P————>	——>			

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
3.2.	Tuck under and Mach buffets (if applicable), and other specific flight characteristics of the aeroplane (e.g. Dutch Roll)	P——>	——>X An aeroplane shall not be used for this exercise		FFS only	
3.3.	Normal operation of systems and controls engineer's panel (if applicable)	OTD P——>	——>			
3.4.	Normal and abnormal operations of following systems:				M	A mandatory minimum of 3 abnormal items shall be selected from 3.4.0 to 3.4.14 inclusive
3.4.0.	Engine (if necessary propeller)	OTD P——>	——>			
3.4.1.	Pressurisation and air conditioning	OTD P——>	——>			
3.4.2.	Pitot/static system	OTD P——>	——>			
3.4.3.	Fuel system	OTD P——>	——>			
3.4.4.	Electrical system	OTD P——>	——>			
3.4.5.	Hydraulic system	OTD P——>	——>			
3.4.6.	Flight control and trim system	OTD P——>	——>			
3.4.7.	Anti-icing/de-icing system, glare shield heating	OTD P——>	——>			
3.4.8.	Autopilot/flight director	OTD P——>	——>		M (single pilot only)	
3.4.9.	Stall warning devices or stall avoidance devices, and stability augmentation devices	OTD P——>	——>			
3.4.10.	Ground proximity warning system, weather radar, radio altimeter, transponder	P——>	——>			
3.4.11.	Radios, navigation equipment, instruments, FMS	OTD P——>	——>			

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
Manoeuvres/procedures					
3.4.12. Landing gear and brake	OTD P————>	————>			
3.4.13. Slat and flap system	OTD	————>			
3.4.14. Auxiliary power unit (APU)	OTD P————>	————>			
Intentionally left blank					
3.6. Abnormal and emergency procedures:				M	A mandatory minimum of 3 items shall be selected from 3.6.1 to 3.6.9 inclusive
3.6.1. Fire drills, e.g. engine, APU, cabin, cargo compartment, flight deck, wing and electrical fires including evacuation	P————>	————>			
3.6.2. Smoke control and removal	P————>	————>			
3.6.3. Engine failures, shutdown and restart at a safe height	P————>	————>			
3.6.4. Fuel dumping (simulated)	P————>	————>			
3.6.5. Wind shear at take-off/landing	P	X		FFS only	
3.6.6. Simulated cabin pressure failure/emergency descent	P————>	————>			
3.6.7. Incapacitation of flight crew member	P————>	————>			
3.6.8. Other emergency procedures as outlined in the appropriate aeroplane flight manual (AFM)	P————>	————>			
3.6.9. TCAS event	OTD P————>	An aeroplane shall not be used		FFS only	
3.7. Upset recovery training	P	X			
3.7.1. Recovery from stall events in: — take-off configuration; — clean configuration at low altitude; — clean configuration near maximum operating altitude; and — landing configuration.	FFS qualified for the training task only	An aeroplane shall not be used for this exercise			
3.7.2. The following upset exercises: — recovery from nose-high at various bank angles; and — recovery from nose-low at various bank angles	P FFS qualified for the training task only	X An aeroplane shall not be used for this exercise		FFS only	

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
Manoeuvres/procedures					
3.8. Instrument flight procedures					
3.8.1* Adherence to departure and arrival routes and ATC instructions	P——>	——>		M	
3.8.2* Holding procedures	P——>	——>			
3.8.3* 3D operations to DH/A of 200 ft (60 m) or to higher minima if required by the approach procedure					

Note: According to the AFM, RNP APCH procedures may require the use of autopilot or flight director. The procedure to be flown manually shall be chosen taking into account such limitations (for example, choose an ILS for 3.8.3.1 in the case of such AFM limitation).

3.8.3.1* Manually, without flight director	P——>	——>		M (skill test only)	
3.8.3.2* Manually, with flight director	P——>	——>			
3.8.3.3* With autopilot	P——>	——>			
3.8.3.4* Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing 1 000 ft above aerodrome level until touchdown or through the complete missed approach procedure. In aeroplanes which are not certificated as transport category aeroplanes (JAR/FAR 25) or as commuter category aeroplanes (SFAR 23), the approach with simulated engine failure and the ensuing go-around shall be initiated in conjunction with the non-precision approach as described in 3.8.4. The go-around shall be initiated when reaching the published obstacle clearance height/altitude (OCH/A); however, not later than reaching an MDH/A of 500 ft above the runway threshold elevation. In aeroplanes having the same performance as a transport category aeroplane regarding take-off mass and density altitude, the instructor may simulate the engine failure in accordance with 3.8.3.4.	P——>	——>		M	
3.8.3.5.* Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach after passing the outer marker (OM) within a distance of not more than 4 NM until touchdown or through the complete missed approach procedure	P——>	——>		M	

