CIVIL AVIATION AUTHORITY OF FIJI

ADOPTION OF AMENDMENT 51 TO ANNEX 6, PART I

ICAO Reference: AN 11/1.3.38-26/23

ICAO Approval Date: 16 April 2026

ICAO Applicability Date: 26 November 2026

CAAF Document Affected: Standards Document – International Commercial Air Transport - Aeroplanes (SD-ICAT(A))

Effective Date: 3 August 2026

Amendment Number: Amendment 6 to SD-ICAT(A)

Purpose of the Amendment: This amendment includes changes brought about by Amendment 51 to Annex 6, Part I which addresses the runway overrun awareness and alerting system (ROAAS), the use of the terms authorization, acceptance and approval, end of flight location, minor amendments, protection of the flight data analysis programme (FDAP) and flight recorder recordings, as well as consequential amendments stemming from the adoption of Amendment 2 to Annex 19.

TEXT OF AMENDMENT 6 TO THE STANDARDS DOCUMENT – INTERNATIONAL COMMERCIAL AIR TRANSPORT – AEROPLANES (SD-ICAT (A))

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ABBREVIATIONS AND SYMBOLS

(used in this Annex)

Abbreviations

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HEA High elevation aerodromes

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~~RNAV Area navigation~~

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PUBLICATIONS

(referred to in this Annex)

ICAO Publications

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Annexes to the Convention on International Civil Aviation

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Annex 6 — *Operation of Aircraft*

Part II — *International General Aviation — Aeroplanes and Helicopters*

Part III — *International ~~Operations~~ Commercial Air Transport — Helicopters*

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Manuals1

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Guidance on the Preparation of an Operations Manual (Doc 10153)

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~~*Preparation of an Operations Manual* (Doc 9376)~~

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CHAPTER 1. DEFINITIONS

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***Acts of unlawful interference*.** These are acts or attempted acts such as to jeopardize the safety of civil aviation, including but not limited to:

a) unlawful seizure of aircraft,

b) destruction of an aircraft in service,

c) hostage-taking on board aircraft or on aerodromes,

d) forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility,

e) introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes,

f) use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment,

g) communication of false information such as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

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***Aircraft operating manual*.** A manual, ~~acceptable to the State of the Operator~~, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

Note.— The aircraft operating manual is part of the operations manual.

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***Area navigation ~~(RNAV)~~*.** A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

~~*Note.— Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.*~~

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***Navigation specification*.** A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

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~~*Area navigation (RNAV) specification.*~~ A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

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***Performance-based navigation (PBN)*.** Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note.— Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, ~~availability~~ and functionality needed for the proposed operation in the context of a particular airspace concept. Availability of a global navigation satellite system signal in space and/or some other navigation aid infrastructure is considered within the airspace concept in order to enable the navigation application.

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CHAPTER 2. APPLICABILITY

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Note 1.— Standards and Recommended Practices applicable to international general aviation operations with aeroplanes and helicopters are to be found in Annex 6, Part II.

Note 2.— Standards and Recommended Practices applicable to international commercial air transport operations ~~or international general aviation operations~~ with helicopters are to be found in Annex 6, Part III.

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CHAPTER 3. GENERAL

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3.1 COMPLIANCE WITH LAWS, REGULATIONS AND PROCEDURES

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3.1.4 Responsibility for operational control shall be delegated only to the pilot-in-command and to a flight operations officer/flight dispatcher if the operator's approved method of control and supervision of flight operations requires the use of flight operations officer/flight dispatcher personnel.

Note.— Guidance on the operational control organization and the role of the flight operations officer/flight dispatcher is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance *(Doc 8335). Detailed guidance on the authorization, duties and responsibilities of the flight operations officer/flight dispatcher is contained in the* Guidance on the Preparation of an Operations Manual *(Doc ~~9376~~ 10153). The requirements for age, skill, knowledge and experience for licensed flight operations officers/flight dispatchers are contained in Annex 1.*

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3.3 SAFETY MANAGEMENT

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3.3.5 Until 22 November 2028, a ~~A~~ flight data analysis programme shall contain adequate safeguards to protect the source(s) of the data in accordance with Appendix 3 to Annex 19.

