

Aviation Safety Rules & Regulations

ANTR OPS I

In compliance with ICAO Annex 6 Part I, 11th Edition July 2018 Amendments up to & including 46 and EASA Easy Access Rules for Air Operation July 2021.

Consequential Amendments to ANTR OPS 1

Bahrain CAA Publication Revisions Highlight Sheet

ANTR: ANTR OPS 1 CAP: _____ TPM: _____

The following pages of ANTR Part IV OPS 1 have been revised to ICAO Annex 6 Part I, 11th Edition July 2018 Amendments up to & including 46 and EASA Easy Access Rules for Air Operation July 2021.

Item	Paragraph number	Page	Reason
	Foreword, Contents (general) and Contents (details)	i - xxvi	To indicate the current revision status
	ANTR OPS 1.003		Introduction of additional terminology - Supernumerary
	Appendix 1 to ANTR OPS 1.005		Deletion of non-practiced type of examiner titles
	ANTR OPS 1.020 (a)(5)		Amended to correct the ICAO Doc reference
	ANTR OPS 1.030		Amended to clarify the MMEL requirement
	ANTR OPS 1.125		To introduce 83 bis requirement – Document to be carried
	Appendix 1 to ANTR OPS 1.125		To introduce 83 bis requirement – format of information
	AOC Certificate Format & Ops Specification		Filling Instruction amendment
	ANTR OPS 1.241		To incorporate ICAO Annex-6, Part-I, Chapter 7.2.7 & 7.2.8 & EASA Air Ops. SPA.RVSM.105 requirement and to address NAT HLA requirement
	Appendix 1 to ANTR OPS 1.241		To incorporate ICAO Annex-6, Part-I, Chapter 7.2.7 & 7.2.8 & EASA Air Ops. SPA.RVSM.105 requirement and to address NAT HLA requirement
	AC OPS 1.241		To incorporate ICAO Annex-6, Part-I, Chapter 7.2.7 & 7.2.8 & EASA Air Ops. SPA.RVSM.105 requirement and to address NAT HLA requirement
	ANTR OPS 1.243		Delete an inactive regulation

	AC OPS 1.243		Amended to reflect the NAT HLA type
	AC OPS 1.297		To delete inactive regulation reference (JAA)
	ANTR OPS 1.505		To change the requirement of deciding the track beyond 180 minutes with two engine inoperative on aeroplanes with three or more engines
	Appendix 1 to ANTR OPS 1.605		To delete inactive regulation reference (JAA)
	ANTR OPS 1.652		Typographical correction from the previous edition
	ANTR OPS 1.668		To incorporate ICAO Annex-6, Part-I, Chapter 6.19.2 requirement
	ANTR OPS 1.680		To incorporate changes as per ICAO Annex-6, Part-I, Chapter 6.12, the visibility of display unit
	AC OPS 1.730(a)(3)		To delete inactive regulation reference (JAA) and to introduce applicable regulation references as per EASA Air Ops.CAT.IDE.A.205
	AMC OPS 1.745		FAK Content list corrected
	ANTR OPS 1.866		To incorporate ICAO Annex-6, Part-I, Chapter 6.20 requirement
	ANTR OPS 1.870		To incorporate ICAO Annex-6, Part-I, Chapter 7.2 requirement & EASA Air Ops. SPA.MNPS.100, SPA.MNPS.105 requirement and to introduce NAT HLA reference
	AC OPS 1.870		To introduce NAT HLA reference
	AC OPS 1.870		To incorporate ICAO Annex-6, Part-I, Chapter 7.2 requirement & EASA Air Ops. SPA.MNPS.100, SPA.MNPS.105 requirement
	ANTR OPS 1.943		Mandated the CRM training
	ANTR OPS 1.965		Amendment to introduce EBT requirement
	ANTR OPS 1.978		Amendment to introduce EBT requirement
	Appendix 1 to ANTR OPS 1.1005		Mandated the CRM training

	IEM OPS 1.1040(b)		To introduce NAT HLA reference
	Appendix 1 to ANTR OPS 1.1045		To introduce NAT HLA reference
	ANTR OPS FTL 1.1100		Clarification to the Scope added
	ANTR OPS FTL CS 1.1100		Clarification to the applicability added
	ANTR OPS 1.1010		Mandated the CRM training
	ANTR OPS 1.1205		Amended to specify the commander's discretion privilege.
	AMC 1 to 1.1205(f)		Amendment to the nature of compliance to commander's discretion
	ANTR OPS 1.1255		To incorporate ICAO Annex-6, Part-I, Chapter 13.2 requirement

FOREWORD

- 1 The Kingdom of Bahrain Civil Aviation Affairs, known in these regulations as the “BCAA” has implemented ANTR OPS 1 (Air Navigation Technical Regulations – Operations 1) based on the ICAO Annexes, with a view to harmonizing legislation and to regulate commercial air transport and private operations of aeroplanes.
- 2 ICAO Annex 6 has been selected to provide the basic structure of ANTR OPS 1 and for Air Operator Certification and Private Operator Authorisation, but with additional subdivision where considered appropriate. The content of Annex 6 has been used and added to where acceptable.
- 3 The BCAA has adopted associated compliance or interpretative material wherever possible and, unless specifically stated otherwise, clarification will be based on this material or other ICAO and EASA documentation.
- 4 Future development of the requirements of ANTR OPS 1 will be in accordance with Notice of Proposed Amendment (NPA) procedures. These procedures allow for the amendment of ANTR OPS 1 to be harmonized with amendments to ICAO Annexes and EASA in a timely manner.
- 5 Definitions and abbreviations of terms used in ANTR OPS 1 that are considered generally applicable are contained in ANTR Part 1- Definitions. However, definitions and abbreviations of terms used in ANTR OPS 1 that are specific to a Subpart of ANTR OPS 1 are normally given in the Subpart concerned or, exceptionally, in the associated compliance or interpretative material.
- 6 The editing practices used in this document are as follows:
 - (a) ‘Shall’ is used to indicate a mandatory requirement and may appear in ANTRs.
 - (b) ‘Should’ is used to indicate a recommendation and normally appears in AMCs and IEMs.
 - (c) ‘May’ is used to indicate discretion by the BCAA, the industry or the applicant, as appropriate.
 - (d) ‘Will’ indicates a mandatory requirement and is used to advise pilots of action incumbent on the BCAA.

NOTE: The use of the male gender implies the female gender and vice versa.
- 7 New, amended and corrected text will be indicated with a side bar beside paragraphs, until a subsequent “amendment” is issued.
- 8 Section 1 regulations are presented in Times Roman font and Section 2 material presented in Arial font
- 9 **This 3rd Edition Revision 12 is dated 15 May 2022.**

~~10 Please refer to the Volume 1 List of Effective Pages and Revision Page for current status.~~

**ANTR OPS 1
COMMERCIAL & PRIVATE
AIR TRANSPORTATION
(AEROPLANES)**

ANTR OPS 1.003 Terminology

Terms used in this Subpart and not defined in ANTRs have the following meaning:

- (a) **Commercial Operator.** A commercial operator is the operator of an aeroplane engaged in transportation of passengers, cargo and mail for remuneration or hire offering service to the public.
- (b) **Commercial Activities.** Unless otherwise specifically authorised by the BCAA, the following operations are categorized as commercial operations;
 - (1) Sightseeing flights
 - (2) Ferry or training flights;
 - (3) Aerial work operations, including:
 - (i) Fire suppression
 - (ii) Agricultural operations
 - (iii) External load operations
 - (iv) Aerial photography and survey
 - (v) Aerial reconnaissance
 - (vi) Aerial advertising
 - (vii) Air shows and aerial demonstrations
 - (viii) Carriage and dropping of parachutists (operator of aircraft)
 - (ix) Navigation aid calibration
 - (x) Other activities as determined by the BCAA.
- (c) **Operator.** The operator means a person, organization or enterprise engaged in or offering to engage in an aeroplane operation. The definition, as used in this Part, applies to Private and Commercial operators as applicable.
- (d) **Private Operator.** Private operator means a person, organisation or enterprise engaged in the carriage of persons or cargo not for hire or reward.
- (e) **‘Supernumeraries’** – means the company employees who are not acting in the capacity of a flight crew or a flight attendant and in general, not trained or qualified to act as a flight crew or a flight attendant and not listed on the load manifest as a flight crew member/flight attendant subject to compliance with respective regulation at ANTR OPS 1.