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
In aeroplanes which are not certificated as transport category aeroplanes (JAR/FAR 25) or as commuter category aeroplanes (SFAR 23), the approach with simulated engine failure and the ensuing go-around shall be initiated in conjunction with the non-precision approach as described in 3.8.4. The go-around shall be initiated when reaching the published OCH/A; however, not later than reaching an MDH/A of 500 ft above the runway threshold elevation. In aeroplanes having the same performance as a transport category aeroplane regarding take-off mass and density altitude, the instructor may simulate the engine failure in accordance with 3.8.3.4.						
3.8.4*	2D operations down to the MDH/A	P*—>	——>		M	
3.8.5.	<p>Circling approach under the following conditions:</p> <p>(a)* approach to the authorised minimum circling approach altitude at the aerodrome in question in accordance with the local instrument approach facilities in simulated instrument flight conditions; followed by:</p> <p>(b) circling approach to another runway at least 90° off centreline from the final approach used in item (a), at the authorised minimum circling approach altitude.</p> <p><i>Remark:</i> If (a) and (b) are not possible due to ATC reasons, a simulated low visibility pattern may be performed.</p>	P*—>	——>			
3.8.6.	Visual approaches	P——>	——>			
SECTION 4						
4	Missed approach procedures					
4.1.	Go-around with all engines operating* during a 3D operation on reaching decision height	P*—>	——>			
4.2.	Go-around with all engines operating* from various stages during an instrument approach	P*—>	——>			
4.3.	Other missed approach procedures	P*—>	——>			
4.4*	Manual go-around with the critical engine simulated inoperative after an instrument approach on reaching DH, MDH or MAPt	P*——>	——>		M	

MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES		PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures		FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
4.5.	Rejected landing with all engines operating: — from various heights below DH/MDH; — after touchdown (balked landing) In aeroplanes which are not certificated as transport category aeroplanes (JAR/FAR 25) or as commuter category aeroplanes (SFAR 23), the rejected landing with all engines operating shall be initiated below MDH/A or after touchdown.	P——>	——>			
SECTION 5						
5	Landings	P				
5.1.	Normal landings* with visual reference established when reaching DA/H following an instrument approach operation					
5.2.	Landing with simulated jammed horizontal stabiliser in any out-of-trim position	P——>	An aeroplane shall not be used for this exercise		FFS only	
5.3.	Crosswind landings (aircraft, if practicable)	P——>	——>			
5.4.	Traffic pattern and landing without extended or with partly extended flaps and slats	P——>	——>			
5.5.	Landing with critical engine simulated inoperative	P——>	——>		M	
5.6.	Landing with two engines inoperative: — aeroplanes with three engines: the centre engine and one outboard engine as far as practicable according to data of the AFM; and — aeroplanes with four engines: two engines at one side	P	X		M FFS only (skill test only)	

General remarks:

Special requirements for the extension of a type rating for instrument approaches down to a decision height of less than 200 ft (60 m), i.e. CAT II/III operations.

SECTION 6

Additional authorisation on a type rating for instrument approaches down to a DH of less than 60 m (200 ft) (CAT II/III)				
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MULTI-PILOT AEROPLANES AND SINGLE-PILOT HIGH-PERFORMANCE COMPLEX AEROPLANES	PRACTICAL TRAINING			ATPL/MPL/TYPE RATING SKILL TEST OR PROF. CHECK	
Manoeuvres/procedures	FSTD	A	Instructor initials when training completed	Tested or checked in FSTD or A	Examiner initials when test or check completed
The following manoeuvres and procedures are the minimum training requirements to permit instrument approaches down to a DH of less than 60 m (200 ft). During the following instrument approaches and missed approach procedures, all aeroplane equipment required for type certification of instrument approaches down to a DH of less than 60 m (200 ft) shall be used.					
6.1* Rejected take-off at minimum authorised runway visual range (RVR)	P*————>	————>X An aeroplane shall not be used for this exercise		M*	
6.2* CAT II/III approaches: in simulated instrument flight conditions down to the applicable DH, using flight guidance system. Standard procedures of crew coordination (task sharing, call-out procedures, mutual surveillance, information exchange and support) shall be observed.	P————>	————>		M	
6.3* Go-around: after approaches as indicated in 6.2 on reaching DH. The training shall also include a go-around due to (simulated) insufficient RVR, wind shear, aeroplane deviation in excess of approach limits for a successful approach, ground/airborne equipment failure prior to reaching DH, and go-around with simulated airborne equipment failure.	P————>	————>		M*	
6.4* Landing(s): with visual reference established at DH following an instrument approach. Depending on the specific flight guidance system, an automatic landing shall be performed.	P————>	————>		M	

NOTE: CAT II/III operations shall be performed in accordance with the applicable air operations requirements.

7. Class ratings — sea

Section 6 shall be completed to revalidate a multi-engine class rating sea, VFR only, where the required experience of 10 route sectors within the previous 12 months has not been completed.

CLASS RATING SEA	PRACTICAL TRAINING	CLASS RATING SKILL TEST OR PROFICIENCY CHECK
Manoeuvres/procedures	Instructor's initials when training completed	Examiner's initials when test completed
SECTION 1		
1 Departure		
1.1. Preflight including: <ul style="list-style-type: none"> — documentation; — mass and balance; — weather briefing; and — NOTAM. 		
1.2. Pre-start checks External/internal		
1.3. Engine start-up and shutdown Normal malfunctions		
1.4. Taxiing		
1.5. Step taxiing		
1.6. Mooring: <ul style="list-style-type: none"> Beach Jetty pier Buoy 		
1.7. Engine-off sailing		
1.8. Pre-departure checks: Engine run-up (if applicable)		
1.9. Take-off procedure: <ul style="list-style-type: none"> — normal with flight manual flap settings; and — crosswind (if conditions are available). 		
1.10. Climbing: <ul style="list-style-type: none"> — turns onto headings — level off 		
1.11. ATC liaison — compliance, R/T procedures		
SECTION 2		
2 Airwork (VFR)		
2.1. Straight and level flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to VMCA when applicable)		
2.2. Steep turns (360° left and right at 45° bank)		

