INFORMATION NOTICE

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Information guide for the UPRT training within an ATO

This Information Notice contains information that is for guidance and/or awareness.

Recipients are asked to ensure that this Information Notice is copied to all members of their staff who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	None
Air Traffic:	None
Airspace:	None
Airworthiness:	None
Flight Operations:	None
Training organisations	ATO/FSTD OPERATORS

Introduction

HCAA Guidance Material on the implementation of the UPRT (Upset Prevention and Recovery Training) for ATO (Approved Training Organizations)

Guidance and/or Awareness

0.1. Intro:

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 and at a global level. This included new training requirements to better prepare pilots for adverse situations of aircraft upset and loss of control.
By Commission Regulation (EU) 2015/445 , 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.
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 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.
This document intends to give an overview of the regulatory framework, the deadlines that are applicable and the procedures to be followed.

Definitions:

"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.

"Aeroplane upset" means an undesired airplane state characterized by unintentional divergences from parameters normally experienced during operations. An airplane upset may involve pitch and/or bank angle divergences as well as inappropriate airspeeds for the conditions.
Note: undesired airplane state is defined in the Line Operations Safety Audit (LOSA) manual, ICAO Doc 9803, 1st edition. Deviations from the desired airplane state will become larger until action is taken to stop the divergence. Return to the desired airplane state can be achieved through natural airplane reaction to accelerations, autoflight system response or pilot intervention.

"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.

'Negative training' refers to training which unintentionally introduces incorrect information or invalid concepts, which could actually decrease rather than increase safety.

'Negative transfer of training' refers to the application (and 'transfer') of what was learned in a training environment (i.e. a classroom, an FSTD) to normal practice, i.e. it describes the degree to which what was learned in training is applied to actual, normal practices. In this context, negative transfer of training refers to the inappropriate generalisation of knowledge and skills to a situation or setting in normal practice that does not equal the training situation or setting.

"Surprise" means the emotionally-based recognition of a difference in what was expected and what is actual.

"Startle" means the initial short-term, involuntary physiological and cognitive reactions to an unexpected event that commence the normal human stress response.

"Stress" (response) means the response to a threatening event that includes physiological, psychological and cognitive effects. These effects may range from positive to negative and can either enhance or degrade performance.

CHAPTER 1: Legal basis

· 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
· EXECUTIVE DIRECTOR DECISION 2018/006/R of 03 may 2018 issuing the Certification Specifications for Aeroplane Flight Simulation Training Devices 'CS-FSTD(A) — Issue 2'
· ICAO document 10011

CHAPTER 2: Applicability

Upset prevention and recovery training shall be a mandatory part of the following training courses :
· Integrated ATP training
· MPL training
· CPL-IR(A) integrated training
· CPL(A) integrated training
· CPL(A) modular training
· Class or type rating for:

- single-pilot aeroplanes operated in multi-pilot operations
- single-pilot non-high-performance complex aeroplanes
- single-pilot high-performance complex aeroplanes
- multi-pilot aeroplanes

· TRI/SFI (A) training course

The EU regulation N°2018/1974 implements a new training course "Advanced UPRT" requiring approval for ATO.

CHAPTER 3: Training manuals

3.1. New training manuals

As from 20 December 2019, all new Training Manuals, for the above mentioned courses, submitted by an ATO will have to be compliant with the UPRT requirements of the amended AIRCREW regulation.

3.2. Updates on previously accepted training manuals

As from 20 December 2019, all concerned approved training courses starting within an ATO will have to be compliant with the UPRT requirements of the amended AIRCREW regulation. The amended training manuals will have to be submitted and accepted by the HCAA.

All previously approved training courses started before 20 December 2019 must be completed (including testing and checking) by 20 December 2021.

The FSTD used for UPRT training in an ATO must be qualified against the requirements laid down in CS-FSTD (A) Issue 2.

CHAPTER 4: UPRT Training

4.1. Basic UPRT

Refer to Part-FCL AMC2 to Appendix 3; AMC1 to Appendix 5: BASIC UPRT FOR AEROPLANE ATP INTEGRATED, CPL/IR INTEGRATED, CPL INTEGRATED AND CPL MODULAR COURSES AS WELL AS MPL COURSE PHASES 1 TO 3

4.2. Advanced UPRT

FCL.745.A Advanced UPRT – Aeroplanes

The advanced UPRT course shall be completed at an ATO and shall comprise at least:

· 5 hours of theoretical knowledge instruction;

· Pre-flight briefings and postflight debriefings; and

· 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. Upon completion of the UPRT course, applicants shall be issued with a certificate of completion by the ATO.

The course content is described in Part-FCL AMC1 FCL.745.A

Instructors should understand that all-attitude/on-aeroplane upset recovery exercises serve primarily as resilience-builder. In other words, the training serves mainly human-factor training objectives and not only flying skills training.

In order to increase the applicant's resilience related to the handling of aeroplane upsets, the advanced UPRT course needs to include the development of confidence and competence in recognising and recovering safely from upsets under the presence of the real human factors. Such confidence building is specifically addressed by successfully overcoming natural stress response (startle and surprise) and being able to perform critically important counter-intuitive actions.

The instructor must understand that UPRT and aerobatics training are different.

FCL.725.A
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,
· a type rating for a complex single-pilot classified as a high performance aeroplane,
· the first type rating course for multi-pilot aeroplane, shall have completed an approved Advanced UPRT course at an ATO.
In cases where the ATO wants to offer Advance UPRT as a standalone module, the ATO certificate will be amended. For integrated training, where UPRT training is mandatory, the ATO will submit an updated training manual and the certificate will not be amended.

