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Международная
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Ref.: AN 11/6.3.31-20/31

8 April 2020

Subject: Adoption of Amendment 37 to Annex 6, Part II

Action required: a) Notify any disapproval before 20 July 2020; b) Notify any differences and compliance before 5 October 2020; c) Consider the use of the Electronic Filing of Differences (EFOD) System for notification of differences and compliance

Sir/Madam,

1. I have the honour to inform you that Amendment 37 to the *International Standards and Recommended Practices, Operation of Aircraft — International General Aviation — Aeroplanes* (Annex 6, Part II to the Convention on International Civil Aviation) was adopted by the Council at the third meeting of its 219th Session on 6 March 2020. Copies of the Amendment and the Resolution of Adoption are available as attachments to the electronic version of this State letter on the ICAO-NET (<http://portal.icao.int>) where you can access all other relevant documentation.

2. When adopting the amendment, the Council prescribed 20 July 2020 as the date on which it will become effective, except for any part concerning which a majority of Contracting States have registered their disapproval before that date. In addition, the Council resolved that Amendment 37, to the extent it becomes effective, will become applicable on 5 November 2020 unless otherwise indicated.

3. Amendment 37 arises from:

- a) recommendations stemming from the fourth meeting of the Flight Operations Panel (FLTOPSP/4) concerning all-weather operations, harmonization of terms for authorizations, acceptance and approvals (AAA), and Article 83 *bis*;
- b) recommendations stemming from the tenth meeting of the Flight Recorder Specific Working Group (FLIRECSWG/10) relating to recording duration for cockpit audio recording system (CARS), image and data link data to be recorded on flight data recorder (FDR)/cockpit voice recorder (CVR), reliable power source for lightweight flight recorders, additional parameters for aircraft data recording systems (ADRS),

bit error rate recording inspections and data link recorder (DLR) and data link recording system (DLRS) recording inspections; and

- c) recommendations stemming from the eleventh meeting of the Flight Recorder Specific Working Group (FLIRECSWG/11) relating to recording of data link communications messages.

4. The subjects are given in the amendment to the Foreword of Annex 6, Part II, a copy of which is in Attachment A. The background information concerning each subject are presented in detail in Attachment B.

5. In conformity with the Resolution of Adoption, may I request:

- a) that before 20 July 2020 you inform me if there is any part of the adopted Standards and Recommended Practices (SARPs) amendments in Amendment 37 concerning which your Government wishes to register disapproval, using the form in Attachment C for this purpose. Please note that only statements of disapproval need be registered and if you do not reply it will be assumed that you do not disapprove of the amendment;
- b) that before 5 October 2020 you inform me of the following, using the Electronic Filing of Differences (EFOD) System or the form in Attachment D for this purpose:
 - 1) any differences that will exist on 5 November 2020 between the national regulations or practices of your Government and the provisions of the whole of Annex 6, Part II, as amended by all amendments up to and including Amendment 37, and thereafter of any further differences that may arise; and
 - 2) the date or dates by which your Government will have complied with the provisions of the whole of Annex 6, Part II, as amended by all amendments up to and including Amendment 37.

6. With reference to the request in paragraph 5 a) above, it should be noted that a registration of disapproval of Amendment 37 or any part of it in accordance with Article 90 of the Convention does not constitute a notification of differences under Article 38 of the Convention. To comply with the latter provision, a separate statement is necessary if any differences do exist, as requested in paragraph 5 b) 1). It is recalled in this respect that international Standards in Annexes have a conditional binding force, to the extent that the State or States concerned have not notified any difference thereto under Article 38 of the Convention.

7. With reference to the request in paragraph 5 b) above, it should be also noted that the ICAO Assembly, at its 39th Session (27 September – 6 October 2016), resolved that Member States should be encouraged to use the EFOD System when notifying differences (Resolution A39-22, refers). The EFOD System is currently available on the Universal Safety Oversight Audit Programme (USOAP) restricted website (<http://www.icao.int/usoap>) which is accessible by all Member States. You are invited to consider using this for notification of compliance and differences.

8. Guidance on the determination and reporting of differences is given in the Note on the Notification of Differences in Attachment E. Please note that a detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

9. I would appreciate it if you would also send a copy of your notifications, referred to in paragraph 5 b) above, to the ICAO Regional Office accredited to your Government.

10. At the fifth meeting of its 204th Session, the Council requested that States, when being advised of the adoption of an Annex amendment, be provided with information on implementation and available guidance material, as well as an impact assessment. This is presented for your information in Attachments F and G, respectively.

11. As soon as practicable after the amendment becomes effective on 20 July 2020, a new edition of Annex 6, Part II incorporating Amendment 37 as well as the adopted amendments mentioned above will be forwarded to you.

Accept, Sir/Madam, the assurances of my highest consideration.

Fang Liu
Secretary General

Enclosures:

- A — Amendment to the Foreword of Annex 6, Part II
- B — Background information concerning the subjects of Amendment 37 to Annex 6, Part II
- C — Form on notification of disapproval of all or part of Amendment 37 to Annex 6, Part II
- D — Form on notification of compliance with or differences from Annex 6, Part II
- E — Note on the Notification of Differences
- F — Implementation task list and outline of guidance material in relation to Amendment 37 to Annex 6, Part II
- G — Impact assessment in relation to Amendment 37 to Annex 6, Part II

ATTACHMENT A to State letter AN 11/6.3.31-20/31

AMENDMENT TO THE FOREWORD OF ANNEX 6, PART II

Add the following at the end of Table A:

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/Approved Effective Applicable</i>
37	Fourth meeting of the Flight Operations Panel (FLTOPSP/4); and the tenth and eleventh meetings of the Flight Recorder Specific Working Group (FLIRECSWG/10 and FLIRECSWG/11).	<ul style="list-style-type: none"> a) all-weather operations, harmonization of terms for authorizations, acceptance and approvals (AAA), and Article 83 <i>bis</i> b) recording duration for CARS, image and data link data to be recorded on FDR/CVR, reliable power source for lightweight flight recorders, additional parameters for ADRS, bit error rate recording inspections and DLR and DLRS recording inspections; and c) recording of data link communications messages. 	6 March 2020 20 July 2020 5 November 2020

**BACKGROUND INFORMATION CONCERNING
THE SUBJECTS OF AMENDMENT 37 TO ANNEX 6, PART II**

Note.— For further clarification regarding a particular subject, please do not hesitate to contact OPS@icao.int.

**1. ALL-WEATHER OPERATIONS, HARMONIZATION OF
TERMS FOR AUTHORIZATIONS, ACCEPTANCE AND
APPROVALS (AAA), AND ARTICLE 83 BIS**

1.1 The amendment relating to all weather operations, harmonization of terms for AAA and Article 83 *bis* addresses the following issues:

- a) *All-weather operations*: As described in Annex 6, Part II the pilot-in-command or operator is responsible for determining aerodrome operating minima. The amendment further clarifies the operator's/pilot-in-command's responsibility for consideration of all relevant items when establishing these minima, including in operations requiring a specific approval. Limitations in the flight manual and those developed by the State of the Aerodrome are also explicitly included to ensure these are also taken into consideration.

An update of the definition of continuous descent final approach (CDFA) is recommended in order to expand the potential applications of this important operational technique. There are occasions where it may be desirable to conduct a CDFA on a non-precision approach which terminates at a circling minimum. This would allow CDFAs to be used in more situations resulting in increased stable approaches. This concept will be further examined in the revised edition of the *Manual of All-Weather Operations* (Doc 9365).

The definitions for Category (CAT) IIIA, IIIB and IIIC instrument approaches are outdated. They are no longer utilized for aircraft certification or operational authorization. Removing the definitions will aid in international harmonization efforts, future landing minima reductions and airspace system capacity improvements due to the implementation of performance-based operations. Future CAT III operations may derive from new low visibility approach and landing technologies. The type of operations, landing minima and aircraft certification criteria for these future systems will not follow the CAT IIIA, IIIB and IIIC definitions, making them obsolete.

- b) *Harmonization of terms for AAA*: There is significant confusion regarding the level of authorization a State needs to apply for provisions in Annex 6. It is often not clear from the current text of the Annex what level of authorization is required and there is no clear description of what each type of authorization involves.