CLASS RATING SEA	PRACTICAL TRAINING	CLASS RATING SKILL TEST OR PROFICIENCY CHECK
Manoeuvres/procedures	Instructor's initials when training completed	Examiner's initials when test completed
2.3. Stalls and recovery: (i) clean stall; (ii) approach to stall in descending turn with bank with approach configuration and power; (iii) approach to stall in landing configuration and power; and (iv) approach to stall, climbing turn with take-off flap and climb power (single-engine aeroplanes only).		
2.4. ATC liaison — compliance, R/T procedures		
SECTION 3		
3 En route procedures VFR		
3.1. Flight plan, dead reckoning and map reading		
3.2. Maintenance of altitude, heading and speed		
3.3. Orientation, timing and revision of ETAs		
3.4. Use of radio navigation aids (if applicable)		
3.5. Flight management (flight log, routine checks including fuel, systems and icing)		
3.6. ATC liaison — compliance, R/T procedures		
SECTION 4		
4 Arrivals and landings		
4.1. Aerodrome arrival procedure (amphibians only)		
4.2. Normal landing		
4.3. Flapless landing		
4.4. Crosswind landing (if suitable conditions)		
4.5. Approach and landing with idle power from up to 2 000' above the water (single-engine aeroplanes only)		
4.6. Go-around from minimum height		

CLASS RATING SEA	PRACTICAL TRAINING	CLASS RATING SKILL TEST OR PROFICIENCY CHECK
Manoeuvres/procedures	Instructor's initials when training completed	Examiner's initials when test completed
4.7. Glassy water landing Rough water landing		
4.8. ATC liaison — compliance, R/T procedures		
SECTION 5		
5 Abnormal and emergency procedures (This section may be combined with Sections 1 through 4.)		
5.1. Rejected take-off at a reasonable speed		
5.2. Simulated engine failure after take-off (single-engine aeroplanes only)		
5.3. Simulated forced landing without power (single-engine aeroplanes only)		
5.4. Simulated emergencies: (i) fire or smoke in flight; and (ii) systems' malfunctions as appropriate.		
5.5. ATC liaison — compliance, R/T procedures		
SECTION 6		
6 Simulated asymmetric flight (This section may be combined with Sections 1 through 5.)		
6.1. Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS and an FNPT II)		
6.2. Engine shutdown and restart (ME skill test only)		
6.3. Asymmetric approach and go-around		
6.4. Asymmetric approach and full-stop landing		
6.5. ATC liaison — compliance, R/T procedures		

C. Specific requirements for the helicopter category

1. In the case of skill test or proficiency check for type ratings and the ATPL, applicants shall pass Sections 1 to 4 and 6 (as applicable) of the skill test or proficiency check. Failure in more than five items will require applicants to repeat the entire test or check. Applicants failing not more than five items shall repeat the failed items. Failure in any item in the case of a retest or a recheck or failure in any other items already passed will require the applicants to repeat the entire test or check again. All sections of the skill test or proficiency check shall be completed within 6 months.
2. In the case of proficiency check for an IR, applicants shall pass Section 5 of the proficiency check. Failure in more than 3 items will require applicants to repeat the entire Section 5. Applicants failing not more than 3 items shall repeat the failed items. Failure in any item in the case of a recheck or failure in any other items of Section 5 already passed will require applicants to repeat the entire check.

FLIGHT TEST TOLERANCE

3. Applicants shall demonstrate the ability to:
 - (a) operate the helicopter within its limitations;
 - (b) complete all manoeuvres with smoothness and accuracy;
 - (c) exercise good judgement and airmanship;
 - (d) apply aeronautical knowledge;
 - (e) maintain control of the helicopter at all times in such a manner that the successful outcome of a procedure or manoeuvre is never in doubt;
 - (f) understand and apply crew coordination and incapacitation procedures, if applicable; and
 - (g) communicate effectively with the other crew members, if applicable.
4. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the helicopter used.

(a) IFR flight limits

Height

Generally	± 100 ft
Starting a go-around at decision height/altitude	+ 50 ft/- 0 ft
Minimum descent height/MAPt/altitude	+ 50 ft/- 0 ft

Tracking

On radio aids	± 5°
For 'angular' deviations	Half-scale deflection, azimuth and glide path (e.g. LPV, ILS, MLS, GLS)
2D (LNAV) and 3D (LNAV/VNAV) 'linear' lateral deviations	cross-track error/deviation shall normally be limited to ± ½ of the RNP value associated with the procedure. Brief deviations from this standard up to a maximum of one time the RNP value are allowable.
3D linear vertical deviations (e.g. RNP APCH (LNAV/VNAV) using BaroVNAV)	not more than - 75 ft below the vertical profile at any time, and not more than + 75 ft above the vertical profile at or below 1 000 ft above aerodrome level.

Heading

all engines operating	± 5°
with simulated engine failure	± 10°

Speed	
all engines operating	± 5 knots
with simulated engine failure	+ 10 knots/- 5 knots
(b) VFR flight limits	
Height	
Generally	± 100 ft
Heading	
Normal operations	± 5°
Abnormal operations/emergencies	± 10°
Speed	
Generally	± 10 knots
With simulated engine failure	+ 10 knots/- 5 knots
Ground drift	
T.O. hover I.G.E.	± 3 ft
Landing	± 2 ft (with 0 ft rearward or lateral flight)

CONTENT OF THE TRAINING/SKILL TEST/PROFICIENCY CHECK

GENERAL

5. The following symbol means:

P = Trained as PIC for the issue of a type rating for single-pilot helicopters (SPH) or trained as PIC or co-pilot and as PF and PM for the issue of a type rating for multi pilot helicopters (MPH).

6. The practical training shall be conducted at least at the training equipment level shown as (P), or may be conducted up to any higher equipment level shown by the arrow (—>).

