STATE OF KUWAIT
Directorate General of Civil Aviation

دولة الكويت
الإدارة العامة للطيران المدني

Date : 2023/6/05 التـــاريخ :

Ref : 2023/086/SUPDT-R/41 الإشارة :

All KCASR Stockholders and Users

Subject.: ***Notice of Proposed Amendment's (NPA) No. 2023-08 to Kuwait Civil Aviation Safety Regulations KCASR 1 - PERSONNEL LICENSINGPART ORA - ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM) Rev 1.***

Dear Sir,

Purpose:

The purpose of this NPA is to announce to the KCASR users the intention of the Directorate General of Civil Aviation to amend ***KCASR 1 - PERSONNEL LICENSINGPART ORA - ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM)*** (issue 4), In order to be in line with EASA requirements.

Action Required:

All users of KCASR are required to refer to DGCA/ASD website (https://kcasr.dgca.gov.kw) for reviewing the NPA and mail or email (safety@dgca.gov.kw) their comments to DGCA by 13/Jul/2023 using the attached NPA Response Sheet Forms No. 1500 or using NPA comments & feedback form on the website. If we do not receive your response by this date, it will be assumed that you do not have any comments on the proposal.

If required, the DGCA/Aviation Safety Department personnel are available to answer your questions on the interpretation and intended implementation of the proposed amendments.

This is for your information and distribution to the concerned parties.

Yours Sincerely,

President of Civil Aviation

Engr. Emad F. Abdelwi
Deputy Director General for Aviation Safety
Air Security & Transport Civil Aviation
Assistant Undersecretary

CC: Director General of Civil Aviation.
Dy. Dir. Gen. Kuwait. Intel. Airport Affairs.
Dy. Dir. Gen. for Air Navigation Services Affairs.
Head of Technical Office.
Aviation Safety Director.
Air Transport Director.
Inspection & oversight Superintendent.
Head of Standards & Aviation Safety Regulations Division.

Notes on the presentation of the Amendment
Notice Of Proposed Amendment
(NPA)

The text of the amendment is arranged to show deleted text in Red Color and with a line through it, new text to be inserted is in Blue color as shown below:

~~Text to be deleted is in Red and shown with a line through it.~~	**Text to be deleted**
New text to be inserted is in Blue Color.	**New text to be inserted**
~~Text to be deleted is in Red and shown with a line through it~~, followed by the replacement text which is in Blue Color.	**New text to replace existing text**
. . . Indicates that remaining text is unchanged in front or following the reflected amendment.	**Text is unchanged**

Notice Of Safety Regulation Amendment
(NPA, NSRA and Revisions)

Side bar indicates that text is changed or added.

NPA RESPONSE FORM

NPA 2023-08

Please add your comments on the proposal by ticking [✓] the appropriate box below.

Any additional constructive comments, suggested amendments or alternative action will be welcome and may be provided on this response sheet or by separate correspondence.

☐ No comments on the proposal.

☐ Comments on the proposal. (Please provide explanatory comment).

Name:	Organization:
Address/Contact No:	
E-Mail:	
Signature:	Date:

الطيران المدني
Civil Aviation
الإدارة العامة للطيران المدني - دولة الكويت
Directorate General of Civil Aviation - State of Kuwait

Kuwait Civil Aviation Safety Regulations

KCASR 1 - PERSONNEL LICENSING

PART ORA - ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM)

Amendment Record

Amendment No	Date of Issue	Remarks
1	June 2018	Part Rename
2	June 2023	NPA 2023-08 (In Synch with EASA)

Control of this Document

DC.1 Introduction

DC.1.1 Pursuant to Law No (30) of the year 1960 and subsequent Ministerial Decisions No (3) of the year 1986~~,~~ and No (18) of the year 1990, ~~and No (3) of the year 1996,~~ based upon that Law and as reflected in the Preamble to the Kuwait Civil Aviation Safety Regulations, Issue 3, Rev.~~0~~2, August ~~2013~~2019, the President of the Kuwait Directorate General of Civil Aviation is empowered to adopt and amend Kuwait Civil Aviation Safety Regulations. In accordance herewith, the following AMC & GM is hereby established for compliance by all persons concerned. This AMC & GM shall be known as KCASR 1 - Part ORA Organisational Requirements for Aircrew (AMC & GM) and any reference to this title shall mean referring to these regulations governing the requirements to be met for the certification of personnel licensing.