As the first stage of this work, standard text was developed for items that require specific approvals and the guidance in the attachments to Annex 6 was amended to clarify which items are subject to a specific approval as distinct from other levels of authorization.

Subsequent work will identify standardized language for approvals and acceptance items, as well as further clarifying the text in the attachments to explain what is required for each level of authorization.

Also included in this amendment is the definition of a “specific approval” and a change to the definition of “operations specifications” to make reference to this new definition.

- c) *Article 83 bis*: Article 83 *bis* of the Convention on International Civil Aviation (Chicago Convention) makes provision for the transfer of certain functions and duties normally incumbent on the State of Registry of an aircraft to the State where the operator of the aircraft has its principal place of business or, if the operator has no such place of business, its permanent residence, in the case of lease, charter or interchange of an aircraft or similar arrangement. The amendment includes the development of an agreement summary, which is a document transmitted with the Article 83 *bis* Agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State.

Existing guidance in *The Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation* (Doc 10059) refers to the carriage on board of a certified true copy of the agreement summary and the Legal Committee recommended, and the Council agreed, that Annex 6 be amended to also include such a requirement.

The amendment also presents a harmonized agreement summary template, which contains all relevant information needed and provides a simple form for operators to carry for use on ramp inspections or other verification activities in order to mitigate misunderstandings when an Article 83 *bis* agreement is applicable to the aircraft being inspected. It further requires that the agreement summary be transmitted to ICAO when an Article 83 *bis* agreement is submitted for registration.

The content and layout of the agreement summary is recommended until such time as ICAO develops an interactive web-based system using a user-friendly electronic platform to allow for swift registration and publication of Article 83 *bis* agreements, including the agreement summary. Once the web-based system operation is mature, Recommendations 2.4.18.4 and Appendix 2.5, paragraph 1 can be upgraded to a Standard.

2. **RECORDING DURATION FOR CARS, IMAGE AND DATA LINK DATA TO BE RECORDED ON FDR/CVR, RELIABLE POWER SOURCE FOR LIGHTWEIGHT FLIGHT RECORDERS, ADDITIONAL PARAMETERS FOR ADRS, BIT ERROR RATE RECORDING INSPECTIONS AND DLR AND DLRS RECORDING INSPECTIONS**

- 2.1 The amendment concerning recording duration for CARS, image and data link data to be recorded on FDR/CVR, reliable power source for lightweight flight recorders, additional parameters for

ADRS, bit error rate recording inspections and, DLR and DLRS recording inspections addresses the following issues:

- a) *Recording duration for CARS:* To align the provisions for lightweight recorders with those of crash-protected recorders, a Standard is included for CVR and CARS to retain the information recorded during at least the last two hours of their operation.
- b) *Image and data link data to be recorded on FDR/CVR:* Current provisions address the possibility to record image and data link data on either the CVR/CARS or the FDR/ADRS. However, for clarification and consistency, aligned text is included in related parts of the Annex which precludes the need to install a third recorder.
- c) *Reliable power source for lightweight flight recorders:* Flight recorders are required to be installed with electrical power from a source that provides maximum reliability for their operation. No such provisions exist for lightweight recorders. A Standard is included for lightweight recorders to be connected to a power source which would ensure proper and reliable recording in their operational environment.
- d) *Additional parameters for ADRS:* A provision is included to address the recording of additional ADRS parameters when ADRS recording capacity is available.
- e) *Bit error rate recording inspections:* Bit error rate was applicable to magnetic tape-based recorders; however, since 1 January 2016 the magnetic tape-based recorders should have been phased out. The provision to analyse bit error rate thus became obsolete and is deleted.
- f) *DLR and DLRS recording inspections:* There are provisions for recording system inspection for FDR, ADRS, CVR, CARS, airborne image recorder (AIR) and airborne image recording system (AIRS), but none for DLR or DLRS. For consistency, provisions are added for recording system inspections of DLR and DLRS.

3. RECORDING OF DATA LINK COMMUNICATIONS MESSAGES

3.1 The provision to record data link communications messages when modifying aircraft to use data link communications applications caused undue financial burden for operators when modifying their aircraft to be controller-pilot data link communications (CPDLC) capable. In some cases, the modification entailed only a software update.

3.2 The additional modification costs discouraged operators from modifying their aircraft, particularly in areas where CPDLC was not mandated, forfeiting the safety benefits CPDLC brings.

3.3 Amending the provision to ease the recording requirement in some aircraft modified after 1 January 2016 to be CPDLC capable, and with data link equipment approved or installed before 1 January 2016, would encourage operators to modify their aircraft. A recommendation is included that operators should nonetheless record the messages.

ATTACHMENT C to State letter AN 11/6.3.31-20/31

**NOTIFICATION OF DISAPPROVAL OF ALL OR PART OF
AMENDMENT 37 TO ANNEX 6, PART II**

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Québec
Canada H3C 5H7

(State) _____ hereby wishes to disapprove the following parts of
Amendment 37 to Annex 6, Part II:

Signature _____

Date _____

NOTES

- 1) If you wish to disapprove all or part of Amendment 37 to Annex 6, Part II, please dispatch this notification of disapproval to reach ICAO Headquarters by 20 July 2020. If it has not been received by that date it will be assumed that you do not disapprove of the amendment. **If you approve of all parts of Amendment 37, it is not necessary to return this notification of disapproval.**
- 2) This notification should not be considered a notification of compliance with or differences from Annex 6, Part II. Separate notifications on this are necessary. (See Attachment C.)
- 3) Please use extra sheets as required.

ATTACHMENT D to State letter AN 11/6.3.31-20/31

**NOTIFICATION OF COMPLIANCE WITH OR DIFFERENCES FROM ANNEX 6, PART II
(including all amendments up to and including Amendment 37)**

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Québec
Canada H3C 5H7

1. No differences will exist on _____ between the national regulations and/or practices of **(State)** _____ and the provisions of Annex 6, Part II, including all amendments up to and including Amendment 37.

2. The following differences will exist on _____ between the regulations and/or practices of **(State)** _____ and the provisions of Annex 6, Part II, including Amendment 37 (Please see Note 2) below.)

a) Annex Provision (Please give exact paragraph reference)	b) Details of Difference (Please describe the difference clearly and concisely)	c) Remarks (Please indicate reasons for the difference)
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(Please use extra sheets as required.)

3. By the dates indicated below, **(State)** _____ will have complied with the provisions of Annex 6, Part II, including all amendments up to and including Amendment 37 for which differences have been notified in 2 above.

a) Annex Provision (Please give exact paragraph reference)	b) Date	c) Comments
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(Please use extra sheets as required.)

Signature _____

Date _____

NOTES

- 1) If paragraph 1 above is applicable to your State, please complete paragraph 1 and return this form to ICAO Headquarters. If paragraph 2 is applicable to you, please complete paragraphs 2 and 3 and return the form to ICAO Headquarters.
- 2) A detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.
- 3) Guidance on the notification of differences is provided in the Note on the Notification of Differences and in the *Manual on Notification and Publication of Differences* (Doc 10055).
- 4) Please send a copy of this notification to the ICAO Regional Office accredited to your Government.

ATTACHMENT E to State letter AN 11/6.3.31-20/31

NOTE ON THE NOTIFICATION OF DIFFERENCES
(Prepared and issued in accordance with instructions of the Council)

1. *Introduction*

1.1 Article 38 of the *Convention on International Civil Aviation* (“Convention”) requires that a Contracting State notify ICAO any time it does not comply with a Standard in all respects, it does not bring its regulations or practices into full accord with any Standard, or it adopts regulations or practices differing in any particular respect from the Standard.

1.2 The Assembly and the Council, when reviewing the notification of differences by Contracting States in compliance with Article 38 of the Convention, have repeatedly noted that the timeliness and currency of such notifications is not entirely satisfactory. Therefore, this note is issued to reiterate the primary purpose of Article 38 of the Convention and to facilitate the determination and notification of differences.