3.3.5 As of 23 November 2028, a ~~A~~ flight data analysis programme shall ~~contain adequate safeguards to protect the source(s) of the data~~ include protections against the disclosure and use of the safety data and safety information as well as protections for related individuals and organizations in accordance with ~~Appendix 3 to~~ Annex 19.

Note.— Guidance on the establishment of flight data analysis programmes is included in the Manual on Flight Data Analysis Programmes (FDAP) *(Doc 10000).*

3.3.6 Until 22 November 2028, States shall not allow the use of recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS for purposes other than the investigation of an accident or incident as per Annex 13, except where the recordings or transcripts are:

a) related to a safety-related event identified in the context of a safety management system; are restricted to the relevant portions of a de-identified transcript of the recording; and are subject to the protections accorded by Annex 19;

b) sought for use in criminal proceedings not related to an event involving an accident or incident investigation and are subject to the protections accorded by Annex 19; or

c) used for inspections of flight recorder systems as provided in Section 7 of Appendix 8.

Note.— Provisions on the protection of safety data, safety information and related sources are contained in Appendix 3 to Annex 19. When an investigation under Annex 13 is instituted, investigation records are subject to the protections accorded by Annex 13. 5

3.3.7 Until 22 November 2028, States shall not allow the use of recordings or transcripts of FDR, ADRS as well as Class B and Class C AIR and AIRS for purposes other than the investigation of an accident or incident as per Annex 13, except where the recordings or transcripts are subject to the protections accorded by Annex 19 and are:

a) used by the operator for airworthiness or maintenance purposes;

b) used by the operator in the operation of a flight data analysis programme required in this Annex;

c) sought for use in proceedings not related to an event involving an accident or incident investigation;

de-identified; or

e) disclosed under secure procedures.

Note.— Provisions on the protection of safety data, safety information and related sources are contained in Appendix 3 to Annex 19.

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3.6 PROTECTION OF RECORDINGS AND TRANSCRIPTS

Applicable as of 23 November 2028.

3.~~3.~~6.1 States shall not allow the use of recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS ~~for purposes other than the investigation of an accident or incident as per Annex 13~~, except where the recordings or transcripts are:

a) used in the investigation of an accident or incident instituted under Annex 13;

~~a)~~b) ~~related to~~ used in the assessment of a safety-related event identified in the context of a safety management system, in which case such use is~~; are~~ restricted to the relevant portions of a de-identified transcript of the recording; and are subject to the protections accorded by Annex 19;

~~b)~~c) sought for use in criminal proceedings not related to an event involving an Annex 13 accident or incident investigation ~~and are subject to the protections accorded by Annex 19~~, in which case such use is restricted to the relevant portions disclosed under authoritative safeguards; or

~~c)~~d) used for inspections of flight recorder systems as provided in Section 7 of Appendix 8.

Note 1.— When an investigation under Annex 13 is instituted, the protection accorded to accident and investigation records, including recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS, is determined in accordance with Annex 13. Provisions on the protection of safety data~~,~~ and safety information collected for purposes of maintaining or improving safety, ~~and~~ as well as related sources are contained in ~~Appendix 3 to~~ Annex 19~~. When an investigation under Annex 13 is instituted, investigation records are subject to the protections accorded by Annex 13.~~

Note 2.— Authoritative safeguards include legal limitations or restrictions such as protective orders, closed proceedings, in-camera review, and de-identification of data for the use or disclosure of safety information in criminal proceedings.

3. ~~*3.7*~~ *6.2* States shall not allow the use of recordings or transcripts of FDR, ADRS as well as Class B and Class C AIR and AIRS ~~for purposes other than the investigation of an accident or incident as per Annex 13~~, except where the recordings or transcripts are ~~subject to the protections accorded by Annex 19 and are~~:

a) used in the investigation of an accident or incident instituted under Annex 13;

~~a)~~ b) used by the operator for airworthiness or maintenance purposes;

~~b)~~ c) used by the operator in the operation of a flight data analysis programme required in this Annex; or

~~c)~~ d) sought for use in proceedings not related to an event involving an accident or incident investigation;

~~d) de-identified; or~~

~~e) disclosed under secure procedures.~~

Note.— Provisions on the protection of safety data~~;~~ and safety information collected for purposes of maintaining or improving safety, ~~and~~ as well as related sources are contained in ~~Appendix 3 to~~ Annex 19.