DC.2 Authority for this Regulation

DC.2.1 This KCASR 1 - Part ORA Organisational Requirements for Aircrew (AMC & GM) is issued on the authority of the President of the Kuwait Directorate General of Civil Aviation.

DC.3 Applicability

DC.3.1 This KCASR 1 - Part ORA Organisational Requirements for Aircrew (AMC & GM) is applicable to the aviation industry of the State of Kuwait.

DC.4 Scope

DC.4.1 KCASR 1 Personnel Licensing (AMC & GM) contain the acceptable means of compliance and guidance material for the personnel licensing regulations of the State of Kuwait and shows compliance with ICAO Annex 1. The AMC & GM are separated into the following parts with cross references between parts where applicable.

- Part ARA Authority Requirements for Aircrew (AMC & GM)
- **Part ORA Organisational Requirements for Aircrew (AMC & GM)**
- Part FCL Flight Crew Licensing (AMC & GM)
- Part CC Cabin Crew (AMC & GM)
- Part FOO/FD Flight Operation Officer and Flight Dispatcher (AMC & GM)
- Part MED Medical (AMC & GM)
- Part 66 Aircraft Maintenance Engineer Licence (AMC & GM)
- Part 147 Approved Training Organisations (AMC & GM)
- Part ATCO Air Traffic Control Officer (AMC & GM)

DC.5 Definitions

DC.5.1 Terms not defined shall have the meaning given to them in the relevant legal instruments or international legal instruments in which they appear, especially as they appear in the Convention and its Annexes.

SOP	standard operating procedure
SPL	sailplane pilot licence
TAWS	terrain awareness warning system
TRE	type rating examiner
TRI	type rating instructor
UPRT	upset prevention and recovery training
VDR	validation data roadmap
ZFTT	zero flight-time training

AMC1 ORA.GEN.120(a) Means of compliance

Demonstration of compliance

In order to demonstrate that regulations are met, a risk assessment should be completed and documented. The result of this risk assessment should demonstrate that an equivalent level of safety to that established by the Acceptable Means of Compliance (AMC) adopted by Kuwait DGCA is reached.

AMC1 ORA.GEN.125 Terms of approval and privileges of an organisation

Management system documentation

The management system documentation should contain the privileges and detailed scope of activities for which the organisation is certified, as relevant to the applicable requirements. The scope of activities defined in the management system documentation should be consistent with the terms of approval.

AMC1 ORA.GEN.130 Changes to organisations

Application time frames

(a) The application for the amendment of an organisation certificate should be submitted at least 30 days before the date of the intended changes.

(b) In the case of a planned change of a nominated person, the organisation should inform the Kuwait DGCA at least 10 days before the date of the proposed change.

(c) Unforeseen changes should be notified at the earliest opportunity, in order to enable the Kuwait DGCA to determine continued compliance with the applicable requirements and to amend, if necessary, the organisation certificate and related terms of approval.

GM1 ORA.GEN.130(a) Changes to organisations

General

(a) Typical examples of changes that may affect the certificate or the terms of approval are listed below:

(1) the name of the organisation;

(2) the organisation’s principal place of business;

(3) the organisation’s scope of activities;

aircraft for subsequent or repeat manoeuvres or instrument approaches. In such cases it should be ensured that the training syllabus provides adequate flexibility to enable the minimum amount of required flight training to be carried out.