1.3 The primary purpose of the notification of differences is to promote safety, regularity and efficiency in air navigation by ensuring that governmental and other agencies, including operators and service providers, concerned with international civil aviation are made aware of all national regulations and practices in so far as they differ from those prescribed in the Standards contained in Annexes to the Convention.

1.4 Contracting States are, therefore, requested to give particular attention to the notification of differences with respect to Standards in all Annexes, as described in paragraph 4 b) 1) of the Resolution of Adoption.

1.5 Although differences from Recommended Practices are not notifiable under Article 38 of the Convention, the Assembly has urged Contracting States to extend the above considerations to Recommended Practices contained in Annexes to the Convention, as well.

2. *Notification of differences from Standards and Recommended Practices (SARPs)*

2.1 Guidance to Contracting States in the notification of differences to Standards and Recommended Practices (SARPs) can only be given in very general terms. Contracting States are further reminded that compliance with SARPs generally extends beyond the issuance of national regulations and requires establishment of practical arrangements for implementation, such as the provision of facilities, personnel and equipment and effective enforcement mechanisms. Contracting States should take those elements into account when determining their compliance and differences. The following categories of differences are provided as a guide in determining whether a notifiable difference exists:

- a) ***A Contracting State’s requirement is more exacting or exceeds a SARP (Category A)***. This category applies when the national regulation and practices are more demanding than the corresponding SARP, or impose an obligation within the scope of the Annex which is not covered by the SARP. This is of particular importance where a Contracting State requires a higher standard which affects the operation of aircraft of other Contracting States in and above its territory;

- b) *A Contracting State's requirement is different in character or the Contracting State has established other means of compliance (Category B)**. This category applies, in particular, when the national regulation and practices are different in character from the corresponding SARP, or when the national regulation and practices differ in principle, type or system from the corresponding SARP, without necessarily imposing an additional obligation; and
- c) *A Contracting State's requirement is less protective, partially implemented or not implemented (Category C)*. This category applies when the national regulation and practices are less protective than the corresponding SARP; when no national regulation has been promulgated to address the corresponding SARP, in whole or in part; or when the Contracting State has not brought its practices into full accord with the corresponding SARP.

These categories do not apply to Not Applicable SARP. Please see the paragraph below.

2.2 **Not Applicable SARP.** When a Contracting State deems a SARP concerning aircraft, operations, equipment, personnel, or air navigation facilities or services to be not applicable to the existing aviation activities of the State, notification of a difference is not required. For example, a Contracting State that is not a State of Design or Manufacture and that does not have any national regulations on the subject, would not be required to notify differences from Annex 8 provisions related to the design and construction of an aircraft.

2.3 **Differences from appendices, tables and figures.** The material comprising a SARP includes not only the SARP itself, but also the appendices, tables and figures associated with the SARP. Therefore, differences from appendices, tables and figures are notifiable under Article 38. In order to file a difference against an appendix, table or figure, States should file a difference against the SARP that makes reference to the appendix, table or figure.

2.4 **Differences from definitions.** Contracting States should notify differences from definitions. The definition of a term used in a SARP does not have independent status but is an essential part of each SARP in which the term is used. Therefore, a difference from the definition of the term may result in there being a difference from any SARP in which the term is used. To this end, Contracting States should take into consideration differences from definitions when determining compliance or differences to SARPs in which the terms are used.

2.5 The notification of differences should be not only to the latest amendment but to the whole Annex, including the amendment. In other words, Contracting States that have already notified differences are requested to provide regular updates of the differences previously notified until the difference no longer exists.

2.6 Further guidance on the identification and notification of differences, examples of well-defined differences and examples of model processes and procedures for management of the notification of differences can be found in the *Manual on Notification and Publication of Differences* (Doc 10055).

* The expression "different in character or other means of compliance" in b) would be applied to a national regulation and practice which achieve, by other means, the same objective as that of the corresponding SARPs or for other substantive reasons so cannot be classified under a) or c).

3. *Form of notification of differences*

3.1 Differences can be notified:

- a) by sending to ICAO Headquarters a form on notification of compliance or differences; or
- b) through the Electronic Filing of Differences (EFOD) System at www.icao.int/usoap.

3.2 When notifying differences, the following information should be provided:

- a) the number of the paragraph or subparagraph which contains the SARP to which the difference relates*;
- b) the reasons why the State does not comply with the SARP, or considers it necessary to adopt different regulations or practices;
- c) a clear and concise description of the difference; and
- d) intentions for future compliance and any date by which your Government plans to confirm compliance with and remove its difference from the SARP for which the difference has been notified.

3.3 The differences notified will be made available to other Contracting States, normally in the terms used by the Contracting State when making the notification. In the interest of making the information as useful as possible, Contracting States are requested to ensure that:

- a) statements be as clear and concise as possible and be confined to essential points;
- b) the provision of extracts from national regulations not be considered as sufficient to satisfy the obligation to notify differences; and
- c) general comments, unclear acronyms and references be avoided.

* This applies only when the notification is made under 3.1 a).

**IMPLEMENTATION TASK LIST AND OUTLINE OF GUIDANCE MATERIAL
IN RELATION TO AMENDMENT 37 TO ANNEX 6, PART II**

1. IMPLEMENTATION TASK LIST

1.1 Essential steps to be followed by a State in order to implement the amendment to Annex 6, Part II:

- a) identification of the rule-making process necessary to transpose the amendments concerning the following provisions into the national regulation taking into consideration the applicability date:
 - 1) all-weather operations, harmonization of terms for authorizations, acceptance and approvals (AAA), and Article 83 *bis*;
 - 2) recording duration for cockpit audio recording system (CARS), image and data link data to be recorded on flight data recorder (FDR)/cockpit voice recorder (CVR), reliable power source for lightweight flight recorders, additional parameters for aircraft data recording systems (ADRS), bit error rate recording inspections and data link recorder (DLR) and data link recording system (DLRS) recording inspections; and
 - 3) recording of data link communications messages;
- b) identification and notification of differences, if applicable;
- c) establishment of a national implementation plan that takes into consideration the provisions that are under development to complement the above provisions and to confirm compliance for each applicable air operator and approved maintenance organization;
- d) drafting of the amendment(s) to the national requirements and means of compliance;
- e) official adoption of national requirements and/or means of compliance (industry guidance);
- f) amendment of air operator certification and/or surveillance programmes to include new requirements;
- g) revision of guidance material(s) and checklist(s) for applicable inspectors that support air operator and approved maintenance organization certification, surveillance and the resolution of any issues identified;
- h) training of inspectors based on the revised inspector guidance material;
- i) operational acceptance of policy and procedures of operator(s) and approved maintenance organizations to comply with applicable requirements.

2. STANDARDIZATION PROCESS

2.1 Effective date: 20 July 2020

2.2 Applicability date: 5 November 2020

2.3 Embedded dates: On or after 1 January 2025 for the provision related to recording duration of CARS.

3. SUPPORTING DOCUMENTATION

3.1 ICAO documentation

Title	Type (PANS/TI/Manual/Circ)	Planned publication date
<i>Flight Recorder System Maintenance Manual (Doc 10104)</i>	Manual	Q1 2020
<i>Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059)</i>	Manual	Available
<i>PBN Operational Approval Manual (Doc 9997)</i>	Manual	Q4 2020
<i>Manual of All-Weather Operations (Doc 9365)</i>	Manual	Available
<i>Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335)</i>	Manual	Available

3.2 External documentation

Title	External Organization	Publication date
<i>Minimum Operational Performance Specifications for Crash Protected Airborne Systems (ED-112A)</i>	EUROCAE	September 2013
<i>Minimum Operational Performance Specifications for Lightweight Recording Systems (ED-155)</i>	EUROCAE	July 2009

4. IMPLEMENTATION ASSISTANCE TASKS

Type	Global	Regional
Increased awareness		By regional aviation safety groups (RASGs), regional safety oversight organizations (RSOs), and cooperative development of operational safety and continuing airworthiness programmes (COSCAPs) regarding amendments to Annex 6, Part II

5. **UNIVERSAL SAFETY OVERSIGHT AUDIT
PROGRAMME (USOAP)**

5.1 The content of this paper may require an amendment of the USOAP continuous monitoring approach (CMA) protocol questions in the areas of accident investigation (AIG), airworthiness of aircraft (AIR), air navigation services (ANS) and aircraft operations (OPS) to assess effective implementation by States. Existing protocol questions may need amendment or new protocol questions may be required. This will be assessed during the next amendment cycle of the protocol questions.