Note: An occupant of an aircraft required for its safe operation that is not a member of the flight or cabin crew. These occupants are limited to live animal handlers, loadmasters, maintenance technicians, safety pilots or inspectors from the BCAA.

Appendix 1 to ANTR OPS 1.005(a)
Operations of performance Class B aeroplanes.
(See AC to Appendix 1 to ANTR OPS 1.005(a))

No Change to Para (a)

No Changes to Para (b) (1) to (b) (34)

(b) (35) is amended as follows (TWG Recommendation)

(b) (35) (i) no change

(b) (35) (ii) amended as follows:

Subparagraph (a)(3(ii)) applies as follows. Training in the aeroplane may be conducted by ~~a Class Rating Examiner (CRE), a Flight Examiner (FE) or~~ a Type Rating Examiner (TRE).

(b) (35) (iii) amended as follows:

Subparagraph (a)(4)(i) applies as follows. Operator proficiency check may be conducted by a Type Rating Examiner (TRE), ~~Class Rating Examiner (CRE) or by a suitably qualified commander nominated by the operator and acceptable to the Authority, trained in CRM concepts and the assessment of CRM skills.~~

ANTR OPS 1.020 Laws, Regulations and Procedures – Operator’s Responsibilities

(a) The operator must ensure that:

- (1) All employees are made aware that they shall comply with the laws, regulations and procedures of those States in which operations are conducted; and
- (2) All crew members are familiar with the laws, regulations and procedures pertinent to the performance of their duties; prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto.
- (3) The operator shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aeroplane.

Note: Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

- (4) The operator or a designated representative shall have responsibility for operational control.

Note: The rights and obligations of a State in respect to the operation of aeroplanes registered in that State are not affected by this provision.

- (5) 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 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 ICAO, Annex 1 and ANTR FCL PART II Chapter-4.

- (6) If an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight operations officer/flight dispatcher, action by that person in accordance with ANTR OPS 1.207 shall include, where necessary, notification to the appropriate authorities of the nature of the situation without delay, and requests for assistance if required.
- (7) If an emergency situation which endangers the safety of the aeroplane or persons necessitates the taking of action which involves a violation of local regulations or procedures, the pilot-in-command shall notify the appropriate local authority without delay. If required by the State in which the incident occurs, the pilot-in-command shall submit a report on any such violation to the appropriate authority of such State; in that event, the pilot-in-command shall also submit a copy of it to the State of the Operator. Such reports shall be submitted as soon as possible and normally within ten days.
- (8) Operators shall ensure that pilots-in-command have available on board the aeroplane all the essential information concerning the search and rescue services in the area over which the aeroplane will be flown.

Note: This information may be made available to the pilot by means of the operations manual or such other means as is considered appropriate.

- (9) Operators shall ensure that flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in ICAO, Annex 1 and ANTR FCL PART II Chapter-1.
- (10) For each type of aeroplane, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation and to ensure annual training in accomplishing these functions are contained in the operator's

training programme and include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the aeroplane.

- (11) The operator shall ensure that a flight will not commence or continue as planned unless it has been ascertained by every reasonable means available that the airspace containing the intended route from aerodrome of departure to aerodrome of arrival, including the intended take-off, destination and en-route alternate aerodromes, can be safely used for the planned operation. When intending to operate over or near conflict zones, a risk assessment shall be conducted and appropriate risk mitigation measures taken to ensure a safe flight.

Note 1: "Reasonable means" in this Standard is intended to denote the use, at the point of departure or while the aircraft is in flight, of information available to the operator either through official information published by the aeronautical information services or readily obtainable from other sources.

Note 2: Guidance on safety risk assessments is contained in the Safety Management Manual (SMM) (Doc 9859).

Note 3: The Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (Doc 10084) contains further guidance on risk assessment for air operators when flying over or near conflict zones.

ANTR OPS 1.030 Minimum Equipment Lists – Operator’s Responsibilities

- (a) The operator shall establish, for each aeroplane, a Minimum Equipment List (MEL) approved by the BCAA. This shall be based upon, but no less restrictive than, the relevant Master Minimum Equipment List (MMEL) ~~(if this exists)~~ accepted by the BCAA.
- (b) The operator shall not operate an aeroplane other than in accordance with the MEL unless permitted by the BCAA. Any such permission will in no circumstances permit operation outside the constraints of the MMEL.

~~(c) The operator shall use the MMEL from the State of Design. (d) the BCAA shall only adopt the MMEL from the State of Design.~~

ICAO A-6-I, Ch. 6.1.5.1

ANTR OPS 1.125 Documents to be carried

(See [Appendix 1 to ANTR OPS 1.125](#))

- (a) The operator shall ensure that the following are carried on each flight:
- (1) The Certificate of Registration;
 - (2) The Certificate of Airworthiness;

- (3) The original or a copy of the Noise Certificate (if applicable), including an English translation, where one has been provided by the Authority responsible for issuing the noise certificate;
 - (4) The original or a certified true copy of the Air Operator Certificate including the operations specifications relevant to the aeroplane type, issued in conjunction with the certificate;
 - (5) The Aircraft Radio Licence;
 - (6) The original or a copy of the Insurance Certificate(s), which cover the aircraft, its crew, passengers and third party liability clauses;
 - (7) An aeroplane, when operating under an Article 83 *bis* agreement entered into between the State of Registry and the State of the 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.
- (b) Each flight crew member shall, on each flight, carry a valid flight crew licence with appropriate rating(s) for the purpose of the flight.

Appendix 1 to ANTR OPS 1.125 Documents to be carried

[See ANTR OPS 1.125](#)

(a) In case of loss or theft of documents specified in ANTR OPS 1.125, the operation is allowed to continue until the flight reaches the base or a place where a replacement document can be provided.

(b) The Article 83 *bis* agreement summary should contain the information in the template below, in a standardized format suggested below.

ARTICLE 83 <i>bis</i> 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:	

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 principal location of a general aviation operator		
Article 12: Rules of the air	Annex 2, all chapters	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Article 30 a): Aircraft radio equipment	Annex 2 (radio station licence)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
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 III, Section II, (composition of the flight crew (radio operator); and/or Annex 6, Part II (qualifications and/or flight crew member licensing); or Annex 6, Part III, Section III (qualifications)	Yes <input type="checkbox"/> No <input type="checkbox"/>	Annex 6: [Specify Part and paragraph] ³
Article 31: Certificates of Airworthiness	Annex 6 Part I or Part III, Section II	Yes <input type="checkbox"/> No <input type="checkbox"/>	[Specify Part and chapters] ³
	Annex 6 Part II or Part III, Section III	Yes <input type="checkbox"/> No <input type="checkbox"/>	[Specify Part and chapters] ³
	Annex 8 Part II, Chapters 3 and 4	Yes <input type="checkbox"/> No <input type="checkbox"/>	[Specify chapters] ³

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 No. (Commercial airtransport)	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.

AIR OPERATOR CERTIFICATE OPERATIONS SPECIFICATIONS

Filling Instructions: -

1. Telephone -----

2. -----

19. Other authorizations or data can be entered here, using one line (or one multi-line block) per authorization (e.g. special approach authorization, NAT HLA ~~+~~ MNPS, approved navigation performance).

ANTR OPS 1.241 Operation in defined airspace with Reduced Vertical Separation Minima (RVSM)

(See AC OPS 1.241)

- (a) -----
- (b) -----
- (c) -----
- (d) -----
- (e) For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, minimum navigation performance ~~specifications (MNPS)~~ / North Atlantic High Level Airspace (NAT HLA) are prescribed, an aeroplane shall be provided with navigation equipment which:
 - (1) continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and
 - (2) has been authorized by the State of the Operator for ~~the MNPS~~ operations concerned.