~~(la) Additional UPRT training as per point FCL.725.A(c) UPRT as per point FCL.725.A(c) should include the elements and components in table 1.~~

~~Table 1: Elements and respective components of upset prevention training~~

~~Elements and components~~		~~TK instruction~~	~~FSTD/Aeroplane training~~
~~A.~~	~~Aerodynamics~~		
~~1.~~	~~General aerodynamic characteristics~~	~~•~~	
~~2.~~	~~Aeroplane certification and limitations~~	~~•~~	
~~3.~~	~~Aerodynamics (high and low altitudes)~~	~~•~~	~~•~~
~~4.~~	~~Aeroplane performance (high and low altitudes)~~	~~•~~	~~•~~
~~5.~~	~~AoA and stall awareness~~	~~•~~	~~•~~
~~6.~~	~~Stick shaker or other stall-warning device activation (as applicable)~~	~~•~~	~~•~~
~~7.~~	~~Stick pusher (as applicable)~~	~~•~~	~~•~~
~~8.~~	~~Mach effects (if applicable to the aeroplane type)~~	~~•~~	~~•~~
~~9.~~	~~Aeroplane stability~~	~~•~~	~~•~~
~~10.~~	~~Control surface fundamentals~~	~~•~~	~~•~~
~~11.~~	~~Use of trims~~	~~•~~	~~•~~
~~12.~~	~~Icing and contamination effects~~	~~•~~	~~•~~
~~13.~~	~~Propeller slipstream (as applicable)~~	~~•~~	~~•~~
~~B.~~	~~Causes of and contributing factors to upsets~~		
~~1.~~	~~Environmental~~	~~•~~	
~~2.~~	~~Pilot-induced~~	~~•~~	
~~3.~~	~~Mechanical (aeroplane systems)~~	~~•~~	
~~C.~~	~~Safety review of accidents and incidents relating to aeroplane upsets~~		
~~1.~~	~~Safety review of accidents and incidents relating to aeroplane upsets~~	~~•~~	

~~D.~~	~~G-load awareness and management~~		
~~1.~~	~~Positive/negative/increasing/decreasing G-loads~~	~~•~~	~~•~~
~~2.~~	~~Lateral G awareness (sideslip)~~	~~•~~	~~•~~
~~3.~~	~~G-load management~~	~~•~~	~~•~~
~~E.~~	~~Energy management~~		
~~1.~~	~~Kinetic energy vs potential energy vs effect of thrust-drag ratio on the total energy~~	~~•~~	~~•~~
~~F.~~	~~Flight path management~~		
~~1.~~	~~Relationship between pitch, power and performance~~	~~•~~	~~•~~
~~2.~~	~~Performance and effects of differing power plants (if applicable)~~	~~•~~	~~•~~
~~3.~~	~~Manual and automation inputs for guidance and control~~	~~•~~	~~•~~
~~4.~~	~~Type-specific characteristics~~	~~•~~	~~•~~
~~5.~~	~~Management of go-arounds from various stages during the approach~~	~~•~~	~~•~~
~~6.~~	~~Automation management~~	~~•~~	~~•~~
~~7.~~	~~Proper use of rudder~~	~~•~~	~~•~~
~~G.~~	~~Recognition~~		
~~1.~~	~~Type-specific examples of physiological, visual and instrument clues during developing and developed upsets~~	~~•~~	~~•~~
~~2.~~	~~Pitch/power/roll/yaw~~	~~•~~	~~•~~
~~3.~~	~~Effective scanning (effective monitoring)~~	~~•~~	~~•~~
~~4.~~	~~Type-specific stall protection systems and cues~~	~~•~~	~~•~~
~~5.~~	~~Criteria for identifying stalls and upsets~~	~~•~~	~~•~~
~~H.~~	~~System malfunction (including immediate handling and subsequent operational considerations, as applicable)~~		
~~1.~~	~~Flight control defects~~	~~•~~	~~•~~
~~2.~~	~~Engine failure (partial or full)~~	~~•~~	~~•~~
~~3.~~	~~Instrument failures~~	~~•~~	~~•~~
~~4.~~	~~Loss of reliable airspeed (see also point (lb) of this AMC)~~	~~•~~	~~•~~
~~5.~~	~~Automation failures~~	~~•~~	~~•~~