IMPACT ASSESSMENT IN RELATION TO AMENDMENT 37 TO ANNEX 6, PART II

1. INTRODUCTION

1.1 Amendment 37 to Annex 6, Part II is intended to:

- a) provide clarity to existing requirements concerning all-weather operations, harmonization of terms for authorizations, acceptance and approvals (AAA) and Article 83 *bis*;
- b) provide for recording duration for cockpit audio recording system (CARS), image and data link data to be recorded on flight data recorder (FDR)/cockpit voice recorder (CVR), reliable power source for lightweight flight recorders, additional parameters for aircraft data recording systems (ADRS), bit error rate recording inspections and data link recorder (DLR) and data link recording system (DLRS) recording inspections; and
- c) recording of data link communications messages.

2. IMPACT ASSESSMENT

2.1 All-weather operations, harmonization of terms for AAA and Article 83 *bis*

2.1.1 All-weather operations – aerodrome operating minima

2.1.1.1 *Safety impact:* Positive benefit. The explicit addition of all relevant items to the aerodrome operating minima list will help operators to correctly determine the relevant minima, positively impacting safety of operations.

2.1.1.2 *Financial impact:* Minimal financial impact from this amendment.

2.1.1.3 *Security impact:* No security impact with the implementation of this amendment.

2.1.1.4 *Environmental impact:* No environmental impact with the implementation of this amendment.

2.1.1.5 *Efficiency impact:* Positive benefit. Correctly established operating minima will reduce the likelihood of missed approaches, increasing terminal area efficiency.

2.1.1.6 *Expected implementation time:* Minimal time needed since this amendment only clarifies current provisions.

2.1.2 All-weather operations - Continuous descent final approach (CDFA)

2.1.2.1 *Safety impact:* Positive benefit. Use of a CDFA is to be encouraged in all situations, including when operating down to circling minima.

2.1.2.2 *Financial impact:* Minimal impact reflecting updating of documentation where required.

2.1.2.3 *Security impact:* No security impact with the implementation of this amendment.

2.1.2.4 *Environmental impact:* No environmental impact with the implementation of this amendment.

2.1.2.5 *Efficiency impact:* Positive benefit. CDFA and stabilized approaches will result in fewer go-arounds and less stress on the air traffic management system.

2.1.2.6 *Expected implementation time:* Minimal time needed since this amendment only clarifies current provisions.

2.1.3 All-weather operations – Category III

2.1.3.1 *Safety impact:* Positive benefit. The change to the Category III definitions will remove an outdated structure and align the definitions in the Annex with the current airworthiness approval terminology, therefore reducing confusion.

2.1.3.2 *Financial impact:* Small increase in costs reflecting updating of documentation where required.

2.1.3.3 *Security impact:* No security impact with the implementation of this amendment.

2.1.3.4 *Environmental impact:* No environmental impact with the implementation of this amendment.

2.1.3.5 *Efficiency impact:* Positive benefit. Removal of outdated nomenclature in guidance material and instrument approach charting will have a positive effect on the efficiency by aligning operational and airworthiness terminology.

2.1.3.6 *Expected implementation time:* Two to five years. Due to the amendment being non-safety critical, the normal instrument charting update cycle can be used. Operator standard operating procedures (SOPs) can be amended in the normal amendment cycle, resulting in changes within one to two years.

2.1.4 Harmonization of terms for AAA

2.1.4.1 *Safety impact:* Positive benefit. Clearer guidance on the minimum oversight requirements will result in a more consistent application of approval processes and ensure that the civil aviation authority (CAA) exercises the appropriate level of control.

2.1.4.2 *Financial impact:* One-off cost for States required to review their processes to ensure compliance with the intent of provisions in Annex 6. Clarification will remove undue regulatory burden on industry.

2.1.4.3 *Security impact:* No security impact with the implementation of this amendment.

2.1.4.4 *Environmental impact:* No environmental impact with the implementation of this amendment.

2.1.4.5 *Efficiency impact:* Positive impact. Providing clarity on the appropriate level of control/oversight will allow CAAs to manage resources more effectively.

2.1.4.6 *Expected implementation time:* Two to five years needed for States to make changes, as required, to their authorization processes.

2.1.5 **Article 83 bis**

2.1.5.1 *Safety impact:* Positive impact. This amendment will facilitate the efficient surveillance of operations under an Article 83 bis agreement, which is otherwise complex to implement.

2.1.5.2 *Financial impact:* Additional costs for training of inspectors with regard to the new agreement summary. One-off cost for development of regulations required for States involved in Article 83 bis operations. Operators benefit from ability to carry a summary of agreement and from reduced findings during ramp inspections.

2.1.5.3 *Security impact:* No security impact with the implementation of this amendment.

2.1.5.4 *Environmental impact:* Positive impact. While this amendment does not by itself provide fuel savings, taken with the guidance of Doc 10059, *Manual on the implementation of Article 83 bis of the Convention on International Civil Aviation*, it provides for optimum routing of Article 83 bis operations over those States not party to Article 83 bis. In addition, it is expected to reduce the volume of documents to be carried on board.

2.1.5.5 *Efficiency impact:* Positive impact. While this amendment does not by itself provide route savings, taken with the guidance of Doc 10059, it provides for optimum routing of Article 83 bis operations over those States not party to Article 83 bis.

2.1.5.6 *Expected implementation time:* Minimal time needed to update regulations where necessary.

2.2 **Recording duration for CARS, image and data link data to be recorded on FDR/CVR, reliable power source for lightweight flight recorders, additional parameters for ADRS, bit error rate recording inspections and DLR and DLRS recording inspections**

2.2.1 **Recording duration for CARS**

2.2.1.1 *Safety impact:* Positive impact. Accident investigation authority (AIA) will have access to additional/increased duration of CARS recordings in support of the accident and incident investigation process.

2.2.1.2 *Financial impact:* The implementation cost of the States would be related to the cost for amending legislation and that would justify having recordings available. The cost impact to industry is

negligible as most known manufacturers already meet the duration as addressed in TSO-C197, and the Standard is for newly manufactured aircraft after 2025.

2.2.1.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.1.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.1.5 *Efficiency impact:* It is not anticipated that there will be a significant change in the efficiency of the air transportation system.

2.2.1.6 *Expected implementation time:* Implementation time will depend on the timelines of States to amend their regulations. From an equipage perspective, the duration for CARS is already in place for most known manufacturers. Operators will need to amend their policies and procedures, including training of relevant personnel, as necessary, to accommodate the requirements prior to the applicability date.

2.2.2 **Image and data link data to be recorded on FDR/CVR**

2.2.2.1 *Safety impact:* Positive impact. It will allow the consolidation of the recordings into two flight recorders and clarify that a third flight recorder is unnecessary.

2.2.2.2 *Financial impact:* Negligible. Amendment of national legislation or regulations. The cost impact to industry is considered negligible.

2.2.2.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.2.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.2.5 *Efficiency impact:* It is not anticipated that there will be a significant change in the efficiency of the air transportation system.

2.2.2.6 *Expected implementation time:* Implementation time will depend on the timelines of States to amend their regulations. From an equipage perspective, image and data link data are already being recorded on either the FDR or the CVR. Operators will need to amend their policies and procedures, including training of relevant personnel, as necessary, to accommodate the requirements prior to the applicability date.

2.2.3 **Reliable power source for lightweight flight recorders**

2.2.3.1 *Safety impact:* Positive impact. This Standard will improve the reliability of operation of the lightweight flight recorders. This would also clarify the differences between the power requirement for lightweight recorders from those of crash-protected flight recorders.

2.2.3.2 *Financial impact:* Negligible. Amendment of national legislation or regulations. The cost impact to industry is negligible. The Standard is for new type certificate aircraft after 2016.