Note: The prescribed minimum navigation performance specifications and the procedures governing their application are published in the Regional Supplementary Procedures (Doc 7030).

ICAO A-6-I, Ch. 7.2.7 & 7.2.8

I AW EASA Air Ops. SPA.RVSM.105

Appendix 1 to ANTR OPS 1.241

Operation in defined airspace with Reduced Vertical Separation Minima (RVSM)

To obtain an RVSM operational approval from the BCAA, the operator shall provide evidence that:

- (a) the RVSM airworthiness approval has been obtained;
- (b) procedures for monitoring and reporting height-keeping errors have been established;
- (c) a training programme for the flight crew members involved in these operations has been established;
- (d) operating procedures have been established specifying:
 - (1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;
 - (2) flight crew composition and experience requirements;
 - (3) flight planning;
 - (4) pre-flight procedures;
 - (5) procedures prior to RVSM airspace entry;
 - (6) in-flight procedures;
 - (7) post-flight procedures;

- (8) incident reporting;
- (9) specific regional operating procedures.

CONTENT OF OPERATOR RVSM APPLICATION

The following material should be made available to the competent authority, in sufficient time to permit evaluation, before the intended start of RVSM operations:

- (a) **Airworthiness documents**
Documentation that shows that the aircraft has RVSM airworthiness approval. This should include an aircraft flight manual (AFM) amendment or supplement.
- (b) **Description of aircraft equipment**
A description of the aircraft appropriate to operations in an RVSM environment.
- (c) **Training programmes, operating practices and procedures**
The operator should submit training syllabi for initial and recurrent training programmes together with other relevant material. The material should show that the operating practices, procedures and training items, related to RVSM operations in airspace that requires State operational approval, are incorporated.
- (d) **Manuals and checklists**

The appropriate manuals and checklists should be revised to include information/guidance on standard operating procedures. Manuals should contain a statement of the airspeeds, altitudes and weights considered in RVSM aircraft approval, including identification of any operating limitations or conditions established for that aircraft type. Manuals and checklists may need to be submitted for review by the competent authority as part of the application process.

- (e) **Past performance**

Relevant operating history, where available, should be included in the application. The applicant should show that any required changes have been made in training, operating or maintenance practices to improve poor height-keeping performance.

- (f) **Minimum equipment list**

Where applicable, a minimum equipment list (MEL), adapted from the master minimum equipment list (MMEL), should include items pertinent to operating in RVSM airspace.

- (g) **Plan for participation in verification/monitoring programmes**

The operator should establish a plan for participation in any applicable verification/monitoring programme acceptable to the competent authority. This plan should include, as a minimum, a check on a sample of the operator's fleet by an regional monitoring agency (RMA)'s independent height-monitoring system.

- (h) **Continuing airworthiness**

Aircraft maintenance programme and continuing airworthiness procedures in support of the RVSM operations.

OPERATING PROCEDURES

- (a) **Flight planning**

- (1) During flight planning the flight crew should pay particular attention to conditions that may affect operation in RVSM airspace. These include, but may not be limited to:
 - (i) verifying that the airframe is approved for RVSM operations;
 - (ii) reported and forecast weather on the route of flight;
 - (iii) minimum equipment requirements pertaining to height-keeping and alerting systems; and
 - (iv) any airframe or operating restriction related to RVSM operations.

(b) Pre-flight procedures

- (1) The following actions should be accomplished during the pre-flight procedure:
 - (i) Review technical logs and forms to determine the condition of equipment required for flight in the RVSM airspace. Ensure that maintenance action has been taken to correct defects to required equipment.
 - (ii) During the external inspection of aircraft, particular attention should be paid to the condition of static sources and the condition of the fuselage skin near each static source and any other component that affects altimetry system accuracy. This check may be accomplished by a qualified and authorised person other than the pilot (e.g. a flight engineer or ground engineer).
 - (iii) Before take-off, the aircraft altimeters should be set to the QNH (atmospheric pressure at nautical height) of the airfield and should display a known altitude, within the limits specified in the aircraft operating manuals. The two primary altimeters should also agree within limits specified by the aircraft operating manual. An alternative procedure using QFE (atmospheric pressure at aerodrome elevation/runway threshold) may also be used. The maximum value of acceptable altimeter differences for these checks should not exceed 23 m (75 ft). Any required functioning checks of altitude indicating systems should be performed.
 - (iv) Before take-off, equipment required for flight in RVSM airspace should be operative and any indications of malfunction should be resolved.

(c) Prior to RVSM airspace entry

- (1) The following equipment should be operating normally at entry into RVSM airspace:
 - (i) two primary altitude measurement systems. A cross-check between the primary altimeters should be made. A minimum of two will need to agree within ± 60 m (± 200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and air traffic control (ATC) notified;
 - (ii) one automatic altitude-control system;
 - (iii) one altitude-alerting device; and

(iv) operating transponder.

(2) Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

(d) In-flight procedures

(1) The following practices should be incorporated into flight crew training and procedures:

(i) Flight crew should comply with any aircraft operating restrictions, if required for the specific aircraft type, e.g. limits on indicated Mach number, given in the RVSM airworthiness approval.

(ii) Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 1013.2 hPa / 29.92 in Hg when passing the transition altitude, and rechecking for proper altimeter setting when reaching the initial cleared flight level.

(iii) In level cruise it is essential that the aircraft is flown at the cleared flight level. This requires that particular care is taken to ensure that ATC clearances are fully understood and followed. The aircraft should not intentionally depart from cleared flight level without a positive clearance from ATC unless the crew are conducting contingency or emergency manoeuvres.

(iv) When changing levels, the aircraft should not be allowed to overshoot or undershoot the cleared flight level by more than 45 m (150 ft). If installed, the level off should be accomplished using the altitude capture feature of the automatic altitude-control system.

(v) An automatic altitude-control system should be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or turbulence require disengagement. In any event, adherence to cruise altitude should be done by reference to one of the two primary altimeters. Following loss of the automatic height-keeping function, any consequential restrictions will need to be observed.

(vi) Ensure that the altitude-alerting system is operative.

(vii) At intervals of approximately 1 hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ± 60 m (± 200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and ATC notified. The usual scan of flight deck instruments should suffice for altimeter cross-checking on most flights.

(viii) In normal operations, the altimetry system being used to control the aircraft should be selected for the input to the altitude reporting transponder transmitting information to ATC.

(ix) If the pilot is notified by ATC of a deviation from an assigned altitude exceeding ± 90 m (± 300 ft) then the pilot should take action to return to cleared flight level as quickly as possible.

(2) Contingency procedures after entering RVSM airspace are as follows:

- (i) The pilot should notify ATC of contingencies (equipment failures, weather) that affect the ability to maintain the cleared flight level and coordinate a plan of action appropriate to the airspace concerned. The pilot should obtain the guidance on contingency procedures is contained in the relevant publications dealing with the airspace.
- (ii) Examples of equipment failures that should be notified to ATC are:
 - (A) failure of all automatic altitude-control systems aboard the aircraft;
 - (B) loss of redundancy of altimetry systems;
 - (C) loss of thrust on an engine necessitating descent; or
 - (D) any other equipment failure affecting the ability to maintain cleared flight level.
- (iii) The pilot should notify ATC when encountering greater than moderate turbulence.
- (iv) If unable to notify ATC and obtain an ATC clearance prior to deviating from the cleared flight level, the pilot should follow any established contingency procedures for the region of operation and obtain ATC clearance as soon as possible.

(e) Post-flight procedures

- (1) In making technical log entries against malfunctions in height-keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system. The pilot should detail the actual defect and the crew action taken to try to isolate and rectify the fault.
- (2) The following information should be recorded when appropriate:
 - (i) primary and standby altimeter readings;
 - (ii) altitude selector setting;
 - (iii) subscale setting on altimeter;
 - (iv) autopilot used to control the aircraft and any differences when an alternative autopilot system was selected;
 - (v) differences in altimeter readings, if alternate static ports selected;
 - (vi) use of air data computer selector for fault diagnosis procedure; and
 - (vii) the transponder selected to provide altitude information to ATC and any difference noted when an alternative transponder was selected.