The following abbreviations are used to indicate the training equipment used:

FFS = full-flight simulator

FTD = flight training device

H = helicopter

7. The starred items (*) shall be flown in actual or simulated IMC, only by applicants wishing to renew or revalidate an IR(H) or extend the privileges of that rating to another type.

8. Instrument flight procedures (Section 5) shall be performed only by applicants wishing to renew or revalidate an IR(H) or extend the privileges of that rating to another type. An FFS or an FTD 2/3 may be used for this purpose.

9. Where the letter 'M' appears in the skill test or proficiency check column, this will indicate a mandatory exercise.

10. An FSTD shall be used for practical training and testing if the FSTD forms part of a type rating course. The following considerations will apply to the course:

(a) the qualification of the FSTD as set out in the relevant requirements of Annex VI (Part-ARA) and Annex VII (Part-ORA);

(b) the qualifications of the instructor and examiner;

(c) the amount of FSTD training provided on the course;

(d) the qualifications and previous experience in similar types of the pilots under training; and

(e) the amount of supervised flying experience provided after the issue of the new type rating.

MULTI-PILOT HELICOPTERS

11. Applicants for the skill test for the issue of the multi-pilot helicopter type rating and ATPL(H) shall pass only Sections 1 to 4 and, if applicable, Section 6.

12. Applicants for the revalidation or renewal of the multi-pilot helicopter type rating proficiency check shall pass only Sections 1 to 4 and, if applicable, Section 6.

SINGLE/MULTI-PILOT HELICOPTERS		PRACTICAL TRAINING			SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		FSTD	H	Instructor initials when training completed	Checked in FSTD or H	Examiner initials when test completed
SECTION 1 — Preflight preparations and checks						
1.1	Helicopter exterior visual inspection; location of each item and purpose of inspection		P		M (if performed in the helicopter)	
1.2	Cockpit inspection	P	—>		M	
1.3	Starting procedures, radio and navigation equipment check, selection and setting of navigation and communication frequencies	P	—>		M	
1.4	Taxiing/air taxiing in compliance with ATC instructions or with instructions of an instructor	P	—>		M	
1.5	Pre-take-off procedures and checks	P	—>		M	
SECTION 2 — Flight manoeuvres and procedures						
2.1	Take-offs (various profiles)	P	—>		M	
2.2	Sloping ground or crosswind take-offs & landings	P	—>			
2.3	Take-off at maximum take-off mass (actual or simulated maximum take-off mass)	P	—>			
2.4	Take-off with simulated engine failure shortly before reaching TDP or DPATO	P	—>		M	
2.4.1	Take-off with simulated engine failure shortly after reaching TDP or DPATO	P	—>		M	
2.5	Climbing and descending turns to specified headings	P	—>		M	
2.5.1	Turns with 30° bank, 180° to 360° left and right, by sole reference to instruments	P	—>		M	
2.6	Autorotative descent	P	—>		M	
2.6.1	For single-engine helicopters (SEH) autorotative landing or for multi-engine helicopters (MEH) power recovery	P	—>		M	
2.7	Landings, various profiles	P	—>		M	
2.7.1	Go-around or landing following simulated engine failure before LDP or DPBL	P	—>		M	
2.7.2	Landing following simulated engine failure after LDP or DPBL	P	—>		M	

SINGLE/MULTI-PILOT HELICOPTERS		PRACTICAL TRAINING			SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		FSTD	H	Instructor initials when training completed	Checked in FSTD or H	Examiner initials when test completed
SECTION 3 — Normal and abnormal operations of the following systems and procedures						
3	Normal and abnormal operations of the following systems and procedures:				M	A mandatory minimum of 3 items shall be selected from this section
3.1	Engine	P	—>			
3.2	Air conditioning (heating, ventilation)	P	—>			
3.3	Pitot/static system	P	—>			
3.4	Fuel system	P	—>			
3.5	Electrical system	P	—>			
3.6	Hydraulic system	P	—>			
3.7	Flight control and trim system	P	—>			
3.8	Anti-icing and de-icing system	P	—>			
3.9	Autopilot/flight director	P	—>			
3.10	Stability augmentation devices	P	—>			
3.11	Weather radar, radio altimeter, transponder	P	—>			
3.12	Area navigation system	P	—>			
3.13	Landing gear system	P	—>			
3.14	APU	P	—>			
3.15	Radio, navigation equipment, instruments and FMS	P	—>			
SECTION 4 — Abnormal and emergency procedures						
4	Abnormal and emergency procedures				M	A mandatory minimum of 3 items shall be selected from this section
4.1	Fire drills (including evacuation if applicable)	P	—>			
4.2	Smoke control and removal	P	—>			
4.3	Engine failures, shutdown and restart at a safe height	P	—>			
4.4	Fuel dumping (simulated)	P	—>			

SINGLE/MULTI-PILOT HELICOPTERS		PRACTICAL TRAINING			SKILL TEST OR PROFICIENCY CHECK	
		FSTD	H	Instructor initials when training completed	Checked in FSTD or H	Examiner initials when test completed
4.5	Manoeuvres/procedures Tail rotor control failure (if applicable)	P	—>			
4.5.1	Tail rotor loss (if applicable)	P	A helicopter shall not be used for this exercise			
4.6	Incapacitation of crew member — MPH only	P	—>			
4.7	Transmission malfunctions	P	—>			
4.8	Other emergency procedures as outlined in the appropriate flight manual	P	—>			
SECTION 5 — Instrument flight procedures (to be performed in IMC or simulated IMC)						
5.1	Instrument take-off: transition to instrument flight is required as soon as possible after becoming airborne	P*	—>*			
5.1.1	Simulated engine failure during departure	P*	—>*		M*	
5.2	Adherence to departure and arrival routes and ATC instructions	P*	—>*		M*	
5.3	Holding procedures	P*	—>*			
5.4	3D operations to DH/A of 200 ft (60 m) or to higher minima if required by the approach procedure	P*	—>*			
5.4.1	Manually, without flight director. Note: According to the AFM, RNP APCH procedures may require the use of autopilot or flight director. The procedure to be flown manually shall be chosen taken into account such limitations (for example, choose an ILS for 5.4.1 in the case of such AFM limitation).	P*	—>*		M*	
5.4.2	Manually, with flight director	P*	—>*		M*	
5.4.3	With coupled autopilot	P*	—>*			
5.4.4	Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing 1 000 ft above aerodrome level until touchdown or until completion of the missed approach procedure	P*	—>*		M*	
5.5	2D operations down to the MDA/H	P*	—>*		M*	