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CHAPTER 4. FLIGHT OPERATIONS

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4.3 FLIGHT PREPARATION

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4.3.5 Meteorological conditions

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4.3.5.3 To ensure that an adequate margin of safety is observed in determining whether or not an approach and landing can be safely carried out at each alternate aerodrome, the operator shall specify appropriate incremental values for height of cloud base and visibility, ~~acceptable to the State of the Operator~~, to be added to the operator's established aerodrome operating minima.

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4.3.6 Fuel requirements

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4.3.6.2 The amount of usable fuel to be carried shall, as a minimum, be based on:

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b) the operating conditions for the planned flight including:

1) anticipated aeroplane mass;

2) ~~Notices to Airmen~~ NOTAMs;

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4.4.9 Aeroplane operating procedures for noise abatement

4.4.9.1 **Recommendation**.— *Aeroplane operating procedures for noise abatement should comply with the provisions of PANS-OPS (Doc 8168), Volume III.*

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4.10 FATIGUE MANAGEMENT

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4.10.5 States that approve the operator's FRMS shall establish a process to ensure that an FRMS provides a level of safety equivalent to, or better than, the prescriptive fatigue management regulations. As part of this process, the State of the Operator shall:

a) require that the operator establish maximum values for flight times and/or flight duty periods(s) and duty period(s), and minimum values for rest periods. These values shall be based upon scientific principles and knowledge, and be subject to safety assurance processes~~, and acceptable to the State of the Operator~~;

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CHAPTER 5. AEROPLANE PERFORMANCE OPERATING LIMITATIONS

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5.2 APPLICABLE TO AEROPLANES CERTIFICATED IN ACCORDANCE WITH PARTS IIIA AND IIIB OF ANNEX 8

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5.2.7 Mass limitations

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d) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the ~~competent authority of the State in which the aerodrome is situated~~ State of the Aerodrome.

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CHAPTER 6. AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

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6.3 FLIGHT RECORDERS

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6.3.5 Flight recorders — general

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6.3.5.5 *Combination recorders*

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6.3.5.5.3 **Recommendation**.— *All aeroplanes of a maximum certificated take-off mass over 5 700 kg, required to be equipped with an FDR and a CVR, may alternatively be equipped with two combination recorders (FDR/CVR).*

Note.— The requirement of 6.3.~~4~~ 5.5 may be satisfied by equipping the aeroplanes with two combination recorders (one forward and one aft) or separate devices.

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6.15 AEROPLANES REQUIRED TO BE EQUIPPED WITH GROUND PROXIMITY WARNING SYSTEMS (GPWS)

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6.15.5 All piston-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers shall be equipped with a ground proximity warning system which provides the warnings in 6.15.~~6~~7 a) and c), warning of unsafe terrain clearance and a forward-looking terrain avoidance function.

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6.17 EMERGENCY LOCATOR TRANSMITTER (ELT)

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6.17.3 All aeroplanes authorized to carry more than 19 passengers for which the individual certificate of airworthiness is first issued after 1 July 2008 shall be equipped with ~~either~~ an automatic ELT and a separate device as follows:

a) ~~at least two ELTs, one of which shall be automatic; or~~ where the aeroplane is not required to comply with 6.18.1, either a second ELT of any type or a device meeting the requirements of 6.18.1;

b) ~~at least one ELT and a capability that meets the requirements of 6.18.~~ where the aeroplane is required to comply with 6.18.1 and the automatic ELT does not fulfil the requirements of 6.18.1, a device meeting the requirements of 6.18.1;

c) where the aeroplane is required to comply with 6.18.1 and the automatic ELT fulfils the requirements of 6.18.1, a second ELT of any type.

~~*Note.— In the case where the requirements for 6.18 are met by another system no automatic ELT is required.*~~

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6.26 TURBINE AEROPLANE - RUNWAY OVERRUN AWARENESS

AND ALERTING SYSTEM (ROAAS)

6.26.1 All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2026, shall be equipped with a runway overrun awareness and alerting system (ROAAS).

Note 1.— An example of relevant g~~G~~uidance material ~~for~~ related to ROAAS ~~design is contained~~ may be found in *EUROCAE ED-250, Minimum Operation Performance Specification (MOPS) for Runway Overrun Awareness and Alerting System (ROAAS)~~, or equivalent documents~~*.

Note 2.— Operator requirements for the use of ROAAS are contained in PANS-OPS, Volume III, Section 12.