(f) Crew training

- (1) The following items should also be included in flight crew training programmes:
 - (i) knowledge and understanding of standard ATC phraseology used in each area of operations;
 - (ii) importance of crew members cross-checking to ensure that ATC clearances are promptly and correctly complied with;

- (iii) use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck;
- (iv) problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;
- (v) characteristics of aircraft altitude capture systems that may lead to overshoots;
- (vi) relationship between the aircraft's altimetry, automatic altitude control and transponder systems in normal and abnormal conditions; and
- (vii) any airframe operating restrictions, if required for the specific aircraft group, related to RVSM airworthiness approval.

CONTINUING AIRWORTHINESS

(a) Maintenance programme

The aircraft maintenance programme should include the instructions for continuing airworthiness issued by the type certificate holder in relation to the RVSM operations certification.

(b) Continuing airworthiness procedures

The continuing airworthiness procedures should establish a process to:

- (1) assess any modification or design change which in any way affects the RVSM approval;
- (2) evaluate any repairs that may affect the integrity of the continuing RVSM approval, e.g. those affecting the alignment of pitot/static probes, repairs to dents, or deformation around static plates;
- (3) ensure the proper maintenance of airframe geometry for proper surface contours and the mitigation of altimetry system error, surface measurements or skin waviness as specified in the instructions for continued airworthiness (ICA), to ensure adherence to RVSM tolerances. These checks should be performed following repairs or alterations having an effect on airframe surface and airflow.

(c) Additional training may be necessary for continuing airworthiness and maintenance staff to support RVSM approval. Areas that may need to be highlighted for the initial and recurrent training of relevant personnel are:

- (1) Aircraft geometric inspection techniques;
- (2) Test equipment calibration and use of that equipment; and
- (3) Any special instructions or procedures introduced for RVSM approval.

(d) Test equipment

The operator should ensure that maintenance organisations use test equipment adequate for maintenance of the RVSM systems. The adequacy of the test equipment should be established in accordance with the type certificate holder recommendations and taking into consideration the required test equipment accuracy and the test equipment calibration.

AC OPS 1.241

Altimetry System Performance Requirements for Operations in RVSM Airspace

See ANTR OPS 1.241

1. In respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the total vertical error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than $28 - 0.013z$ for $0 \leq z \leq 25$ when z is the magnitude of the mean TVE in metres, or $92 - 0.004z$ for $0 \leq z \leq 80$ where z is in feet. In addition, the components of TVE shall have the following characteristics:
 - a. the mean altimetry system error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude;
 - b. the sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft); and
 - c. the differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
 2. In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph 1, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics:
 - a. the ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions; and
 - b. the differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
-

ANTR OPS 1.243 Operations in areas with specified navigation performance requirements

(See AC OPS 1.243)

- (a) The operator shall ensure that an aeroplane operated in areas, or through portions of airspace, or on routes where a navigation specification for performance-based navigation has been prescribed, is certified according to these regulations.
- (b) The operator of an aeroplane operating in areas referred to in (a) shall establish and document:

- (1) normal and abnormal procedures including contingency procedures;

Note: Electronic navigation data management is an integral part of normal and abnormal procedures.

- (2) flight crew qualification and proficiency requirements in accordance with the appropriate navigation specifications;
- (3) a training programme for relevant personnel consistent with the intended operations; and
- (4) appropriate maintenance procedures to ensure continued airworthiness in accordance with the appropriate navigation specifications.

- (c) The BCAA shall issue a specific approval for operations based on PBN authorization required (AR) navigation specifications (See OPS 1.865(d)(2) and 1.870).

~~(d) After 31 December 2017, all Bahraini operators shall be required to be certified for RNAV1 operations.~~

~~Note: RNAV1 level is possible with:~~

~~D1 All permitted sensors.~~

~~D2 GNSS.~~

~~D3 DME/DME.~~

~~D4 DME/DME/IRU.~~

~~Operators shall indicate RNAV1 compliance by including PBN/D1, PBN/D2, PBN/D3 or PBN/D4 in field 18 of their flight plan.~~

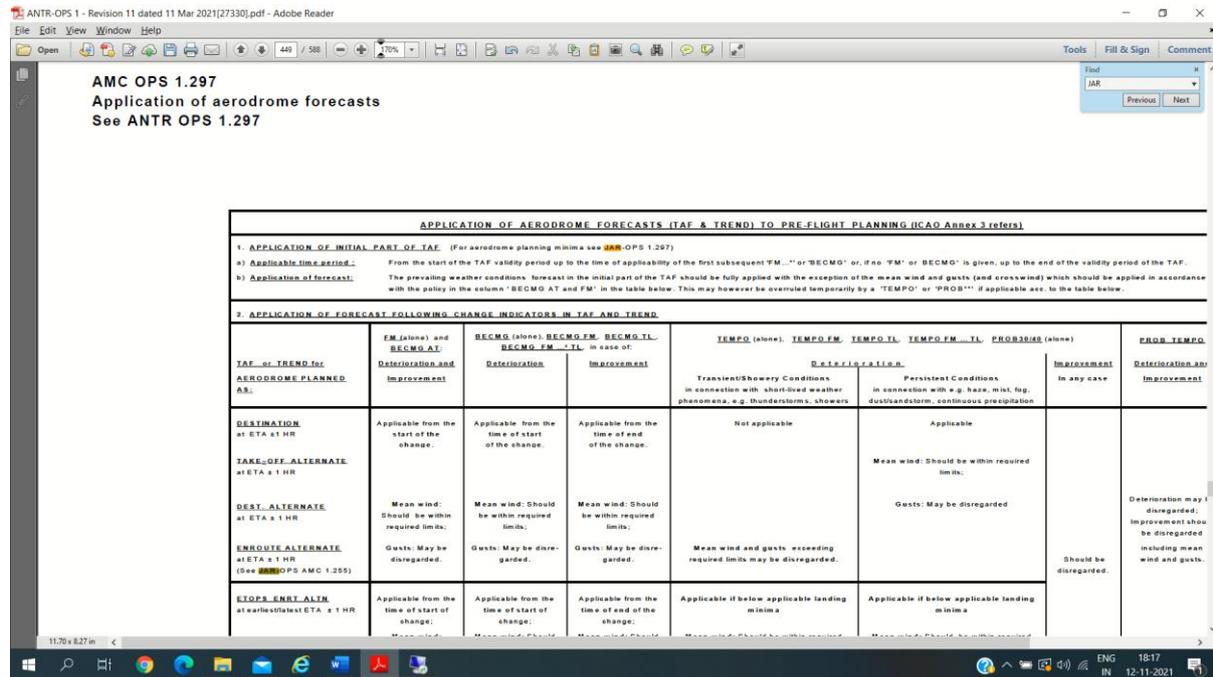
AC OPS 1.243

Operations in areas with specified navigation performance requirements

See ANTR OPS 1.243

1. The equipment carriage requirements, operational and contingency procedures and operator approval requirements relating to areas, portions of airspace or on routes where navigation performance specifications have so far been specified can be found in the following documentation:
 - a. **North Atlantic High Level Airspace (NAT HLA)** ~~For the North Atlantic MNPS~~ - ICAO document Doc 7030/4 Regional Supplementary Procedures (NAT Supps)
 - b. For RVSM in the North Atlantic and Europe (ECAC States) - Doc 7030/4 (NAT and EUR Supps)
 - c. For General Guidance on Performance Based Navigation Manual - ICAO Doc 9613
 - d. For European RNAV (ECAC States) - Doc 7030/4 (EUR Supps)
 - e. Eurocontrol Standard Document 009-93 (RNAV Operations)
 2. Operators should be aware that requirements relating to performance based navigation, including Area Navigation (RNAV) and Required Navigation Performance (RNP), are currently under rapid development. Pending the development, appropriate EASA and/or ICAO endorsed guidance and approval material, may be used in order to approve operators for operations in airspace that has specified navigation performance requirements.
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The AC OPS 1.297 – Text in the table require correction to delete the JAR and to replace with ANTR



ICAO A-6-I, Ch.