2.2.3.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.3.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.3.5 *Efficiency impact:* The efficiency impact associated with implementation of this amendment is considered negligible.

2.2.3.6 *Expected implementation time:* For States, implementation time will depend on the timelines of States to amend their regulations. For industry, the requirement is for forward fit only, so the lightweight flight recorders are to be incorporated into the electrical power system in newly manufactured aircraft. Implementation therefore will be gradual.

2.2.4 **Additional parameters for ADRS**

2.2.4.1 *Safety impact:* Positive impact. More parameters available for accident and serious incident investigations. In addition, the additional recommended parameters could facilitate the analysis of incidents and flight data monitoring by operators.

2.2.4.2 *Financial impact:* Negligible. Amendment of national regulations.

2.2.4.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.4.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.4.5 *Efficiency impact:* The efficiency impact associated with implementation of this amendment is considered negligible.

2.2.4.6 *Expected implementation time:* Implementation time will depend on the timelines of States to amend their regulations. From an industry perspective, the provision has no timeline as it provides for a list of parameters to be considered if further ADRS recording capacity is available.

2.2.5 **Bit error rate recording inspections**

2.2.5.1 *Safety impact:* Positive impact. Removing obsolete Standard.

2.2.5.2 *Financial impact:* Negligible. Amendment of national regulations.

2.2.5.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.5.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.5.5 *Efficiency impact:* The efficiency impact associated with implementation of this amendment is considered negligible.

2.2.5.6 *Expected implementation time:* Implementation time will depend on the timelines of States to amend their regulations.

2.2.6 **DLR and DLRS recording inspections**

2.2.6.1 *Safety impact:* Positive impact. This provision provides clarification with relation to DLR and DLRS maintenance inspections.

2.2.6.2 *Financial impact:* Negligible cost impact to States and industry as the provision provides clarification with relation to DLR and DLRS maintenance inspections.

2.2.6.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.2.6.4 *Environmental impact:* The environmental impact associated with implementation of this amendment is considered negligible.

2.2.6.5 *Efficiency impact:* The efficiency impact associated with implementation of this amendment is considered negligible.

2.2.6.6 *Expected implementation time:* Implementation time will depend on the timelines of States to amend their regulations. Operators would have to amend their policies and procedures, including training of relevant personnel, as necessary, to accommodate the requirements.

2.3 **Recording of data link communications messages**

2.3.1 *Safety impact:* Positive impact. It was determined that the availability of CPDLC messages used for the separation of aircraft would contribute more to flight safety than having such messages recorded. The amendment is for the alleviation of the requirement to record data link communications messages in certain aircraft.

2.3.2 *Financial impact:* Minimal financial impact to States to amend their legislation or regulations. For industry, a decrease in overall cost due to an alleviation for the recording of data link communications messages, the modification costs of aircraft would be less, thus encouraging operators to modify aircraft for CPDLC capability and the associated safety benefits.

2.3.3 *Security impact:* The security impact associated with implementation of this amendment is considered negligible.

2.3.4 *Environmental impact:* No environmental impact is foreseen with the implementation of this amendment.

2.3.5 *Efficiency impact:* More aircraft would be CPDLC capable which would assist with the efficiency of the air traffic management system.

2.3.6 *Expected implementation time:* Minimal time needed to update regulations where necessary.

AMENDMENT No. 37

TO THE

**INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

OPERATION OF AIRCRAFT

ANNEX 6

TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

**PART II
INTERNATIONAL GENERAL AVIATION — AEROPLANES**

The amendment to Annex 6, Part II, contained in this document was adopted by the Council of ICAO on **6 March 2020**. Such parts of this amendment as have not been disapproved by more than half of the total number of Contracting States on or before **20 July 2020** will become effective on that date and will become applicable on **5 November 2020** as specified in the Resolution of Adoption. (State letter AN 11/6.3.31-20/31 refers.)

MARCH 2020

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**AMENDMENT 37 TO THE INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

**ANNEX 6 — OPERATION OF AIRCRAFT,
PART II — INTERNATIONAL GENERAL AVIATION — AEROPLANES**

RESOLUTION OF ADOPTION

The Council

Acting in accordance with the Convention on International Civil Aviation, and particularly with the provisions of Articles 37, 54 and 90 thereof,

1. *Hereby adopts* on 6 March 2020 Amendment 37 to the International Standards and Recommended Practices contained in the document entitled *International Standards and Recommended Practices, Operation of Aircraft, International General Aviation — Aeroplanes* which for convenience is designated Annex 6, Part II to the Convention;

2. *Prescribes* 20 July 2020 as the date upon which the said amendment shall become effective, except for any part thereof in respect of which a majority of the Contracting States have registered their disapproval with the council before that date;

3. *Resolves* that the said amendment or such parts thereof as have become effective shall become applicable on 5 November 2020 unless otherwise indicated;

4. *Requests the Secretary General:*

a) to notify each Contracting State immediately of the above action and immediately after 20 July 2020 of those parts of the amendment which have become effective;

b) to request each Contracting State:

1) to notify the Organization (in accordance with the obligation imposed by Article 38 of the Convention) of the differences that will exist on 5 November 2020 between its national regulations or practices and the provisions of the Standards in the Annex as hereby amended, such notification to be made before 5 October 2020, and thereafter to notify the Organization of any further differences that arise;

2) to notify the Organization before 5 October 2020 of the date or dates by which it will have complied with the provisions of the Standards in the Annex as hereby amended;

c) to invite each Contracting State to notify additionally any differences between its own practices and those established by the Recommended Practices, following the procedure specified in subparagraph b) above with respect to differences from Standards.

**NOTES ON THE PRESENTATION OF THE
AMENDMENT TO ANNEX 6, PART II**

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

~~Text to be deleted is shown with a line through it.~~

text to be deleted

New text to be inserted is highlighted with grey shading.

new text to be inserted

~~Text to be deleted is shown with a line through it~~
followed by the replacement text which is highlighted
with grey shading.

new text to replace existing text

TEXT OF AMENDMENT 37
TO THE
INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES
OPERATION OF AIRCRAFT
ANNEX 6
TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION
PART II
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...

ABBREVIATIONS AND SYMBOLS
(used in this Annex)

...

CAT IIIA Category IIIA
~~CAT IIIB~~ ~~Category IIIB~~
~~CAT IIIC~~ ~~Category IIIC~~

...

PUBLICATIONS
(referred to in this Annex)

...

Manuals¹

...

Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059)

...

SECTION 1

GENERAL

CHAPTER 1.1 DEFINITIONS

...

Agreement summary. When an aircraft is operating under an Article 83 *bis* agreement between the State of Registry and another State, the agreement summary is a document transmitted with the Article 83 *bis* Agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State.

Note.— The other State in the above definition refers to the State of the principal location of a general aviation operator.

...

Continuous descent final approach (CDFA). A technique, consistent with stabilized approach procedures, for flying the final approach segment (FAS) of an instrument non-precision instrument approach (NPA) procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre ~~should~~ begins for the type of aircraft flown; for the FAS of an NPA procedure followed by a circling approach, the CDFA technique applies until circling approach minima (circling OCA/H) or visual flight manoeuvre altitude/height are reached.

...

Low-visibility operations (LVO). Approach operations in RVRs less than 550 m and/or with a DH less than 60 m (200 ft) or take-off operations in RVRs less than 400 m.

...

Specific approval. A specific approval is an approval which is documented in the Operations Specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations.

Note.— The terms authorization, specific approval, approval and acceptance are further described in Attachment 3.D.

...

State of the principal location of a general aviation operator. The State in which the operator of a general aviation aircraft has its principal place of business or, if there is no such place of business, its permanent residence.

Note.— Guidance concerning the options for the principal location of a general aviation operator is contained in the Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059).

...

SECTION 2

GENERAL AVIATION OPERATIONS

...

CHAPTER 2.2 FLIGHT OPERATIONS

...

2.2.2 Operational management

...

2.2.2.2 Aerodrome operating minima

2.2.2.2.1 The pilot-in-command shall establish aerodrome operating minima in accordance with criteria specified by the State of Registry, for each aerodrome to be used in operations. When establishing aerodrome operating minima, any conditions that may be prescribed in the list of specific approvals shall be observed. Such minima shall not be lower than any that may be established for such aerodromes by the State of the Aerodrome, except when specifically approved by that State.