6.	Fly-by-wire (FBW) protection degradations	•	•
7.	Stall protection system failures including icing alerting systems	•	•

(lb) Flight path management (manual or automatic, as appropriate) during unreliable airspeed indication and other failures at high altitude in aeroplanes with a maximum cruising altitude above FL300

The following training elements should be integrated into type rating training courses for aeroplanes with a maximum cruising altitude above FL300:

Elements and components	TK instruction	FSTD/ Aeroplane training
Basic flight physics principles concerning flight at high altitude, with a particular emphasis on the relative proximity of the critical Mach number and the stall, pitch behaviour, and an understanding of the reduced stall angle of attack when compared with low altitude flight.	•	•
Interaction of the automation (autopilot, flight director, auto-throttle/auto-thrust) and the consequences of failures inducing disconnection of the automation.	•	•
Consequences of an unreliable airspeed and other failures indication at high altitude and the need for the flight crew to promptly identify the failure and react with appropriate (minimal) control inputs to keep the aircraft in a safe envelope.	•	•
Degradation of FBW flight control laws/modes and its consequence on aircraft stability and flight envelope protections, including stall warnings.	•	•
Practical training, using appropriate simulators, on manual handling at high altitude in normal and in non-normal flight control laws/modes, with particular emphasis on pre-stall buffet, the reduced stall angle of attack when compared with low altitude flight, and the effect of pitch inputs on the aircraft trajectory and energy state.		•
The requirement to promptly and accurately apply the stall recovery procedure, as provided by the aircraft manufacturer, at the first indication of an impending stall. Differences between high-altitude and low-altitude stalls must be addressed.	•	•
Procedures for taking over and transferring manual control of the aircraft, especially for FBW aeroplanes with independent side-sticks.	•	•
Task sharing and crew coordination in high workload/stress conditions with appropriate call-out and acknowledgement to confirm changes to the aircraft flight control law/mode.	•	•

(la) Additional UPRT training as per point FCL.725.A(c) UPRT as per point FCL.725.A(c) should include the elements and components in table 1.

Table 1: Elements and respective components of upset prevention training

Elements and components		TK instruction	FSTD/Aeroplane training
A.	**Aerodynamics**		
1.	General aerodynamic characteristics	•	
2.	Aeroplane certification and limitations	•	
3.	Aerodynamics (high and low altitudes)	•	•
4.	Aeroplane performance (high and low altitudes)	•	•
5.	AoA and stall awareness	•	•
6.	Stick shaker or other stall-warning device activation (as applicable)	•	•
7.	Stick pusher (as applicable)	•	•
8.	Mach effects (if applicable to the aeroplane type)	•	•
9.	Aeroplane stability	•	•
10.	Control surface fundamentals	•	•
11.	Use of trims	•	•
12.	Icing and contamination effects	•	•
13.	Propeller slipstream (as applicable)	•	•
B.	**Causes of and contributing factors to upsets**		
1.	Environmental	•	
2.	Pilot-induced	•	
3.	Mechanical (aeroplane systems)	•	
C.	**Safety review of accidents and incidents relating to aeroplane upsets**		
1.	Safety review of accidents and incidents relating to aeroplane upsets	•	
D.	**G-load awareness and management**		
1.	Positive/negative/increasing/decreasing G-loads	•	•
2.	Lateral G awareness (sideslip)	•	•
3.	G-load management	•	•
E.	**Energy management**		