SINGLE/MULTI-PILOT HELICOPTERS		PRACTICAL TRAINING			SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		FSTD	H	Instructor initials when training completed	Checked in FSTD or H	Examiner initials when test completed
5.6	Go-around with all engines operating on reaching DA/H or MDA/MDH	P*	—>*			
5.6.1	Other missed approach procedures	P*	—>*			
5.6.2	Go-around with one engine simulated inoperative on reaching DA/H or MDA/MDH	P*	—>*		M*	
5.7	IMC autorotation with power recovery	P*	—>*		M*	
5.8	Recovery from unusual attitudes	P*	—>*		M*	
SECTION 6 — Use of optional equipment						
6	Use of optional equipment	P	—>			

D. Specific requirements for the powered-lift aircraft category

1. In the case of skill tests or proficiency checks for powered-lift aircraft type ratings, applicants shall pass Sections 1 to 5 and 6 (as applicable) of the skill test or proficiency check. Failure in more than five items will require applicants to repeat the entire test or check. Applicants failing not more than five items shall repeat the failed items. Failure in any item in the case of a retest or a recheck or failure in any other items already passed will require applicants to repeat the entire test or check. All sections of the skill test or proficiency check shall be completed within 6 months.

FLIGHT TEST TOLERANCE

2. Applicants shall demonstrate the ability to:
 - (a) operate the powered-lift aircraft within its limitations;
 - (b) complete all manoeuvres with smoothness and accuracy;
 - (c) exercise good judgement and airmanship;
 - (d) apply aeronautical knowledge;
 - (e) maintain control of the powered-lift aircraft at all times in such a manner that the successful outcome of a procedure or manoeuvre is never in doubt;
 - (f) understand and apply crew coordination and incapacitation procedures; and
 - (g) communicate effectively with the other crew members.
3. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the powered-lift aircraft used.

(a) IFR flight limits

Height

Generally	± 100 ft
Starting a go-around at decision height/altitude	+ 50 ft/- 0 ft
Minimum descent height/altitude	+ 50 ft/- 0 ft

Tracking

On radio aids	± 5°
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Precision approach	half-scale deflection, azimuth and glide path
Heading	
Normal operations	± 5°
Abnormal operations/emergencies	± 10°
Speed	
Generally	± 10 knots
With simulated engine failure	+ 10 knots/- 5 knots
(b) VFR flight limits:	
Height	
Generally	± 100 ft
Heading	
Normal operations	± 5°
Abnormal operations/emergencies	± 10°
Speed	
Generally	± 10 knots
With simulated engine failure	+ 10 knots/- 5 knots
Ground drift	
T.O. hover I.G.E.	± 3 ft
Landing	± 2 ft (with 0 ft rearward or lateral flight)

CONTENT OF THE TRAINING/SKILL TEST/PROFICIENCY CHECK

4. The following symbol means:

P = Trained as PIC or co-pilot and as PF and PM for the issue of a type rating as applicable

5. The practical training shall be conducted at least at the training equipment level shown as (P), or may be conducted up to any higher equipment level shown by the arrow (—>).

6. The following abbreviations are used to indicate the training equipment used:

FFS = full-flight simulator

FTD = flight training device

OTD = other training device

PL = powered-lift aircraft

(a) Applicants for the skill test for the issue of the powered-lift aircraft type rating shall pass Sections 1 to 5 and, if applicable, Section 6.

(b) Applicants for the revalidation or renewal of the powered-lift aircraft type rating proficiency check shall pass Sections 1 to 5 and, if applicable, Section 6 and/or Section 7.

(c) The starred items (*) shall be flown solely by reference to instruments. If this condition is not met during the skill test or proficiency check, the type rating will be restricted to VFR only.

7. Where the letter 'M' appears in the skill test or proficiency check column, this will indicate a mandatory exercise.

8. FSTDs shall be used for practical training and testing if they form part of an approved type rating course. The following considerations will apply to the approval of the course:

(a) the qualification of the FSTDs as set out in the relevant requirements of Annex VI (Part-ARA) and Annex VII (Part-ORA); and

(b) the qualifications of the instructor.