4.3. Specific UPRT

FCL.725.A
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.

The course content can be found in:
· AMC2 ORA.ATO.125
· GM1 ORA.ATO.125
· Part-FCL Appendix 9 – TMGs and single-pilot aeroplanes, except for high-performance complex aeroplanes – Section 7
· Part-FCL Appendix 9 – Muti-Pilot aeroplanes and single-pilot high performance complex aeroplanes – Section 3

CHAPTER 5: Instructor Training

5.1. Advanced UPRT

Part-FCL.915 (e) Additional requirements for FI instructing for Advanced UPRT:
· have at least 500 hours of flight time as pilots of aeroplanes, including 200 hours of flight instruction;
· have completed a UPRT instructor training course at an ATO, during which the competence of applicants shall have been assessed continuously; and
· 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 to instruct for Advanced UPRT in the logbook of the applicants.
The content for the Advanced UPRT instructor training course can be found in:
· AMC1 FCL.915 (e) General prerequisites and requirements for instructors ADDITIONAL REQUIREMENTS FOR INSTRUCTING IN A TRAINING COURSE IN ACCORDANCE WITH FCL.745.A
· GM1 FCL.915 (e) General prerequisites and requirements for instructors ADDITIONAL REQUIREMENTS FOR INSTRUCTING IN A TRAINING COURSE IN ACCORDANCE WITH FCL.745.A
· AMC2 FCL.915 (e) General prerequisites and requirements for instructors.
According to Part-FCL.900 (b) (1) (ii) the HCAA will grant privileges to instruct for advanced UPRT to a restricted amount of FI, in order to allow ATO's to start with advanced UPRT training. The ATO's with an approved advanced UPRT course will propose a list of instructors with extensive experience directly related to UPRT (Military Pilots, Aerobatic rating). The HCAA has the ultimate authority to accept or not the proposed flight instructors.

5.2. Refresher training

The privileges to instruct for Advanced UPRT 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.
AMC1 Part-FCL 915(e) (2) lays down the requirements; the ATO will establish a case-by-case compliant training scheme.

5.3. Instructor for instructors

Part-FCL 915 e) (3)
The instructors holding the privileges to instruct for Advanced UPRT may act as instructors for an advanced UPRT instructor course provided that they:
· Have 25 hours of flight instruction experience during advanced UPRT training;
· Have completed an assessment of competence for this privilege;
· Comply with the recency requirements for UPRT instructors.
The privileges shall be entered in the logbook of the instructors and will be signed by the examiner.

5.3. TRI/SFI

The requirements for the training course are found in AMC1 Part-FCL.930.TRI TRI Upset Prevention and Recovery Training (UPRT) (ac). Existing TRI/SFI course will have to be amended to meet those new requirements. For existing TRI/SFI the ATO will assess the gap between the existing UPRT knowledge and the new requirements laid down in the AMC and provide bridge training with special emphasis on those items:
· understand the capabilities and limitations of the FSTD used for UPRT;
· be able to ensure that the training remains within the FSTD training envelope to avoid the risk of negative transfer of training;
· understand and be able to use the (instructor operating station) IOS of the FSTD in the context of effective UPRT delivery;
· understand and be able to use the FSTD instructor tools available for providing accurate feedback on pilot performance;
· understand the importance of adhering to the FSTD UPRT scenarios that have been validated by the training program developer; and
· understand the missing critical human factor aspects due to the limitations of the FSTD and convey this to the student pilot(s) receiving the training.

CHAPTER 6: Training Devices

6.1. Training aeroplane

Advanced UPRT should be delivered on a suitable aircraft to ensure that no negative transfer of learning to wider body occurs.
It is the responsibility of the ATO to demonstrate that the aircraft used for Advanced UPRT is adequate for the intended use.
It is the responsibility of the ATO to consult the Type Certificate holder of the aircraft about the intended UPRT usage.
There is presently no certification for “Training Aircraft”. There are 3 categories:
· Normal category is non aerobatics (3.8G to -1.52g)
- Normal flying
- Stall (except whip stalls)
- Lazy 8, chandelles and steep turns or similar (60° AOB)
· Utility category (4.4g to -1.76g): same as normal category
- Spin and lazy 8 up to 90° AOB.
· Aerobatic category: no limitations.
Due attention should be paid about training spin on aerobatic aircraft as this kind of aircraft will usually stop spinning faster than the utility category.

6.2. Training FSTD

FSTD used in an approved course for UPRT training must be qualified according to UPRT elements listed in CS-FSTD(A) – Issue 2:

· For FSTD already qualified with CS-FSTD(A) – Issue 2 as reference document, provided that no UPRT limitation exist on the certificate;

· For FSTD qualified with an older reference document, UPRT capabilities must be explicitly specified as additional capabilities on the certificate.

For sessions not covering UPRT elements, a FSTD without UPRT capabilities may be used; those sessions must clearly be identified by the ATO. In all cases the ATO will submit to HCAA a list of FSTD that will be used for specific UPRT training. If for some reason the FSTD used for the training is not qualified in accordance with CS-FSTD (A) Issue 2, the ATO must introduce an exemption in accordance with the flexible provisions of Art 71.1 of EC 2018/1139. FSTD's not qualified in accordance with CS-FSTD issue 2 cannot be used for UPRT.

7. Validity

7.1 This Information Notice will remain in force until further notice.