1.	Kinetic energy vs potential energy vs effect of thrust-drag ratio on the total energy	•	•
F.	**Flight path management**		
1.	Relationship between pitch, power and performance	•	•
2.	Performance and effects of differing power plants (if applicable)	•	•
3.	Manual and automation inputs for guidance and control	•	•
4.	Type-specific characteristics	•	•
5.	Management of go-arounds from various stages during the approach	•	•
6.	Automation management	•	•
7.	Proper use of rudder	•	•
G.	**Recognition**		
1.	Type-specific examples of physiological, visual and instrument clues during developing and developed upsets	•	•
2.	Pitch/power/roll/yaw	•	•
3.	Effective scanning (effective monitoring)	•	•
4.	Type-specific stall protection systems and cues	•	•
5.	Criteria for identifying stalls and upsets	•	•
H.	**System malfunction** (including immediate handling and subsequent operational considerations, as applicable)		
1.	Flight control defects	•	•
2.	Engine failure (partial or full)	•	•
3.	Instrument failures	•	•
4.	Loss of reliable airspeed (see also point (lb) of this AMC)	•	•
5.	Automation failures	•	•
6.	Fly-by-wire (FBW) protection degradations	•	•
7.	Stall protection system failures including icing alerting systems	•	•

(lb) Flight path management (manual or automatic, as appropriate) during unreliable airspeed indication and other failures at high altitude in aeroplanes with a maximum cruising altitude above FL300

The following training elements should be integrated into type rating training courses for aeroplanes with a maximum cruising altitude above FL300:

Elements and components	TK instruction	FSTD/ Aeroplane training
Basic flight physics principles concerning flight at high altitude, with a particular emphasis on the relative proximity of the critical Mach number and the stall, pitch behaviour, and an understanding of the reduced stall angle of attack when compared with low altitude flight.	•	•
Interaction of the automation (autopilot, flight director, auto-throttle/auto-thrust) and the consequences of failures inducing disconnection of the automation.	•	•
Consequences of an unreliable airspeed and other failures indication at high altitude and the need for the flight crew to promptly identify the failure and react with appropriate (minimal) control inputs to keep the aircraft in a safe envelope.	•	•
Degradation of FBW flight control laws/modes and its consequence on aircraft stability and flight envelope protections, including stall warnings.	•	•
Practical training, using appropriate simulators, on manual handling at high altitude in normal and in non-normal flight control laws/modes, with particular emphasis on pre-stall buffet, the reduced stall angle of attack when compared with low altitude flight, and the effect of pitch inputs on the aircraft trajectory and energy state.		•
The requirement to promptly and accurately apply the stall recovery procedure, as provided by the aircraft manufacturer, at the first indication of an impending stall. Differences between high-altitude and low-altitude stalls must be addressed.	•	•
Procedures for taking over and transferring manual control of the aircraft, especially for FBW aeroplanes with independent side-sticks.	•	•
Task sharing and crew coordination in high workload/stress conditions with appropriate call-out and acknowledgement to confirm changes to the aircraft flight control law/mode.	•	•

Skill test

(m) Upon completion of the flight training, the pilot will be required to undergo a skill test with an examiner to demonstrate adequate competency of aircraft operation for issue of the type rating. The skill test should be separate from the flight training syllabus, and provision for it cannot be included in the minimum requirements or training hours of the agreed flight training programme. The skill test may be conducted in an FFS, the aeroplane or, in exceptional circumstances, a combination of both.

Course Completion Certificate

(n) The HT, or a nominated representative, should certify that all training has been carried out before an applicant undertakes a skill test for the type rating to be included in the

instrument approaches. In such cases it should be ensured that the training syllabus provides adequate flexibility to enable the minimum amount of required flight training to be carried out.

Final in-flight exercise

(j) Upon completion of the flight test training, the test pilot or flight test engineer will be required to undergo in-flight exercise with a flight test instructor (FTI) to demonstrate adequate competency of flight testing for issue of the flight test rating. The final in- flight exercise must be conducted in an appropriate aeroplane or helicopter (as applicable).