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
SECTION 1 — Preflight preparations and checks								
1.1	Powered-lift aircraft exterior visual inspection; location of each item and purpose of inspection				P			
1.2	Cockpit inspection	P	—>	—>	—>			
1.3	Starting procedures, radio and navigation equipment check, selection and setting of navigation and communication frequencies	P	—>	—>	—>		M	
1.4	Taxiing in compliance with ATC instructions or with instructions of an instructor		P	—>	—>			
1.5	Pre-take-off procedures and checks including power check	P	—>	—>	—>		M	
SECTION 2 — Flight manoeuvres and procedures								
2.1	Normal VFR take-off profiles: Runway operations (short take-off and landing (STOL) and vertical take-off and landing (VTOL)) including crosswind Elevated heliports Ground level heliports		P	—>	—>		M	
2.2	Take-off at maximum take-off mass (actual or simulated maximum take-off mass)		P	—>				
2.3.1	Rejected take-off: — during runway operations; — during elevated heliport operations; and — during ground level operations.		P	—>			M	
2.3.2	Take-off with simulated engine failure after passing decision point: during runway operations; during elevated heliport operations; and during ground level operations.		P	—>			M	
2.4	Autorotative descent in helicopter mode to ground (an aircraft shall not be used for this exercise)	P	—>	—>			M FFS only	
2.4.1	Windmill descent in aeroplane mode (an aircraft shall not be used for this exercise)		P	—>			M FFS only	

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
2.5	Normal VFR landing profiles: runway operations (STOL and VTOL) elevated heliports ground level heliports		P	—>	—>		M	
2.5.1	Landing with simulated engine failure after reaching decision point: — during runway operations; — during elevated heliport operations; and — during ground level operations.							
2.6	Go-around or landing following simulated engine failure before decision point		P	—>			M	
SECTION 3 — Normal and abnormal operations of the following systems and procedures:								
3	Normal and abnormal operations of the following systems and procedures (may be completed in an FSTD if qualified for the exercise):						M	A mandatory minimum of 3 items shall be selected from this section
3.1	Engine	P	—>	—>				
3.2	Pressurisation and air conditioning (heating, ventilation)	P	—>	—>				
3.3	Pitot/static system	P	—>	—>				
3.4	Fuel system	P	—>	—>				
3.5	Electrical system	P	—>	—>				
3.6	Hydraulic system	P	—>	—>				
3.7	Flight control and trim system	P	—>	—>				
3.8	Anti-icing and de-icing system, glare shield heating (if fitted)	P	—>	—>				
3.9	Autopilot/flight director	P	—>	—>				
3.10	Stall warning devices or stall avoidance devices and stability augmentation devices	P	—>	—>				
3.11	Weather radar, radio altimeter, transponder, ground proximity warning system (if fitted)	P	—>	—>				

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
3.12	Landing gear system	P	————>	————>				
3.13	APU	P	————>	————>				
3.14	Radio, navigation equipment, instruments and FMS	P	————>	————>				
3.15	Flap system	P	————>	————>				
SECTION 4 — Abnormal and emergency procedures								
4	Abnormal and emergency procedures (may be completed in an FSTD if qualified for the exercise)						M	A mandatory minimum of 3 items shall be selected from this section
4.1	Fire drills, engine, APU, cargo compartment, flight deck and electrical fires including evacuation if applicable	P	————>	————>				
4.2	Smoke control and removal	P	————>	————>				
4.3	Engine failures, shutdown and restart (an aircraft shall not be used for this exercise) including one engine inoperative conversion from helicopter to aeroplane modes and vice versa	P	————>	————>			FFS only	
4.4	Fuel dumping (simulated, if fitted)	P	————>	————>				
4.5	Wind shear at take-off and landing (an aircraft shall not be used for this exercise)			P			FFS only	
4.6	Simulated cabin pressure failure/emergency descent (an aircraft shall not be used for this exercise)	P	————>	————>			FFS only	
4.7	ACAS event (an aircraft shall not be used for this exercise)	P	————>	————>			FFS only	
4.8	Incapacitation of crew member	P	————>	————>				
4.9	Transmission malfunctions	P	————>	————>			FFS only	

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
4.11	Other emergency procedures as detailed in the appropriate flight manual	P	—>	—>				
SECTION 5 — Instrument flight procedures (to be performed in IMC or simulated IMC)								
5.1	Instrument take-off: transition to instrument flight is required as soon as possible after becoming airborne	P*	—>*	—>*				
5.1.1	Simulated engine failure during departure after decision point	P*	—>*	—>*			M*	
5.2	Adherence to departure and arrival routes and ATC instructions	P*	—>*	—>*			M*	
5.3	Holding procedures	P*	—>*	—>*				
5.4	Precision approach down to a decision height not less than 60 m (200 ft)	P*	—>*	—>*				
5.4.1	Manually, without flight director	P*	—>*	—>*			M* (Skill test only)	
5.4.2	Manually, with flight director	P*	—>*	—>*				
5.4.3	With use of autopilot	P*	—>*	—>*				
5.4.4	Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing the OM and continued either to touchdown or until completion of the missed approach procedure	P*	—>*	—>*			M*	
5.5	Non-precision approach down to the MDA/H	P*	—>*	—>*			M*	
5.6	Go-around with all engines operating on reaching DA/H or MDA/MDH	P*	—>*	—>*				

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING				SKILL TEST OR PROFICIENCY CHECK		
		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
5.6.1	Other missed approach procedures	P*	——>*	——>*				
5.6.2	Go-around with one engine simulated inoperative on reaching DA/H or MDA/MDH	P*					M*	
5.7	IMC autorotation with power recovery to land on runway in helicopter mode only (an aircraft shall not be used for this exercise)	P*	——>*	——>*			M* FFS only	
5.8	Recovery from unusual attitudes (this one depends on the quality of the FFS)	P*	——>*	——>*			M*	

SECTION 6 — Additional authorisation on a type rating for instrument approaches down to a decision height of less than 60 m (200 ft) (CAT II/III)