ANTR OPS 1.505

En-route – Aeroplanes With Three Or More Engines, Two Engines Inoperative

- (a) The operator shall ensure that at no point along the intended track will an aeroplane having three or more engines be more than ~~90~~ 180 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met unless it complies with sub-paragraphs (b) to (f) below.
- (b) The two engines inoperative en-route net flight path data must permit the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously, to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative. The net flight path must clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track. At altitudes and in meteorological conditions requiring ice protection systems to be operable, the effect of their use on the net flight path data must be taken into account. If the navigational accuracy does not meet the 95% containment level, the operator must increase the width margin given above to 18.5 km (10 nm).
- (c) The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than ~~90~~ 180 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.
- (d) The net flight path must have a positive gradient at 1500 ft above the aerodrome where the landing is assumed to be made after the failure of two engines.
- (e) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

- (f) The expected mass of the aeroplane at the point where the two engines are assumed to fail must not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.
-

EASA AMC1 CAT.POL.MAB.100(b)

Appendix 1 to ANTR OPS 1.605 Mass and Balance – General

(See ANTR OPS 1.605)

(a) *Determination of the dry operating mass of an aeroplane*

(1) *Weighing of an aeroplane*

- (i) New aeroplanes are normally weighed at the factory and are eligible to be placed into operation without reweighing if the mass and balance records have been adjusted for alterations or modifications to the aeroplane. Aeroplanes transferred from a JAA or EASA operator with an approved mass control programme to a Bahraini operator with an approved programme need not be weighed prior to use by the receiving operator unless more than 4 years have elapsed since the last weighing.
-

Typo error in the previous edition corrected:-

ANTR OPS 1.652 IFR or night operations – Flight and navigational instruments and associated equipment

(See AMC OPS 1.650/1.652 & IEM OPS 1.650/1.652)

~~The operator shall not operate an aeroplane in accordance with Instrument Flight Rules (IFR) or by night, when the aeroplane cannot be maintained in a desired attitude without reference to one or more flight instruments, in accordance with Visual Flight Rules (VFR) unless it is~~ All aeroplanes when operated in accordance with the instrument flight rules, or when the aeroplane cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with the flight and navigational instruments and associated equipment and, where applicable, under the conditions stated in the following sub-paragraphs:

----- no changes to subsequent subparagraphs

IAW ICAO A-6-I, Ch 6.19.2

ANTR OPS 1.668 Airborne Collision Avoidance System

(See IEM OPS 1.668)

- (a) All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than 19 passengers shall be equipped with an airborne collision avoidance system (ACAS II).
- (b) *All aeroplanes should be equipped with an airborne collision avoidance system (ACAS II).*
- (c) An airborne collision avoidance system shall operate in accordance with the relevant provisions of ICAO Annex 10, Volume IV.

No changes required on IEM OPS 1.668.

IAW ICAO A-6-I, Ch 6.12

ANTR OPS 1.680 Cosmic radiation detection equipment

- (a) The operator shall not operate an aeroplane above 15000 m (49000 ft) unless:
- (1) It is equipped with an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e. the total of ionizing and neutron radiation of galactic and solar origin) and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew member and
 - (2) A system of on-board quarterly radiation sampling acceptable to the BCAA is established (See AC OPS 1.680(a)(2)).
 - (3) The equipment is calibrated on the basis of assumptions / standards and agencies acceptable to the BCAA.
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EASA AMC1 CAT.IDE.A.205

AC OPS 1.730(a)(3) Seats, seat safety belts, harnesses and child restraint devices (See ANTR OPS 1.730(a)(3))

1. General

A child restraint device (CRD) is considered to be acceptable if:

- a) It is a 'supplementary loop belt' manufactured with the same techniques and the same materials of the approved safety belts; or
- b) It complies with paragraph 2.

2. Acceptable CRDs

Provided the CRD can be installed properly on the respective aircraft seat, the following CRDs are considered "acceptable":

2.1 Types of CRDs

- a) CRDs approved for use in aircraft only by ~~any JAA authority~~, the EASA or FAA or Transport Canada (on the basis of a national technical standard) or through the respective STCs / Certificates and marked accordingly.
- b) ~~CRDs approved for use in motor vehicles according to the UN standard ECE R 44, -03 or later series of Amendments; or~~ Child seats approved for use in motor vehicles on the basis of the technical standard specified in point (i) below. The child seat must be also approved for use in aircraft on the basis of the technical standard specified in either point (ii) or point (iii):
 - (i) UN Standard ECE R44-04 (or 03), or ECE R129 bearing the respective 'ECE R' label; and
 - (ii) German 'Qualification Procedure for Child Restraint Systems for Use in Aircraft' (TÜV/958-01/2001) bearing the label 'For Use in Aircraft'; or
 - (iii) Other technical standard acceptable to the BCAA. The child seat should hold a qualification sign that it can be used in aircraft.
- c) CRDs approved for use in motor vehicles and aircraft according to Canadian CMVSS 213/213.1 bearing the respective label; or
- d) CRDs approved for use in motor vehicles and aircraft according to US FMVSS No 213 and ~~are manufactured to these standards on or after February 26, 1985~~. US approved CRDs ~~manufactured after this date must~~ and bearing one or two labels displaying the following labels in red lettering:
 - 1) "THIS CHILD RESTRAINT SYSTEM CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS" and
 - 2) ~~in red letters~~ "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT".
- e) ~~CRDs qualified for use in aircraft according to the German "Qualification Procedure for Child Restraint Systems for Use in Aircraft" (TÜV Doc.: TÜV/958-01/2001)~~. Child seats approved for use in motor vehicles and aircraft according to Australia/New Zealand's technical standard AS/NZS 1754:2013 bearing the green part on the label displaying 'For Use in Aircraft'; and

2.2 Devices approved for use in cars manufactured and tested to standards equivalent to those listed in 2.1 (a) to (e) inclusive, which are acceptable to the authority. The device must be marked with an associated qualification sign, which shows the name of the qualification organisation and a specific identification number, related to the associated qualification project.

2.3 The qualifying organization shall be a competent and independent organization that is acceptable to the authority.

3. Location

3.1 Forward facing CRDs may be installed on both forward and rearward facing passenger seats but only when fitted in the same direction as the passenger seat on which it is positioned. Rearward facing CRDs can only be installed on forward facing passenger seats. A CRD may not be installed within the radius of action of an airbag, unless it is

obvious that the airbag is de-activated or it can be demonstrated that there is no negative impact from the airbag.

- 3.2 An infant / child in a restraint device should be located ~~as near to~~ in the vicinity of a floor level exit as feasible.
- 3.3 An infant / child in a restraint device should be seated in accordance with ANTR OPS 1.280 and IEM OPS 1.280, "Passenger Seating" so as to not hinder evacuation for any passenger.
- 3.4 A child in a restraint device should neither be located in the row (where rows are existing) leading to an emergency exit nor located in a row immediately forward or aft of an emergency exit. A window passenger seat is the preferred location. An aisle passenger seat or a cross aisle passenger seat is not recommended. Other locations may be acceptable provided the access of neighbour passengers to the nearest aisle is not obstructed by the CRD.
- 3.5 In general, only one CRD per row segment is recommended. More than one CRD per row segment is allowed if the infant / children are from the same family or travelling group provided the infant / children are accompanied by a responsible person sitting next to them.
- 3.6 A Row Segment is the fraction of a row separated by two aisles or by one aisle and the aircraft fuselage.