Course completion certificate

(k) The HT is required to certify that the applicant has successfully completed the training course.

GM1 ORA.ATO.125 Training programme

UPSET PREVENTION AND RECOVERY TRAINING (UPRT)

(a) General

The objective of the UPRT is to ensure that pilots are competent to prevent or recover from a developing or developed aeroplane upset. Prevention training prepares pilots to avoid upsets whereas recovery training prepares pilots to prevent an accident once an upset condition has developed.

(b) Human factors

Threat and Error Management (TEM) and Crew Resource Management (CRM) principles should be integrated into the UPRT. In particular, the surprise and startle effect as well as the importance of resilience development should be emphasised.

Training should also emphasise that an actual upset condition may expose pilots to significant physiological and psychological challenges, such as visual illusions, spatial disorientation and unusual G-forces, with the objective of developing strategies to deal with such challenges.

(c) Development of training scenarios

During the development of training scenarios, the ATO should ensure that all of the following is avoided:

(1) negative training and negative transfer of training; and

(2) training utilising predictive scenarios.

Please refer to Revision 2 of the Airplane Upset Recovery Training Aid (AURTA) for further guidance on the development of training scenarios.

(d) Additional guidance

Specific guidance to the UPRT elements and exercises is available in:

(1) the latest revision of the ICAO Doc 10011 ‘Manual on Aeroplane Upset Prevention and Recovery Training’;

(2) Revision 3 of the Airplane Upset Prevention and Recovery Training Aid (AUPRTA); and

(3) the Flight Safety Foundation publication ‘A Practical Guide for Improving Flight Path Monitoring’, November 2014.

(e) Training platform

(1) When designing a training course, ATOs should select aeroplanes that are suitable for all the required training exercises. Where certain exercises require particular capabilities, then an ATO may consider the use of different aeroplanes for different exercises. Examples include basic UPRT or instrument flight training and the advanced UPRT course.

(2) For basic UPRT training conducted during the CPL or ATP courses, it is not anticipated that aerobatic category aeroplanes will be required or that aircraft need to be certificated for intentional spins. Aeroplanes with a maximum bank angle limitation may not be suitable for exercises such as steep turns or recovery from spiral dive.

(3) For the advanced UPRT course (FCL.745), the use of an aeroplane certificated in the aerobatic category will provide the greatest safety margin. Aeroplanes certificated in the normal or utility category may also be suitable provided the exercises used during the training take into account the capabilities of the aeroplane and are planned to remain within the training envelope for the aeroplane, as determined by the ATO (see point (f)).

(f) Training envelope

The training envelope is the envelope within which all training exercises will be carried out. It should be specified by the ATO in terms of the range of attitudes, speed and g-loads that can be used for training, taking into account:

(1) the training environment;

(2) the capabilities of the instructors; and

(3) in the case of training in FSTDs, the limitations of the FSTD (as per GM3 FCL.010 for the FSTD training envelope); and

(4) in the case of training in aeroplanes, the capabilities and certification of the aircraft, while considering a margin of safety in order to ensure that unintentional deviations from the training envelope will not exceed aircraft limitations. Different training envelopes may be specified for different aeroplane types even within a single training course.

AMC1 ORA.ATO.135 Training aircraft and FSTDs

All ATOs, except those providing flight test training

(a) The number of training aircraft may be affected by the availability of FSTDs.

(b) Each training aircraft should be:

(1) equipped as required in the training specifications concerning the course in which it is used;

(2) except in the case of balloons or single-seat aircraft, fitted with primary flight controls that are instantly accessible by both the student and the instructor (for example dual flight controls or a centre control stick). Swing-over flight controls should not be used.

(c) The fleet should include, as appropriate to the courses of training:

(1) aircraft suitably equipped to simulate instrument meteorological conditions (IMC) and for the instrument flight training required. For flight training and