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CHAPTER 9. AEROPLANE FLIGHT CREW

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9.3 FLIGHT CREW MEMBER TRAINING PROGRAMMES

9.3.1 The operator shall establish and maintain a ground and flight training programme, approved by the State of the Operator, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:

. . .

Note 9.— Guidance material on the different means used to assess competence can be found in the Attachment C to Chapter 2 of the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868).*

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CHAPTER 12. CABIN CREW

12.1 ASSIGNMENT OF EMERGENCY DUTIES

The operator shall establish~~, to the satisfaction of the State of the Operator,~~ the minimum number of cabin crew required for each type of aeroplane, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The operator shall assign these functions for each type of aeroplane.

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CHAPTER 14. DANGEROUS GOODS

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14.3 OPERATORS WITH A SPECIFIC APPROVAL FOR THE TRANSPORT OF DANGEROUS GOODS AS CARGO

The State of the Operator shall issue a specific approval for the transport of dangerous goods and ensure that the operator:

a) establishes a dangerous goods training programme that meets the requirements in the Technical Instructions, Part 1, Chapter 4, ~~Table 1-4~~, and the requirements of the State regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

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APPENDIX 2. ORGANIZATION AND CONTENTS OF AN OPERATIONS MANUAL

(Chapter 4, 4.2.3.1, refers)

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2. CONTENTS

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2.1 General

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2.1.31 Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS).

Note.— Procedures for the operation of ACAS are contained in PANS-OPS (Doc 8168), Volume III, and in PANS-ATM (Doc 4444), Chapters 12 and 15.

2.1.32 Policy, instructions procedures and training requirements for the use of a Runway Overrun Awareness and Alerting System (ROAAS).

Editorial Note.— Renumber subsequent paragraphs.

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2.3.7 Information regarding the use of ROAAS, in particular where the use of such systems is not available.

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APPENDIX 5. SAFETY OVERSIGHT OF AIR OPERATORS

(Chapter 4, 4.2.1.8, refers)

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1. PRIMARY AVIATION LEGISLATION

The State of the Operator shall enact and implement laws that enable the State to regulate the certification and continued ~~supervision~~ surveillance of air operators and the resolution of safety issues identified by the authority ~~and to ensure that compliance will result in an acceptable level of safety performance for the operations undertaken.~~

Note 1.— The term authority as used in this Appendix refers to the Civil Aviation Authority as well as equivalent organizations, including inspectors and staff.

Note 2.— Guidance on the inspection, certification and continued surveillance of operations is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance *(Doc 8335) and the* Airworthiness Manual *(Doc 9760).*

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APPENDIX 6. AIR OPERATOR CERTIFICATE (AOC)

(Chapter 4, 4.2.1.5 and 4.2.1.6, refer)

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3. OPERATIONS SPECIFICATIONS FOR EACH AIRCRAFT MODEL

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OPERATIONS SPECIFICATIONS (subject to the approved conditions in the operations manual)				
ISSUING AUTHORITY CONTACT DETAILS[1] Telephone: _____ Fax: _____ Email: _____				
AOC#[2]: _____ Operator name[3]: _____ Date[4]: _____ Signature: _____ Dba trading name[3]: _____				
Aircraft model[5]:				
Types of operation: Commercial air transportation ☐Passengers ☐ Cargo ☐ Other[6]: _____				
Area(s) of operation[7]:				
Special limitations[8]:				
SPECIFIC APPROVAL	**YES**	**NO**	**DESCRIPTION [9]**	**REMARKS**
Dangerous goods	☐	☐		
Low visibility operations Approach and landing Take-off Operational credit(s)	☐ ☐ ☐	☐ ☐ ☐	CAT[10]: _____ RVR: _____ m DH: _____ ft RVR[11]: _____ m [12]	
RVSM[13] ☐ N/A	☐	☐		
EDTO[14] ☐ N/A	☐	☐	Threshold time[15]: _____ minutes Maximum diversion time[15]: _____ minutes	
AR navigation specifications for PBN operations	☐	☐	[16]	
Continuing airworthiness	☒	☒	[17]	
EFB	☐	☐	[18]	
Other [19]	☐	☐		

Notes.—

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7. List the ~~geographical~~ area(s) of authorized operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries), including any limitations related to aerodrome elevations (such as high elevation aerodrome (HEA)), as clearly defined by the issuing authority, and indicating any designated airspace requiring approval (such as the North Atlantic High Level Airspace (NAT HLA)). The authorized area(s) of operation may be issued in attachments to the operations specifications.