4. Installation

- 4.1 CRDs shall only be installed on a suitable aircraft seat with the type of connecting device they are approved or qualified for. E.g., CRDs to be connected by a three point harness only (most rearward facing baby CRDs currently available) shall not be attached to an aircraft seat with a lap belt only, a CRD designed to be attached to a vehicle seat by means of rigid bar lower anchorages (ISO-FIX or US equivalent) only, shall only be used on aircraft seats that are equipped with such connecting devices and shall not be attached by the aircraft seat lap belt. The method of connecting must be clearly shown in the manufacturer's instructions to be provided with each CRD.
- 4.2 All safety and installation instructions must be followed carefully by the responsible person accompanying the infant / child. Cabin crew ~~should prohibit the use of any inadequately installed CRD or not qualified seat. Operators~~ should prohibit the use of a CRD not installed on the passenger seat according to the manufacturer's instructions or not approved for use in aircraft.
- 4.3 If a forward facing CRD with a rigid backrest is to be fastened by a lap belt, the restraint device should be fastened when the backrest of the passenger seat on which it rests is in a reclined position. Thereafter, the backrest is to be positioned upright. This procedure ensures better tightening of the CRD on the aircraft seat if the aircraft seat is reclinable.
- 4.4 The buckle of the adult safety belt must be easily accessible for both opening and closing, and must be in line with the seat belt halves (not canted) after tightening.

- 4.5 Forward facing restraint devices with an integral harness must not be installed such that the adult safety belt is secured over the infant **child**.
5. Operation
- 5.1 Each CRD shall remain secured to a passenger seat during all phases of flight, unless it is properly stowed when not in use.
- 5.2 Where a CRD is adjustable in recline it must be in an upright position for all occasions when passenger restraint devices are required to be used according to ANTR OPS 1.320(b)(1).
-

ANTR OPS 1.745

-----No Change

ICAO Annex 6, Part-I, Appendix 2 (Org and Contents of Ops Manual) 2.2.14 / Easy Access Rules for Air Operations – AMC1 CAT.IDE.A.190

AMC OPS 1.745

First-Aid Kits

See ANTR OPS 1.745

The following should be included in the First-Aid Kits:

— List of contents

Bandage: adhesive strips

Bandage: gauze 7.5 cm x 4.5 m

Bandage: triangular; safety pins

Dressing: burn 10 cm x 10 cm

Dressing: compress, sterile 7.5 cm x 12 cm

Dressing: gauze, sterile 10.4 cm x 10.4 cm

Antiseptic swabs (10/Pack)

Adhesive wound closures

Tape: Adhesive 2.5 cm (roll)

Steri-strips (or equivalent adhesive strip)

Hand Cleanser or cleansing towelettes

Pad with shield, or tape for eye

Mouth-to-mouth resuscitation mask with one-way valve

Scissors: 10 cm (if allowed by national regulation)

Tape: Adhesive, surgical 1.2 cm x 4.6 m

Thermometer (non-mercury)

Mild to moderate analgesic

Antiemetic

Tweezers: splinter

Nasal decongestant

First-Aid handbook – current edition

* Antacid

Antihistamine – non-injectable

* Anti-diarrhoeal medication e.g. Loperamide +

~~Ground/Air visual signal code for use by survivors.~~ (Proposed to be deleted as this requirement is addressed under the Ch.12 -Rule of Air, Section A to Appendix 1 to ANTR OPS 1.1045)

Disposable Gloves (multiple pairs)
Incident record form

A list of contents in at least 2 languages (English and one other). This should include information on the effects and side effects of drugs carried.

NOTE: An eye irrigator whilst not required to be carried in the first-aid kit should, where possible, be available for use on the ground.

* For aeroplanes with more than 9 passenger seats installed.

IAW ICAO A-6-I, Ch 6.20

ANTR OPS 1.866 Transponder equipment

- (a) ~~The operator shall not operate an aeroplane unless it is equipped with;~~
~~(1) — A pressure altitude reporting SSR transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV; and~~
~~(2) — any other SSR transponder capability required for the route being flown.~~

All aeroplanes shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV.

- (b) All aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2009 shall be equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft), or better.
- (c) All aeroplanes shall be equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft), or better.

Note: (d) *The Mode S transponder should be provided with the airborne/on-the-ground status if the aeroplane is equipped with an automatic means of detecting such status.*

Note 1. - These provisions will improve the effectiveness of airborne collision avoidance systems as well as air traffic services that employ Mode S radar. In particular, tracking processes are significantly enhanced with a resolution of 7.62 m (25 ft), or better.

Note 2. - Mode C replies of transponders always report pressure altitude in 30.50 m (100 ft) increments irrespective of the resolution of the data source.

IAW ICAO A-6-I, Ch 7.25 & EASA Easy Access Rules for Air Operations SPA.MNPS.100 MNPS Operations, SPA.MNPS.105 MNPS Operational approval

ANTR OPS 1.870 Additional navigation equipment for operations in ~~MNPS~~ NAT HLA airspace

(See AC OPS 1.870)

- (a) ~~The operator shall not operate an aeroplane in NAT HLA airspace unless it is equipped with navigation equipment that complies with minimum navigation performance specifications prescribed in ICAO Doc 7030 in the form of Regional Supplementary Procedures.~~

For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, ~~minimum navigation performance specifications (MNPS)~~ North Atlantic High Level Airspace (NAT HLA) are prescribed, an aeroplane shall be provided with navigation equipment which:

- 1) continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and
- 2) has been authorized by the BCAA for ~~the MNPS~~ NAT HLA operations concerned.

Note.— The prescribed minimum navigation performance specifications and the procedures governing their application are published in the Regional Supplementary Procedures (Doc 7030).

(b) The navigational equipment meets the required performance;

(c) ~~b~~ The navigation equipment comprising of navigation displays, indicators and controls required by this paragraph must be visible and ~~usable~~ operable by either pilot seated at his/her duty station.

(d) ~~e~~ For unrestricted operation in NAT HLA airspace based on Regional Air Navigation Agreement an aeroplane must be equipped with two independent Long Range Navigation Systems (LRNS).

(e) ~~d~~ For operation in NAT HLA / Regional Air Navigation Agreement airspace along notified special routes an aeroplane must be equipped with one Long Range Navigation System (LRNS), unless otherwise specified.

(f) A training programme for the flight crew members involved in these operations has been established by the operator.

(g) operating procedures have been established by the operator specifying:

- (1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;
 - (2) flight crew composition and experience requirements;
 - (3) normal procedures;
 - (4) contingency procedures including those specified by the authority responsible for the airspace concerned;
 - (5) monitoring and incident reporting.
-

AC OPS 1.870

Additional Navigation Equipment for operations in ~~MNPS~~ NAT HLA Airspace

See ANTR OPS 1.870

- 1 A Long Range Navigation System may be one of the following:
 - a. One Inertial Navigation System (INS);
 - b. One Global Navigation Satellite System (GNSS); or
 - c. One navigation system using inputs from one or more Inertial Reference Systems (IRS), or any other NAT HLA approved sensor system complying with ~~MNPS~~ NAT HLA requirement.
 - 2 To conform to the Long range navigation System Specification, a GNSS and its operational use shall be approved in accordance with the relevant requirements for NAT HLA of airspace based on Regional Air Navigation Agreement.
 3. An integrated navigation system which offers equivalent functional availability, integrity and redundancy, when approved may, for the purpose of this requirement, be considered as two independent Long Range Navigation Systems.
 4. In case of the GNSS is used as a stand-alone system for LRNS, an integrity check should be carried out.
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ANTR OPS 1.943 Initial Operator's Crew Resource Management (CRM) training

(See AC OPS (AMC) 1.943/1.945(a)(9)/1.955(b)(6)/1.965(e))

(See AC OPS (IEM) 1.943/1.945(a)(9)/1.955(b)(6)/1.965(e))

- (a) When a flight crew member has not previously completed initial Operator's Crew Resource Management (CRM) training (either new employees or existing staff), then the operator shall ensure that the flight crew member completes an initial CRM training course. New employees shall complete initial Operator's CRM, prior to being qualified and scheduled to operate with the present operator, within their first year of joining the operator. Flight crew who are already operating as flight crew members in commercial air transportation and who have not completed CRM training before shall complete an initial operator's CRM training course effective forthwith.
 - (b) If the flight crew member has not previously been trained in Human Factors, then a theoretical course, based on the human performance and limitations programme for the ATPL (see the requirements applicable to the issue of Flight Crew Licences) shall be completed before the initial Operator's CRM training or combined with the initial Operator's CRM training.
 - (c) Initial CRM training shall be conducted by at least one CRM trainer acceptable to the BCAA who may be assisted by experts in order to address specific areas. (See AC OPS (AMC) 1.943/1.945(a)(9)/1.955(b)(6)/1.965(e)).
 - (d) Initial CRM training is conducted in accordance with a detailed course syllabus included in the Operations Manual.
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ANTR OPS 1.965 Recurrent training and checking

(See Appendices 1 & 2 to ANTR OPS 1.965)

(See AMC OPS 1.965)

(See AC OPS (AMC) 1.943/1.945(a)(9)/1.955(b)(6)/1.965(e))

(See AC OPS (IEM) 1.943/1.945(a)(9)/1.955(b)(6)/1.965(e)
(See IEM OPS 1.965)

(a) *General.* The operator shall ensure that:

- (1) Each flight crew member undergoes recurrent training and checking and that all such training and checking is relevant to the type or variant of aeroplane on which the flight crew member operates;
- (2) A recurrent training and checking programme is established in the Operations Manual and approved by the BCAA;
- (3) The operator may establish a suitable Evidence-Based-Training (EBT) programme approved by BCAA in lieu of ANTR OPS 1.965 'Recurrent Training and checking' or ANTR-OPS 1.978 'Alternative Training and Qualification Programme'.