6	<p>Additional authorisation on a type rating for instrument approaches down to a decision height of less than 60 m (CAT II/III).</p> <p>The following manoeuvres and procedures are the minimum training requirements to permit instrument approaches down to a DH of less than 60 m (200 ft). During the following instrument approaches and missed approach procedures, all powered-lift aircraft equipment required for the type certification of instrument approaches down to a DH of less than 60 m (200 ft) shall be used.</p>							
6.1	Rejected take-off at minimum authorised RVR		P	——>			M*	
6.2	<p>ILS approaches:</p> <p>in simulated instrument flight conditions down to the applicable DH, using flight guidance system. Standard operating procedures (SOPs) of crew coordination shall be observed.</p>		P	——>	——>		M*	

POWERED-LIFT AIRCRAFT CATEGORY		PRACTICAL TRAINING				SKILL TEST OR PROFICIENCY CHECK		
		OTD	FTD	FFS	PL	Instructor's initials when training completed	Checked in FFS PL	Examiner's initials when test completed
6.3	Go-around: after approaches as indicated in 6.2 on reaching DH. The training shall also include a go-around due to (simulated) insufficient RVR, wind shear, aircraft deviation in excess of approach limits for a successful approach, ground/airborne equipment failure prior to reaching DH, and go-around with simulated airborne equipment failure.		P	—>	—>		M*	
6.4	Landing(s): with visual reference established at DH following an instrument approach. Depending on the specific flight guidance system, an automatic landing shall be performed.		P	—>			M*	
SECTION 7 — Optional equipment								
7	Use of optional equipment		P	—>	—>			

E. Specific requirements for the airship category

- In the case of skill tests or proficiency checks for airship type ratings, applicants shall pass Sections 1 to 5 and 6 (as applicable) of the skill test or proficiency check. Failure in more than five items will require applicants to repeat the entire test or check. Applicants failing not more than five items shall take the failed items again. Failure in any item in the case of a retest or a recheck, or failure in any other items already passed will require applicants to repeat the entire test or check again. All sections of the skill test or proficiency check shall be completed within 6 months.

FLIGHT TEST TOLERANCE

- Applicants shall demonstrate the ability to:
 - operate the airship within its limitations;
 - complete all manoeuvres with smoothness and accuracy;
 - exercise good judgement and airmanship;
 - apply aeronautical knowledge;
 - maintain control of the airship at all times in such a manner that the successful outcome of a procedure or manoeuvre is never in doubt;
 - understand and apply crew coordination and incapacitation procedures; and
 - communicate effectively with the other crew members.

3. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the airship used.

(a) **IFR flight limits:**

Height

Generally ± 100 ft

Starting a go-around at decision height/altitude $+ 50$ ft/ $- 0$ ft

Minimum descent height/altitude $+ 50$ ft/ $- 0$ ft

Tracking

On radio aids $\pm 5^\circ$

Precision approach half-scale deflection, azimuth and glide path

Heading

Normal operations $\pm 5^\circ$

Abnormal operations/emergencies $\pm 10^\circ$

(b) **VFR flight limits:**

Height

Generally ± 100 ft

Heading

Normal operations $\pm 5^\circ$

Abnormal operations/emergencies $\pm 10^\circ$

CONTENT OF THE TRAINING/SKILL TEST/PROFICIENCY CHECK

4. The following symbol means:

P = Trained as PIC or co-pilot and as PF and PM for the issue of a type rating as applicable.

5. The practical training shall be conducted at least at the training equipment level shown as (P), or may be conducted up to any higher equipment level shown by the arrow (\longrightarrow).

6. The following abbreviations are used to indicate the training equipment used:

FFS = full-flight simulator

FTD = flight training device

OTD = other training device

As = airship

- (a) Applicants for the skill test for the issue of the airship shall pass Sections 1 to 5 and, if applicable, Section 6.
- (b) Applicants for the revalidation or renewal of the airship type rating proficiency check shall pass Sections 1 to 5 and, if applicable Section 6.
- (c) The starred items (*) shall be flown solely by reference to instruments. If this condition is not met during the skill test or proficiency check, the type rating will be restricted to VFR only.
7. Where the letter 'M' appears in the skill test or proficiency check column, this will indicate a mandatory exercise.
8. FSTDs shall be used for practical training and testing if they form part of a type rating course. The following considerations will apply to the course:
- (a) the qualification of the FSTDs as set out in the relevant requirements of Annex VI (Part-ARA) and Annex VII (Part-ORA); and

(b) the qualifications of the instructor.

AIRSHIP CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	As	Instructor's initials when training completed	Checked in	Examiner's initials when test completed
							FFS As	
SECTION 1 — Preflight preparations and checks								
1.1	Preflight inspection				P			
1.2	Cockpit inspection	P	—>	—>	—>			
1.3	Starting procedures, radio and navigation equipment check, selection and setting of navigation and communication frequencies		P	—>	—>		M	
1.4	Off-mast procedure and ground manoeuvring			P	—>		M	
1.5	Pre-take-off procedures and checks	P	—>	—>	—>		M	
SECTION 2 — Flight manoeuvres and procedures								
2.1	Normal VFR take-off profile			P	—>		M	
2.2	Take-off with simulated engine failure			P	—>		M	
2.3	Take-off with heaviness > 0 (Heavy T/O)			P	—>			
2.4	Take-off with heaviness < 0 (Light/TO)			P	—>			
2.5	Normal climb procedure			P	—>			
2.6	Climb to pressure height			P	—>			
2.7	Recognising of pressure height			P	—>			
2.8	Flight at or close to pressure height			P	—>		M	
2.9	Normal descent and approach			P	—>			
2.10	Normal VFR landing profile			P	—>		M	
2.11	Landing with heaviness > 0 (Heavy Ldg.)			P	—>		M	
2.12	Landing with heaviness < 0 (Light Ldg.)			P	—>		M	
	Intentionally left blank							
SECTION 3 — Normal and abnormal operations of the following systems and procedures								
3	Normal and abnormal operations of the following systems and procedures (may be completed in an FSTD if qualified for the exercise):						M	A mandatory minimum of 3 items shall be selected from this section