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APPENDIX 8. FLIGHT RECORDERS

(Chapter 6, 6.3, 6.18, refers)

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Table A8-1. Parameter characteristics for flight data recorders

Serial number	*Parameter*	*Applicability*	*Measurement range*	*Maximum sampling and recording interval (seconds)*	*Accuracy limits (sensor input compared to FDR readout)*	*Recording resolution*
. . .						
38*	Selected barometric setting (pilot, co-pilot)		As installed	64	As installed	0.1 mb (0.0~~1~~03 in-Hg)

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Table A8-3. Parameter Characteristics for Aircraft Data Recording Systems

No.	*Parameter name*	*Minimum recording range*	*Maximum recording interval in seconds*	*Minimum recording accuracy*	*Minimum recording resolution*	*Remarks*
. . .						
8	External static pressure (or pressure altitude)	34.4 mb (~~-3.44~~ 1.02 in-Hg) to 310.2 mb (~~-31.02~~ 9.16 in-Hg) or available sensor range	1	As installed (±1 mb (0.~~1~~03 in-Hg) or ±30 m (±100 ft) to ±210 m (±700 ft) recommended)	0.1 mb (0.0~~1~~03 in-Hg) or 1.5 m (5 ft)	

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APPENDIX 10. ARTICLE 83 *bis* AGREEMENT SUMMARY

(Chapter 6, 6.1.5.4, refers)

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2. Article 83 *bis* agreement summary

ARTICLE 83 *bis* AGREEMENT SUMMARY		
Title of the Agreement:		
State of Registry:		Focal point:
State of the Operator:		Focal point:
Date of signature:	By State of Registry[1]:	
	By State of the 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:		

Convention on International Civil Aviation	ICAO Annexes affected by the transfer of responsibility in respect of certain functions and duties to the State of the Operator		
Article 12: Rules of the Air	Annex 2, all chapters	Yes ☐ No ☐	
Article 30 a): Aircraft radio equipment	Radio Station Licence	Yes ☐ No ☐	
Articles 30 b) and 32 a): Licenses of personnel	Annex 1, Chapters 1, 2, 3 and 6; and Annex 6, Part I, Radio Operator; or Annex 6, Part II (qualifications and/or flight crew member licensing); or Annex 6, Part III, Section II (composition of the flight crew) (radio operator)~~; or Annex 6, Part III, Section III (qualifications)~~	Yes ☐ No ☐	Annex 6: [Specify Part and paragraph][3]
Article 31: Certificates of Airworthiness	Annex 6 Part I or Part III, Section II	Yes ☐ No ☐	[Specify Part and chapters][3]
	Annex 6 Part II ~~or Part III, Section III~~	Yes ☐ No ☐	[Specify ~~Part and~~ chapters][3]
	Annex 8 Part II, Chapters 3 and 4	Yes ☐ No ☐	[Specify chapters][3]

Aircraft affected by the transfer of responsibilities to the State of the Operator					
Aircraft make, model, series	Nationality and registration marks	Serial No.	AOC No. (Commercial air transport)	Dates of transfer of responsibilities	
				From[1]	To (if applicable)[2]

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ATTACHMENT B. AIR OPERATOR CERTIFICATION AND VALIDATION

Supplementary to Chapter 4, 4.2.1

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2. REQUIRED TECHNICAL SAFETY EVALUATIONS

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Editorial Note.— Insert new Section 2.6 as follows:

2.6 Area of operation

2.6.1 In deciding which area(s) of operation to authorize and include in the operations specifications, the State of the Operator should take into account the following factors:

a) the adequacy of the operational control (for example, staffing, communication means, aircraft tracking means, access to local regulations and weather information) within the proposed area(s) of operation;

b) the adequacy of ground handling and maintenance arrangements at the departure and destination aerodromes intended to be used;

c) the capability of the aircraft to operate in the proposed area(s), in particular:

1) the performance capability of the aircraft with regard to the terrain;

2) the need for any special equipment or procedures (such as fuel temperature monitoring and fuel freeze strategy);