Note-1: The EBT programme and philosophy are intended to be applied as the means of assessing and training key areas of flight crew performance in a recurrent training system.

Note-2: The data analyses undertaken to support the EBT programme illustrate inadequacies in the perpetuation of historical airline flight training regimes and identify areas in which major change is necessary. The analyses strongly support the implementation of such change in both the regulation and development of recurrent airline pilot assessment and training. Finally, they identify the areas for improvement, providing the prioritisation of relevant training topics to guide in the construction of suitable EBT programmes.

- (3) Recurrent training is conducted by the following personnel:
 - (i) *Ground and refresher training* – by suitably qualified personnel;
 - (ii) *Aeroplane/FSTD training* - by a Type Rating Instructor (TRI), Class Rating Instructor (CRI) or in the case of the FSTD content, a Synthetic Flight Instructor (SFI), providing that the TRI, CRI or SFI satisfies the operator's experience and knowledge requirements sufficient to instruct on the items specified in paragraphs (a)(1)(i)(A) and (B) of Appendix 1 to ANTR OPS 1.965;
 - (iii) *Emergency and safety equipment training* – by suitably qualified personnel; and
 - (iv) *Crew Resource Management (CRM)*:
 - (A) Integration of CRM elements into all their phases of the recurrent training - by all the personnel conducting

recurrent training. The operator shall ensure that all personnel conducting recurrent training are suitably qualified to integrate elements of CRM into this training;

- (B) Modular CRM training – by at least one CRM trainer acceptable to the BCAA (see AMC OPS 1.943/1.945(a)(9)/1.955(b)(6)/ 1.965(e)) who may be assisted by experts in order to address specific areas.

(4) Recurrent checking is conducted by the following personnel:

- (i) *Operator proficiency check* – by a Type Rating Examiner (TRE), ~~Class Rating Examiner (CRE)~~ or, if the check is conducted in a FSTD, a TRE, ~~CRE~~ or a Synthetic Flight Examiner (SFE), trained in CRM concepts and the assessment of CRM skills;
- (ii) *Line checks* – annually by TRE / TRI with line check authority. ~~by suitably qualified commanders nominated by the operator and acceptable to the BCAA;~~
- (iii) *Emergency and safety equipment checking* – by suitably qualified personnel.

(b) *Operator Proficiency Check*

(1) The operator shall ensure that:

- (i) Each flight crew member undergoes operator proficiency checks to demonstrate his competence in carrying out normal, abnormal and emergency procedures; and
- (ii) The check is conducted without external visual reference when the flight crew member will be required to operate under IFR.
- (iii) Each flight crew member undergoes operator proficiency checks as part of a normal flight crew complement.

(2) The period of validity of the operator proficiency check shall be 6 calendar months in addition to the remainder of the month of issue. If issued within the final 3 calendar months of validity of a previous operator proficiency check, the period of validity shall extend from the date of issue until 6 calendar months from the expiry date of that previous operator proficiency check.

(c) *Line Check*. The operator shall ensure that each flight crew member undergoes a line check on the aeroplane to demonstrate his competence in carrying out normal line operations described in the Operations Manual. The period of validity of a line check shall be 12 calendar months, in addition to the remainder of the month of issue. If issued within the final 3 calendar months of validity of a previous line check the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous line check. (See AMC OPS 1.965(c)).

(d) *Emergency and Safety Equipment training and checking*. The operator shall ensure that each flight crew member undergoes training and checking on the location and use of all emergency and safety equipment carried. The period of validity of an

emergency and safety equipment check shall be 12 calendar months in addition to the remainder of the month of issue. If issued within the final 3 calendar months of validity of a previous emergency and safety check, the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous emergency and safety equipment check. (See AMC OPS 1.965(d)).

- (e) *CRM*. The operator shall ensure that:
 - (1) Elements of CRM are integrated into all appropriate phases of the recurrent training, and;
 - (2) Each flight crew member undergoes specific modular CRM training. All major topics of CRM training shall be covered over a period not exceeding 3 years;
- (f) *Ground and Refresher training*. The operator shall ensure that each flight crew member undergoes ground and refresher training at least every 12 calendar months. If the training is conducted within 3 calendar months prior to the expiry of the 12 calendar months period, the next ground and refresher training must be completed within 12 calendar months of the original expiry date of the previous ground and refresher training.
- (g) *Aeroplane/FSTD training*. The operator shall ensure that each flight crew member undergoes aeroplane/FSTD training at least every 12 calendar months. If the training is conducted within 3 calendar months prior to the expiry of the 12 calendar months period, the next aeroplane/FSTD training must be completed within 12 calendar months of the original expiry date of the previous aeroplane/FSTD training.

ANTR OPS 1.978 Alternative Training and Qualification Programme (See Appendix 1 to ANTR OPS 1.978) (See AC OPS 1.978)

- (a) The operator, following a minimum of two years continuous operations, may substitute the training and checking requirements for flight crew specified in Appendix 1 to ANTR OPS 1.978(a) by an Alternative Training and Qualification Programme (ATQP) [or Evidence Based Training \(EBT\)](#) approved by the BCAA. The two years continuous operations may be reduced at the discretion of the BCAA.

The aeroplane operator having appropriate experience may substitute one or more of the following training and checking requirements for flight crew by an alternative training and qualification programme (ATQP) [, or Evidence Based Training \(EBT\)](#) approved by the competent authority:

- (1) SPA.LVO.120 on flight crew training and qualifications;
- (2) conversion training and checking;
- (3) differences training and familiarisation training;
- (4) command course;

- (5) recurrent training and checking; and
 - (6) operation on more than one type or variant. a
-

As recommended as part CAP 24

Appendix 1 to ANTR OPS 1.1005

Initial training

See Appendix 3 to ANTR-OPS 1.1005/1.1010/1.1015

See IEM to Appendix 1 to ANTR OPS 1.1005/1.1010/1.1015/1.1020

No Changes to Para (a) to (h)

- (a) The operator shall ensure that all elements of initial training and all associated drills are conducted by suitably qualified persons.
- (b) *Fire and Smoke Training.* The operator shall ensure that fire and smoke training includes:
 - (1) Emphasis on the responsibility of cabin crew to deal promptly with emergencies involving fire and smoke and, in particular, emphasis on the importance of identifying the actual source of the fire;
 - (2) The importance of informing the flight crew immediately, as well as the specific actions necessary for co-ordination and assistance, when fire or smoke is discovered;
 - (3) The necessity for frequent checking of potential fire-risk areas including toilets, and the associated smoke detectors;
 - (4) The classification of fires and the appropriate type of extinguishing agents and procedures for particular fire situations, the techniques of application of extinguishing agents, the consequences of misapplication, and of use in a confined space; and
 - (5) The general procedures of ground-based emergency services at aerodromes.
- (c) *Water Survival Training.* The operator shall ensure that water survival training includes the actual donning and use of personal flotation equipment in water by each cabin crew member. Before first operating on an aeroplane fitted with life-rafts or other similar equipment, training must be given on the use of this equipment, as well as actual practice in water.
- (d) *Survival Training.* The operator shall ensure that survival training is appropriate to the areas of operation, (e.g. polar, desert, jungle or sea).
- (e) *Medical aspects and First Aid.* The operator shall ensure that medical and first aid training includes:
 - (1) Instruction on medical aspects and first aid, first-aid kits, emergency medical kits, their contents and emergency medical equipment;
 - (2) First aid associated with survival training and appropriate hygiene; and
 - (3) The physiological effects of flying and with particular emphasis on hypoxia.
- (f) *Passenger handling.* The operator shall ensure that training for passenger handling includes the following:
 - (1) Advice on the recognition and management of passengers who are, or become, intoxicated with alcohol or are under the influence of drugs or are aggressive;