AIRSHIP CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	As	Instructor's initials when training completed	Checked in	Examiner's initials when test completed
							FFS As	
3.1	Engine	P	—>	—>	—>			
3.2	Envelope pressurisation	P	—>	—>	—>			
3.3	Pitot/static system	P	—>	—>	—>			
3.4	Fuel system	P	—>	—>	—>			
3.5	Electrical system	P	—>	—>	—>			
3.6	Hydraulic system	P	—>	—>	—>			
3.7	Flight control and trim system	P	—>	—>	—>			
3.8	Ballonet system	P	—>	—>	—>			
3.9	Autopilot/flight director	P	—>	—>	—>			
3.10	Stability augmentation devices	P	—>	—>	—>			
3.11	Weather radar, radio altimeter, transponder, ground proximity warning system (if fitted)	P	—>	—>	—>			
3.12	Landing gear system	P	—>	—>	—>			
3.13	APU	P	—>	—>	—>			
3.14	Radio, navigation equipment, instruments and FMS	P	—>	—>	—>			
	Intentionally left blank							
SECTION 4 — Abnormal and emergency procedures								
4	Abnormal and emergency procedures (may be completed in an FSTD if qualified for the exercise)						M	A mandatory minimum of three items shall be selected from this section
4.1	Fire drills, engine, APU, cargo compartment, flight deck and electrical fires, including evacuation if applicable	P	—>	—>	—>			
4.2	Smoke control and removal	P	—>	—>	—>			
4.3	Engine failures, shutdown and restart: in particular phases of flight, inclusive multiple engine failure	P	—>	—>	—>			

AIRSHIP CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	As	Instructor's initials when training completed	Checked in	Examiner's initials when test completed
							FFS As	
4.4	Incapacitation of crew member	P	—>	—>	—>			
4.5	Transmission/gearbox malfunctions	P	—>	—>	—>		FFS only	
4.6	Other emergency procedures as outlined in the appropriate flight manual	P	—>	—>	—>			
SECTION 5 — Instrument Flight Procedures (to be performed in IMC or simulated IMC)								
5.1	Instrument take-off: transition to instrument flight is required as soon as possible after becoming airborne	P*	—>*	—>*	—>*			
5.1.1	Simulated engine failure during departure	P*	—>*	—>*	—>*		M*	
5.2	Adherence to departure and arrival routes and ATC instructions	P*	—>*	—>*	—>*		M*	
5.3	Holding procedures	P*	—>*	—>*	—>*			
5.4	Precision approach down to a decision height not less than 60 m (200 ft)	P*	—>*	—>*	—>*			
5.4.1	Manually, without flight director	P*	—>*	—>*	—>*		M* (Skill test only)	
5.4.2	Manually, with flight director	P*	—>*	—>*	—>*			
5.4.3	With use of autopilot	P*	—>*	—>*	—>*			
5.4.4	Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing the OM and continued to touchdown or until completion of the missed approach procedure	P*	—>*	—>*	—>*		M*	
5.5	Non-precision approach down to the MDA/H	P*	—>*	—>*	—>*		M*	
5.6	Go-around with all engines operating on reaching DA/H or MDA/MDH	P*	—>*	—>*	—>*			
5.6.1	Other missed approach procedures	P*	—>*	—>*	—>*			

AIRSHIP CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK		
		Manoeuvres/procedures	OTD	FTD	FFS	As	Instructor's initials when training completed	Checked in	Examiner's initials when test completed
FFS As									
5.6.2	Go-around with one engine simulated in-operative on reaching DA/H or MDA/MDH	P*						M*	
5.7	Recovery from unusual attitudes (this one depends on the quality of the FFS)	P*	—>*	—>*	—>*			M*	

SECTION 6 — Additional authorisation on a type rating for instrument approaches down to a decision height of less than 60 m (200 ft) (CAT II/III)

6	Additional authorisation on a type rating for instrument approaches down to a decision height of less than 60 m (200 ft) (CAT II/III). The following manoeuvres and procedures are the minimum training requirements to permit instrument approaches down to a DH of less than 60 m (200 ft). During the following instrument approaches and missed approach procedures, all airship equipment required for the type certification of instrument approaches down to a DH of less than 60 m (200 ft) shall be used.								
6.1	Rejected take-off at minimum authorised RVR		P	—>				M*	
6.2	ILS approaches: in simulated instrument flight conditions down to the applicable DH, using flight guidance system. SOPs of crew coordination shall be observed.		P	—>				M*	
6.3	Go-around After approaches as indicated in 6.2 on reaching DH. The training shall also include a go-around due to (simulated) insufficient RVR, wind shear, aircraft deviation in excess of approach limits for a successful approach, ground/airborne equipment failure prior to reaching DH and, go-around with simulated airborne equipment failure.		P	—>				M*	

AIRSHIP CATEGORY		PRACTICAL TRAINING					SKILL TEST OR PROFICIENCY CHECK	
Manoeuvres/procedures		OTD	FTD	FFS	As	Instructor's initials when training completed	Checked in	Examiner's initials when test completed
							FFS As	
6.4	Landing(s): with visual reference established at DH following an instrument approach. Depending on the specific flight guidance system, an automatic landing shall be performed		P	—>			M*	
SECTION 7 — Optional equipment								
7	Use of optional equipment		P	—>				