...

2.2.2.2.1.1 The State of Registry ~~may approve~~ shall authorize operational credit(s) for operations with aeroplanes equipped with automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS. ~~Such approvals shall not affect the classification of the instrument approach procedure.~~ Where the operational credit relates to low visibility operations, the State of Registry shall issue a specific approval. Such authorizations shall not affect the classification of the instrument approach procedure.

...

2.2.2.2.2 Instrument approach operations shall be classified based on the designed lowest operating minima below which an approach operation shall only be continued with the required visual reference as follows:

...

b) Type B: a decision height below 75 m (250 ft). Type B instrument approach operations are categorized as:

...

3) Category IIIA (CAT IIIA): a decision height lower than 30 m (100 ft) or no decision height and a runway visual range ~~not~~ less than 175 300 m or no runway visual range limitations;

4) Category IIIB (CAT IIIB): a decision height lower than 15 m (50 ft) or no decision height and a runway visual range less than 175 m but not less than 50 m; and

5) Category IIIC (CAT IIIC): no decision height and no runway visual range limitations.

Note 1.— Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation). This does not apply if the RVR and/or DH has been approved as operational credits.

...

2.2.2.2.5 The State of Registry shall issue a specific approval for instrument approach operations in low visibility which shall only be conducted when RVR information is provided.

Note.— Guidance on low visibility operations is contained in the Manual of All-Weather Operations (Doc 9365).

2.2.2.2.6 For take-off in low visibility, the State of Registry shall issue a specific approval for the minimum take-off RVR.

Note.— In general, visibility for take-off is defined in terms of RVR. An equivalent horizontal visibility may also be used.

...

CHAPTER 2.4 AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

...

2.4.16 FLIGHT RECORDERS

Note 1.— Crash protected flight recorders comprise one or more of the following systems:

- a flight data recorder (FDR),
- a cockpit voice recorder (CVR),
- an airborne image recorder (AIR),
- a data link recorder (DLR).

As per Appendix 2.3, image and data link information may be recorded on either the CVR or the FDR.

Note 2.— Lightweight flight recorders comprise one or more of the following systems:

- an aircraft data recording system (ADRS),
- a cockpit audio recording system (CARS),
- an airborne image recording system (AIRS),
- a data link recording system (DLRS).

As per Appendix 2.3, image and data link information may be recorded on either the CARS or the ADRS.

...

2.4.16.2 Cockpit voice recorders and cockpit audio recording systems

...

2.4.16.2.3 Duration

2.4.16.2.3.1 All CVRs shall retain the information recorded during at least the last 2 hours of their operation.

2.4.16.2.3.2 All aeroplanes that are required to be equipped with CARS, and for which the individual certificate of airworthiness is first issued on or after 1 January 2025, shall be equipped with a CARS which shall retain the information recorded during at least the last two hours of their operation.

2.4.16.3 Data link recorders

2.4.16.3.1 Applicability

2.4.16.3.1.1 All aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 2016, which utilize any of the data link communications applications listed referred to in 5.1.2 of Appendix 2.3 and are required to carry a CVR, shall record the data link communications messages on a crash-protected flight recorder—all data link communications messages.

2.4.16.3.1.2 All aeroplanes for which the individual certificate of airworthiness was first issued before 1 January 2016, that are required to carry a CVR and are modified on or after 1 January 2016 to install and ~~utilize~~ use any of the data link communications applications ~~listed~~ referred to in 5.1.2 of Appendix 2.3, and are required to carry a CVR shall record the data link communications messages on a crash-protected flight recorder unless the installed data link communications ~~messages~~ equipment is compliant with a type certificate issued or aircraft modification first approved prior to 1 January 2016.

Note 1.— Refer to Table 3.C-4 in Attachment 3.D for examples of data link communication recording requirements.

Note 2.— A Class B AIR could be a means for recording data link communications applications messages to and from the aeroplanes where it is not practical or is prohibitively expensive to record those data link communications applications messages on FDR or CVR.

Note 3.— The “aircraft modifications” refer to modifications to install the data link communications equipment on the aircraft (e.g. structural, wiring).

2.4.16.3.1.3 **Recommendation.**— All aeroplanes for which the individual certificate of airworthiness was first issued before 1 January 2016, that are required to carry a CVR and are modified on or after 1 January 2016 to use any of the data link communications applications referred to in 5.1.2 of Appendix 2.3 should record the data link communications messages on a crash-protected flight recorder.

...

2.4.17 Electronic flight bags (EFBs)

Note.— Guidance on EFB equipment, functions and ~~establishing criteria for their operational use~~ specific approval is contained in the Manual on Electronic Flight Bags (EFBs) (Doc 10020).

...

2.4.17.2.2 The State of Registry shall ~~establish criteria~~ issue a specific approval for the operational use of EFB functions to be used for the safe operation of aeroplanes.

2.4.17.3 EFB ~~specific approval~~ ~~operational criteria~~

~~In establishing operational criteria~~ When issuing a specific approval for the use of EFBs, the State of Registry shall ensure that:

...

2.4.18 Aeroplane operated under an Article 83 bis agreement

Note.— Guidance concerning the transfer of responsibilities by the State of Registry to the State of the principal location of a general aviation operator in accordance with Article 83 bis is contained in the Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Doc 10059).

2.4.18.1 An aeroplane, when operating under an Article 83 *bis* agreement entered into between the State of Registry and the State of the principal location of a general aviation operator, shall carry a certified true copy of the agreement summary, in either an electronic or hard copy format. When the summary is issued in a language other than English, an English translation shall be included.

Note.— *Guidance regarding the agreement summary is contained in Doc 10059.*

2.4.18.2 The agreement summary of an Article 83 *bis* agreement shall be accessible to a civil aviation safety inspector to determine which functions and duties are transferred under the agreement by the State of Registry to the State of the principal location of a general aviation operator, when conducting surveillance activities such as ramp checks.

Note.— *Guidance for the civil aviation safety inspector conducting an inspection of an aeroplane operated under an Article 83 bis agreement is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335).*

2.4.18.3 The agreement summary shall be transmitted to ICAO together with the Article 83 *bis* Agreement for registration with the ICAO Council by the State of Registry or the State of the principal location of a general aviation operator.

Note.— *The agreement summary transmitted with the Article 83 bis agreement registered with the ICAO Council contains the list of all aircraft affected by the agreement. However, the certified true copy to be carried on board as per 2.4.18.1 will need to list only the specific aircraft carrying the copy.*

2.4.18.4 **Recommendation.**—*The agreement summary should contain the information in Appendix 2.5 for the specific aircraft and should follow the layout of Appendix 2.5, paragraph 2.*

...

CHAPTER 2.5 AEROPLANE COMMUNICATION, NAVIGATION AND SURVEILLANCE EQUIPMENT

...

2.5.2 Navigation equipment

...

2.5.2.7 For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, ~~an aeroplane~~:

a) ~~the aeroplane~~ shall be provided with equipment which is capable of:

...

b) ~~shall be authorized by the State of Registry~~ shall issue a specific approval for RVSM operations ~~in the airspace concerned; and~~

c) ~~shall demonstrate a vertical navigation performance in accordance with Appendix 2.2.~~

2.5.2.8 Prior to granting the RVSM **specific** approval required in accordance with 2.5.2.7 b), the State shall be satisfied that:

...

*Note.— An RVSM **specific** approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance.*

...

2.5.2.10 The State of Registry that has issued an RVSM **specific** approval to an owner/operator shall establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the owner/operator have their height-keeping performance monitored, at least once every two years or within intervals of 1 000 flight hours per aeroplane, whichever period is longer. If an owner/operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

...

2.5.2.11 All States that are responsible for airspace where RVSM has been implemented, or that have issued RVSM **specific** approvals to owners/operators within their State, shall establish provisions and procedures which ensure that appropriate action will be taken in respect of aircraft and owners/operators found to be operating in RVSM airspace without a valid RVSM **specific** approval.