3) the performance and reliability of the aircraft systems, with regard to extremes of weather or climate (such as desert, polar, high elevation aerodrome operations);

4) the need for any special dispatch requirements with regard to the content of the MEL; and

5) the availability of the necessary communication, navigation and surveillance equipment;

d) the communication, navigation and surveillance facilities available over the proposed routes;

e) the availability of adequate aerodromes within the proposed area(s), and the availability of related navigation data (such as charts, navigation databases);

f) the availability of adequate search and rescue facilities, and the need to carry special survival equipment;

g) any special training required for:

1) coping with weather or climatic conditions likely to be encountered, including low atmospheric pressure at high elevation aerodromes and crew exposure to solar and cosmic radiations;

2) complying with communication, navigation, surveillance specifications (PBCS, PBN) or with specific operational or airspace requirements (for example augmented crew, North Atlantic High Level Airspace (NAT-HLA));

3) complying with ATC requirements such as the use of non-standard phraseology, altitude reference (such as metres), meteorological information (such as altimeter settings in inches of mercury, wind in metres per second, visibility in miles or feet); and

4) complying with relevant area, route and aerodrome qualification requirements in accordance with Chapter 9, 9.4.3;

h) the adequacy of relevant parts of the operations manual, in particular with regard to procedures and training programmes;

i) the ability of the operator to track their aircraft in accordance with the requirements of Chapter 3, 3.5; and

j) additionally, when considering proposed changes to the operators authorized area(s) of operation, the results of the operator's management of change process, detailing identified hazards, safety risk assessments and mitigations related to these changes.

Note.— Guidance on safety risk assessments is contained in the Safety Management Manual *(Doc 9859).*

2.6.2 In listing the authorized area(s) of operation in the operations specifications, the State of Operator should:

a) specify whether the use of designated airspaces has been authorized (for example, "NAT, including NAT HLA" or "SAM, including HEA operations up to XX FT elevation");

b) use "worldwide" only if the operator has demonstrated its capability to operate (in terms of equipment, procedures and training), in every area of the world; if some areas or operations are excluded, these should be explicitly stated (for example, worldwide, excluding polar regions).

End of new text

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3. AUTHORIZATIONS

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3.4 Provisions that require a technical evaluation

Other provisions in Annex 6, Part I, require the State to have made a technical evaluation. ~~These provisions contain the phrases "acceptable to the State", "satisfactory to the State", "determined by the State", "deemed acceptable by the State", and "prescribed by the State".~~ While not necessarily requiring an approval by the State, these Standards do require the State to at least accept the matter at issue after it conducts a specific review or evaluation. These provisions are:

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ATTACHMENT C. MINIMUM EQUIPMENT LIST (MEL)

Supplementary to Chapter 6, 6.1.~~2~~3

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ATTACHMENT H. ACCURATE LOCATION OF ~~AN AEROPLANE IN DISTRESS~~ THE END OF FLIGHT

(Supplementary to Chapter 6, 6.3.6, 6.17 and 6.18)

GUIDANCE FOR ACCURATE LOCATION OF

~~AN AEROPLANE IN DISTRESS~~ THE END OF FLIGHT

1. INTRODUCTION

1.1 The following material provides guidance on ~~locating an aeroplane in distress~~ determining the end of flight location, which includes guidance related to the location of an aircraft in distress (6.18) along with additional information on the interrelation between these Standards and those for the carriage of ELTs (6.17) and flight recorder data recovery (6.3.6). The Triggered Transmission of Flight Data Working Group (TTFDWG) reviewed forty-two accidents to determine an indication of the distance from a last-known aeroplane position to the location of an accident site. The report concluded that in approximately 95 per cent of the cases, when the aircraft position was known one minute prior to the accident, the accident site location was within a 6 NM radius of that position. (Click here to access the TTFDWG Report under the "publications" tab or go to https://www.bea.aero/en/ .)

> *Note.— In this context "end of flight" refers to the location of the aircraft following an accident, and not to the safe landing at destination or at an alternate aerodrome.*

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1.3 When an accident is survivable, the accurate determination of the location of the end of flight in a timely manner is essential and may not only rely on the last known aeroplane position before the accident. An ELT automatically activated subsequent to an impact is therefore required and aims at enabling timely, efficient and effective search and rescue (SAR) operations by guiding SAR units to the actual accident scene to rescue survivors during the time-frame for survival and minimize the risk to SAR units.

> *Note.— Additional guidance on the robust and automatic means to accurately determine the location of the point of end of flight is contained in the* Manual on Global Aeronautical Distress and Safety System *(Doc 10165).*

2. CLARIFICATION OF PURPOSE OF EQUIPMENT

2.1 In flight ~~I~~information from which a position can be determined: Information from an aircraft system which either is active, or, when automatically or manually activated, can provide flight position information which includes a time stamp. This is a performance-based requirement which is not system-specific and may also bring operational benefits.

2.2 Emergency locator transmitter (ELT): ~~The current generation of ELTs were~~ ELTs are designed to provide the position of impact for a survivable accident. ~~The next generation of~~ Some ELTs may also have the additional capability to be automatically activated ~~a transmission~~ in flight, by ~~when~~ any of the conditions detailed in EUROCAE ED-237, Minimum Aviation System Performance Specification (MASPS) for Criteria to Detect In-Flight Aircraft Distress Events to Trigger Transmission of Flight Information ~~are met. When~~ If an ELT sinks below the surface of water, its signal is not detectable.

> *Note.— A distress tracking capability meeting the requirements of Chapter 6, 6.18, does not necessarily include the automatic activation function subsequent to an impact or the post-accident homing signal.*

2.3 Automatic deployable flight recorder (ADFR): The purpose of an ADFR is to have flight recorder data available soon after an accident, in particular for accidents over water. The ADFR contains an integrated ELT which provides for both locating the accident site for accident investigation and search and rescue purposes. Being floatable, it will assist in locating the accident site by providing an ELT signal when if the wreckage sinks below the surface of the water. ~~It also ensures redundancy for one ELT.~~ The ADFR may be used to meet the requirements of Chapter 6, 6.17, regarding the carriage of an automatic ELT on the aircraft.

~~2.4 Underwater locator device (ULD): A ULD operating at a frequency of 8.8 kHz is attached to the airframe to locate aeroplane wreckage below the surface of water when an ELT signal is not possible to detect. The ULDs operating at 37.5 kHz are attached to the flight recorders and are used for locating the flight recorders under water.~~

3. EQUIPAGE COMPLIANCE

The advancement of technology has made it possible to meet the equipage requirements by different means. Table H-1 below provides a list of the most stringent examples of compliance to accurately determine the location of the end of flight and provides possible equipage combinations. In such potential installations, the cost will be minimized and the effectiveness of the current installation improved.

Table H-1. Examples of compliance

~~Current~~	~~After 1 January 2021~~
~~In-service~~	~~Application for type certification is submitted to a Contracting State~~
~~Two ELTs~~ ~~Two fixed recorders~~	~~Example:~~ ~~A system from which a position can be determined; and one ADFR with an integrated ELT; and one combined recorder;~~ ~~or~~ ~~A system from which a position can be determined and one ELT and two fixed recorders and an additional means to retrieve flight recorder data in a timely manner.~~

Date of application for type certificate submitted to a Contracting State	Date of issuance of first Certificate of for the individual aircraft	Examples of aeroplane equipage for compliance with Standards in Chapter 6, 6.3.6, 6.17 and 6.18
Before 1 January 2021	Before 1 January 2024	Two ELTs, one of which must be an automatic ELT.
Before 1 January 2021	On or after 1 January 2024	One device meeting the requirements of 6.18, plus one automatic ELT;

		or One device meeting the requirements of Chapter 6, 6.18, and which includes the functionality of an automatic ELT, plus one additional ELT.
On or after 1 January 2021	Before 1 January 2024	One deployable ADFR with integrated automatic ELT, plus one additional ELT.
On or after 1 January 2021	On or after 1 January 2024	One device meeting the requirements of Chapter 6, 6.18, and which includes the functionality of an automatic ELT, plus one additional ELT, plus a capability meeting the requirements of Chapter 6, 6.3.6; or One deployable ADFR with integrated automatic ELT, plus one device meeting the requirements of Chapter 6, 6.18; or One deployable ADFR with integrated automatic ELT which also meets the requirement of 6.18, plus one additional ELT.

~~*Note.— A system from which a position can be determined and used to comply with Chapter 6, 6.18, may replace one of the ELTs required by Chapter 6, 6.17.*~~

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— END —