*Note 1.— These provisions and procedures need to address both the situation where the aircraft in question was operating without a **specific** approval in the airspace of the State, and the situation where an owner/operator for which the State has regulatory oversight responsibility is found to be operating without the required **specific** approval in the airspace of another State.*

*Note 2.— Guidance material relating to the **specific** approval for operation in RVSM airspace is contained in the Manual on a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).*

...

APPENDIX 2.3 FLIGHT RECORDERS

(Section 2, Chapter 2.4, 2.4.16, refers)

The material in this Appendix concerns flight recorders intended for installation in aeroplanes engaged in international air navigation. Crash-protected flight recorders comprise one or more of the following systems:

- a flight data recorder (FDR),
- a cockpit voice recorder (CVR),
- an airborne image recorder (AIR),
- a data link recorder (DLR).

When image or data link information is required to be recorded on a crash-protected flight recorder, it is permissible to record it on either the CVR or the FDR.

Lightweight flight recorders comprise one or more of the following systems:

- an aircraft data recording system (ADRS),
- a cockpit audio recording system (CARS),
- an airborne image recording system (AIRS),
- a data link recording system (DLRS).

When image or data link information is required to be recorded on a lightweight flight recorder, it is permissible to record it on either the CARS or the ADRS.

...

1.5 The crash-protected flight recorders systems shall be installed so that they receive electrical power from a bus that provides the maximum reliability for operation of the flight recorders systems without jeopardizing service to essential or emergency loads.

1.6 The lightweight flight recorders shall be connected to a power source having the characteristics which ensure proper and reliable recording in the operational environment.

...

Editorial Note.— Renumber subsequent paragraphs.

2. FLIGHT DATA RECORDER (FDR) AND AIRCRAFT DATA RECORDING SYSTEMS (ADRS)

...

2.2 Parameters to be recorded

...

2.2.4 The parameters that satisfy the requirements for ADRS are the first 7 parameters listed in Table A2.3-3.

2.2.5 If further ADRS recording capacity is available, the recording of any parameters from 8 onwards defined in Table A2.3-3 shall be considered.

...

6. INSPECTIONS OF FLIGHT RECORDER SYSTEMS

...

6.3 Recording inspections shall be carried out as follows:

...

- ~~b) the analysis of the FDR or ADRS recording shall evaluate the quality of the recorded data to determine if the bit error rate (including those errors introduced by recorder, the acquisition unit, the source of the data on the aeroplane and by the tools used to extract the data from the recorder)~~

~~is within acceptable limits and to determine the nature and distribution of the errors;~~

Editorial Note.— *Renumber* subsequent paragraphs.

...

h) an examination of the recorded messages on the DLR or DLRS shall be carried out by replay of the DLR or DLRS recording.

...

APPENDIX 2.4 GENERAL AVIATION SPECIFIC APPROVALS

(Section 2, Chapter 2.1, 2.1.4, refers)

...

2. SPECIFIC APPROVAL TEMPLATE

SPECIFIC APPROVAL				
ISSUING AUTHORITY and CONTACT DETAILS¹				
Issuing Authority ¹ _____				
Address _____				
Signature: _____		Date ² : _____		
Telephone: _____		Fax: _____		Email: _____
OWNER/OPERATOR				
Name ³ : _____		Address: _____		
Telephone: _____		Fax: _____		Email: _____
Aircraft model ⁴ and registration marks:				
SPECIFIC APPROVAL	YES	NO	DESCRIPTION⁵	REMARKS
Low visibility operations				
Approach and landing	<input type="checkbox"/>	<input type="checkbox"/>	CAT ⁶ : _____ RVR: _____ m DH: _____ ft	
Take-off	<input type="checkbox"/>	<input type="checkbox"/>	RVR ⁷ : _____ m	
Operational credit(s)	<input type="checkbox"/>	<input type="checkbox"/>	⁸	
RVSM	<input type="checkbox"/>	<input type="checkbox"/>		
AR navigation specifications for PBN operations	<input type="checkbox"/>	<input type="checkbox"/>	⁹	
EFB	<input type="checkbox"/>	<input type="checkbox"/>	¹⁰	
Other ¹⁰¹	<input type="checkbox"/>	<input type="checkbox"/>		

Notes.—

1. Civil Aviation Authority name and contact details, including the telephone country code and email if available.
2. Issuance date of the specific approval (dd-mm-yyyy) and signature of the authority representative.
3. Owner or operator's name and address.
4. Insert the aeroplane make, model and series, or master series, if a series has been designated. The CAST/ICAO taxonomy is available at: <http://www.intlaviationstandards.org/>.
5. List in this column the most permissive criteria for each specific approval or the approval type (with appropriate criteria).
6. Insert the applicable precision approach category (CAT II or IIIA, ~~IIIB~~ or IIIC). Insert the minimum RVR in metres and decision height in feet. One line is used per listed approach category.
7. Insert the approved minimum take-off RVR in metres, or the equivalent horizontal visibility if RVR is not used. One line per approval may be used if different approvals are granted.
8. List the airborne capabilities (i.e. automatic landing, HUD, EVS, SVS, CVS) and associated operational credit(s) granted.
9. Performance-based navigation (PBN): one line is used for each PBN AR navigation specification approval (e.g. RNP AR APCH), with appropriate limitations listed in the "Description" column.
10. List the EFB functions used for the safe operation of aeroplanes and any applicable limitations.
11. Other specific approvals or data can be entered here, using one line (or one multi-line block) per approval (e.g. specific approach operations approval, ~~MANPS~~).

...

Editorial note.— Insert new Appendix 2.5 as follows:

APPENDIX 2.5 ARTICLE 83 *bis* AGREEMENT SUMMARY

(Chapter 2.4, 2.4.18.4, refers)

Note.— Chapter 2.4, 2.4.18.1, requires a certified true copy of the agreement summary to be carried on board.

1. Purpose and scope

Recommendation.— *The Article 83 bis agreement summary should contain the information in the template at paragraph 2, in a standardized format.*

2. Article 83 bis agreement summary

ARTICLE 83 bis AGREEMENT SUMMARY		
Title of the Agreement:		
State of Registry:		Focal point:
State of the principal location of a general aviation operator:		Focal point:
Date of signature:	By State of Registry ¹ :	
	By State of the principal location of a general aviation operator ¹ :	
Duration:	Start Date ¹ :	End Date (if applicable) ² :
Languages of the Agreement		
ICAO Registration No.:		
Umbrella Agreement (if any) with ICAO Registration number:		

Chicago Convention	ICAO Annexes affected by the transfer to the State of the principal location of a general aviation operator of responsibility in respect of certain functions and duties		
Article 12: Rules of the Air	Annex 2, all chapters	Yes <input type="checkbox"/>	
		No <input type="checkbox"/>	
Article 30 a): Aircraft radio equipment	Radio Station Licence	Yes <input type="checkbox"/>	
		No <input type="checkbox"/>	
Articles 30 b) and 32 a): Personnel Licensing	Annex 1, Chapters 1, 2, 3 and 6 and Annex 6 Part I, Radio Operator or Part III, section II, Composition of the flight crew (radio operator) and/or Part II, Qualifications and/or Flight crew member licensing or Part III, Section III, Qualifications	Yes <input type="checkbox"/>	Annex 6: [Specify Part and paragraph] ³
		No <input type="checkbox"/>	
Article 31: Certificates of Airworthiness	Annex 6 Part I or Part III, Section II	Yes <input type="checkbox"/>	[Specify Part and chapters] ³
		No <input type="checkbox"/>	
	Annex 6 Part II or Part III, Section III	Yes <input type="checkbox"/>	[Specify Part and chapters] ³
		No <input type="checkbox"/>	
	Annex 8 Part II, Chapters 3 and 4	Yes <input type="checkbox"/>	[Specify chapters] ³
		No <input type="checkbox"/>	

Aircraft affected by the transfer of responsibilities to the State of the principal location of a general aviation operator					
Aircraft make, model, series	Nationality and Registration marks	Serial No	AOC # (Commercial air transport)	Dates of transfer of responsibilities	
				From ¹	To (if applicable) ²

Notes.—

1. dd/mm/yyyy.
2. dd/mm/yyyy or N/A if not applicable.
3. Square brackets indicate information that needs to be provided.

...

SECTION 3

LARGE AND TURBOJET AEROPLANES

...

CHAPTER 3.4 FLIGHT OPERATIONS

...

3.4.2 Operational management

...

3.4.2.7 Aerodrome operating minima

The operator shall establish aerodrome operating minima, in accordance with criteria specified by the State of Registry, for each aerodrome to be used in operations. When establishing aerodrome operating minima any conditions that may be prescribed in the list of specific approvals shall be observed. Such minima shall not be lower than any that may be established for such aerodromes by the State of the Aerodrome, except when specifically approved by that State.

...

ATTACHMENT 3.C GUIDE TO CURRENT FLIGHT RECORDER PROVISIONS

Supplementary to Section 2, Chapter 2.4, 2.4.16 and Section 3, Chapter 3.6, 3.6.3

...

Editorial Note.— Insert new Table 3.C-4 and the following explanatory text.

Table 3.C-4. Data link communications (DLC) recording installation clarification

Rows	Date individual certificate of airworthiness was first issued	Date aircraft type certificate issued or modification for DLC equipment first approved	Date of activation for use of DLC equipment	DLC recording required	SARP Reference
1	On or after 1 January 2016	On or after 1 January 2016	On or after 1 January 2016	Yes	6.3.3.1.1
2	On or after 1 January 2016	Before 1 January 2016	On or after 1 January 2016	Yes	6.3.3.1.1
3	Before 1 January 2016	On or after 1 January 2016	On or after 1 January 2016	Yes	6.3.3.1.2
4	Before 1 January 2016	Before 1 January 2016	Before 1 January 2016	No	6.3.3.1.2
5	Before 1 January 2016	Before 1 January 2016	On or after 1 January 2016	No ¹	6.3.3.1.2 6.3.3.1.3

¹ Not required but recommended.

1. TABLE HEADINGS

1.1 *Date individual certificate of airworthiness* was first issued is self-explanatory.

1.2 *Date aircraft type certificate issued or modification for DLC equipment first approved* is the date that allows the installation of DLC equipment on the aircraft and refers to the airworthiness approval of the installation of aircraft components such as the structural and wiring provisions with which the DLC equipment needs to be compliant. These airworthiness approvals are usually in a form of a type certificate, a supplemental type certificate or an amended type certificate..

1.2.1 It is not uncommon for original customers of an aircraft that have airworthiness approvals related to DLC capability, to choose not to install the DLC equipment or choose not to have it activated even if the aircraft is prepared for it.

1.3 *Date of activation for use of DLC equipment* refers to the date that a DLC application referred to in 5.1.2 of Appendix 2.3 was first activated for use.

1.3.1 Datalink communication (DLC) equipment as used in these provisions, refer to the physical unit(s) (e.g. box(es)) that was approved to a minimum performance standard issued by a certification authority (e.g. TSO or ETSO).

1.3.2 The activation of DLC functions refer to approved software activation of DLC functions or software updates.

1.4 *DLC recording required* refers to the requirement to record DLC message in accordance with provisions 2.4.16.3.1.1, 2.4.16.3.1.2 and 2.4.16.3.1.3.

2. GENERAL

2.1 It is the date on which the CVR capabilities of the aircraft were approved that determines the DLC recording requirement. The date in which the DLC equipment was approved to a minimum performance standard is not relevant for CVR recording requirement purposes.

2.2 For the DLC equipment to be compliant with an airworthiness approval, it needs to be able to use, without modification, the installed aircraft components that are necessary to provide the DLC function such as the:

- a) datalink router (e.g. hosted in the communications management unit);
- b) radios (e.g. VHF, HF datalink, Satcom) and related antennas.

2.3 Approved software updates to installed equipment or software activation of functions normally do not alter the DLC equipment compliance with the rest of the aircraft systems.

3. EXAMPLES

3.1 For rows 1 and 2:

- The recording requirement is driven by Standard 2.4.16.3.1.1 which is based on when the individual certificate of airworthiness was first issued. Any subsequent airworthiness

modifications related to DLC capability do not exempt the aircraft from the requirement to record DLC messages.

3.2 For rows 3 to 5 — General:

- The recording requirement is driven by Standard 2.4.16.3.1.2 and is based on whether or not the aircraft has an airworthiness approval for DLC capabilities and the date of its issue.
- Since there was no requirement to record DLC messages prior to 1 January 2016, airworthiness approvals related to DLC capability issued before that date did not necessarily include this function.

3.3 For row 3:

- The recording requirement applies regardless of when the certificate of airworthiness was issued, because an airworthiness approval related to DLC capability was issued on or after 1 January 2016. The date of installation of the equipment would typically be after the airworthiness approval.

3.4 For row 4:

- The recording requirement does not apply because the aircraft's certificate of airworthiness and an airworthiness approval related to DLC capability was issued before 1 January 2016. The date of installation of DLC equipment is not a factor for DLC message recording requirements as long as the equipment is compliant with that airworthiness approval.

3.5 For row 5:

- The recording requirement does not apply because the aircraft's certificate of airworthiness and an airworthiness approval related to DLC capability was issued before 1 January 2016. The date of installation of DLC equipment is not a factor for DLC message recording requirements as long as the equipment is compliant with that airworthiness approval.
- Notwithstanding the above, if the installation of the DLC equipment is on or after 1 January 2016, DLC messages should be recorded in accordance with Recommendation 2.4.16.3.1.3.

...

Editorial note.— Insert new Attachment 3.D as follows:

ATTACHMENT 3.D AUTHORIZATIONS

An authorization entitles an operator, owner or pilot-in-command to undertake the authorized operations. Authorizations can take the form of specific approvals, approvals or acceptances.

1. SPECIFIC APPROVAL ACTIONS

1.1 The term “specific approval” indicates a formal action on the part of the State which results in an addition to the specific approval template.

1.2 The following provisions make explicit reference to the need for a specific approval:

- a) Operational credits for HUD, EVS, SVS, CVS, automatic landing systems [2.2.2.2.1.1];
- b) Low Visibility Operations [2.2.2.2.5, 2.2.2.2.6];
- c) Electronic Flight Bags [2.4.17.2.2];
- d) AR navigation specifications for PBN Operations [2.5.2.5];
- e) Reduced Vertical Separation Minima [2.5.2.7 (b)].

1.3 The specific approval template is provided in Appendix 2.4

2. APPROVAL ACTIONS

The term “approval” indicates a more formal action on the part of the State with respect to a certification matter than does the term “acceptance”. Some States require the Director of the Civil Aviation Authority (CAA) or a designated lower-level CAA official to issue a formal written instrument for every “approval” action taken. Other States allow a variety of documents to be issued as evidence of an approval. The approval document issued and the matter addressed by the approval will depend on the delegated authority of the official. In such States, authority to sign routine approvals is delegated to technical inspectors. More complex or significant approvals are normally issued by higher-level officials.

3. PROVISIONS THAT REQUIRE AN APPROVAL

The following provisions require or encourage approval by specified States. The approval of the State of Registry is required in all of the certification actions listed below that are not preceded by an asterisk. Certification actions listed below that are preceded by one or more asterisks require approval by the State of Registry (single asterisk or “*”), or by the State of Design (double asterisk or “**”). However, the State of Registry should take the necessary steps to ensure that operators for which it is responsible comply with any applicable approvals issued by the State of Design, in addition to its own requirements.

Note.— Items that require a specific approval are not included here. Refer to 1.2 for a list of these provisions.

- a) *Configuration deviation list (CDL) (Definitions);
- b) *Master minimum equipment list (MMEL) (Definitions);
- c) Aircraft-specific minimum equipment list (MEL) (Section 3, 3.6.1.1);
- d) Performance-based navigation operations (other than RNP-AR) (2.5.2.3);
- e) MNPS operations (2.5.2.6 (b));
- f) Procedures for electronic navigation data management (Section 3, 3.7.3); and
- g) **Mandatory maintenance tasks and intervals (Section 3, 3.11.2.2).

End of new attachment.

— END —