- (2) Methods used to motivate passengers and the crowd control necessary to expedite an aeroplane evacuation;
 - (3) Regulations covering the safe stowage of cabin baggage (including cabin service items) and the risk of it becoming a hazard to occupants of the cabin or otherwise obstructing or damaging safety equipment or aeroplane exits;
 - (4) The importance of correct seat allocation with reference to aeroplane mass and balance. Particular emphasis shall also be given on the seating of disabled passengers, and the necessity of seating able-bodied passengers adjacent to unsupervised exits;
 - (5) Duties to be undertaken in the event of encountering turbulence including securing the cabin;
 - (6) Precautions to be taken when live animals are carried in the cabin;
 - (7) Dangerous Goods training as prescribed in Subpart R; and
 - (8) Security procedures, including the provisions of Subpart S.
- (g) *Communication.* The operator shall ensure that, during training, emphasis is placed on the importance of effective communication between cabin crew and flight crew including technique, common language and terminology.
- (h) *Discipline and responsibilities.* The operator shall ensure that each cabin crew member receives training on:
- (1) The importance of cabin crew performing their duties in accordance with the Operations Manual;
 - (2) Continuing competence and fitness to operate as a cabin crew member with special regard to flight and duty time limitations and rest requirements;
 - (3) An awareness of the aviation regulations relating to cabin crew and the role of the BCAA;
 - (4) General knowledge of relevant aviation terminology, theory of flight, passenger distribution, meteorology and areas of operation;
 - (5) Pre-flight briefing of the cabin crew and the provision of necessary safety information with regard to their specific duties;
 - (6) The importance of ensuring that relevant documents and manuals are kept up-to-date with amendments provided by the operator;
 - (7) The importance of identifying when cabin crew members have the authority and responsibility to initiate an evacuation and other emergency procedures; and
 - (8) The importance of safety duties and responsibilities and the need to respond promptly and effectively to emergency situations.
- (i) *Crew Resource Management.* The operator shall ensure that CRM training satisfies the following:
- (1) **Introductory CRM Course:**
 - (i) The operator shall ensure that a cabin crew member has completed an Introductory CRM Course before being first assigned to operate as a cabin crew member.

Cabin crew who are already operating as cabin crew members in commercial air transportation and who have not previously completed an introductory course, shall complete an Introductory CRM Course by the time of the next required recurrent training and/or checking.

When a cabin crew member has not previously completed initial Operator's Crew Resource Management (CRM) training (either new employees or existing staff), then the operator shall ensure that the cabin crew member completes an initial CRM training course. New employees shall complete initial Operator's CRM, prior to being qualified and scheduled to operate with the present operator, within their first year of joining the operator. Cabin crew who are already operating as flight crew members in commercial air transportation and who have not completed CRM training before shall complete an initial operator's CRM training course effective forthwith.

- (ii) The training elements in Appendix 2 to ANTR OPS 1.1005/1.1010/1.1015 Table 1, Column (a) shall be covered to the level required in Column (b), Introductory CRM Course.
- (iii) The Introductory CRM Course shall be conducted by at least one cabin crew CRM instructor.

No Changes necessary to ANTR OPS 1.1005, Appendix 1 to ANTR OPS 1.1010, Appendix 2 to ANTR OPS 1.1015 & Appendix 1 to ANTR OPS 1.1005/1.1010/1.1015.

IEM OPS 1.1040(b)
Elements of the Operations Manual subject to approval
 See ANTR OPS 1.1040(b)

- 1. -----
- 2. -----
- 3. The following list indicates only those elements of the Operations Manual which require specific approval by the BCAA.

Ops Manual Section	Subject	OPS Reference
(App 1 to ANTR OPS 1.1045)	NAT HLA / MNPS	1.243

Appendix 1 to ANTR OPS 1.1045

Operations Manual Contents

(See IEM to Appendix 1 to ANTR OPS 1.1045)

The operator shall ensure that the Operations Manual contains the following:

A. GENERAL-----

- 1.-----
- 2.-----

8.3.2 *Navigation Procedures*

- (a) -----
- (b) NAT HLA / MNPS and POLAR navigation and navigation in other designated areas;
- (c) -----

Typographical errors on the previous edition corrected hereunder.

Appendix 1 to ANTR OPS 1.1045

Operations Manual Contents

(See IEM to Appendix 1 to ANTR OPS 1.1045)

The operator shall ensure that the Operations Manual contains the following:

A. GENERAL

0 ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL

0.1 Introduction.....

-----no change up to subchapter 8.8.2.

Sub-para number corrections.....

8.8 Oxygen Requirements

8.8.1 An explanation of the conditions under which oxygen must be provided and used.

8.8.2 The oxygen requirements specified for:

- (a) Flight crew;
- (b) Cabin crew; and
- (c) Passengers.

~~8.8.3~~ 8.9 Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach operations

~~8.8.4~~ 8.10 Information and instructions relating to the interception of civil aircraft including:
a) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and
b) visual signals for use by intercepting and intercepted aircraft, as contained in ICAO, Annex 2.

~~8.8.5~~ 8.11 For aeroplanes intended to be operated above 15 000 m (49 000 ft):
a) information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and
b) procedures in the event that a decision to descend is taken, covering:
1) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
2) the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

Note: Guidance material on the information to be provided is contained in Circular 126 - Guidance Material on SST Aircraft Operations.

~~8.8.6~~ 8.12 Details of the safety management system (SMS) provided in accordance with Chapters 3 and 4 of Annex 19.

9 DANGEROUS GOODS AND WEAPONS

B AEROPLANE OPERATING MATTERS – TYPE RELATED

Taking account of the differences between types, and variants of types, under the following headings:

0 GENERAL INFORMATION AND UNITS OF MEASUREMENT

0.1 General Information (e.g. aeroplane dimensions), including a description of the units of measurement used for the operation of the aeroplane type concerned and conversion tables.

1 LIMITATIONS-----

-----No change up to chapter 8

8 CONFIGURATION DEVIATION LIST

The Configuration Deviation List(s) (CDL), if provided by the manufacturer, taking account of the aeroplane types and variants operated including procedures to be followed when an aeroplane is being despatched under the terms of its CDL.

9A A LIST OF THE NAVIGATIONAL EQUIPMENT TO BE CARRIED INCLUDING ANY REQUIREMENTS RELATING TO OPERATIONS WHERE PERFORMANCE-BASED NAVIGATION IS PRESCRIBED.

9B 10 MINIMUM EQUIPMENT LIST

The Minimum Equipment List (MEL) and configuration deviation list taking account of the aeroplane types and variants operated and the type(s)/area(s) of operation/specific operations authorised. The MEL must include the navigational equipment and take into account the required performance-based navigation for the route and area of operation prescribed.

10 11 SURVIVAL AND EMERGENCY EQUIPMENT INCLUDING OXYGEN

10 11.1 A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and instruction for the use of survival and emergency equipment and its associated check list(s) must also be included.

10 11.2 The condition under which oxygen shall be used and procedure for determining the amount of oxygen required and the quantity that is available. The flight profile, number of occupants and possible cabin decompression must be considered. The information provided must be in a form in which it can be used without difficulty. Refer to ANTR OPS 1.770 for details on Oxygen requirement.

11 12 EMERGENCY EVACUATION PROCEDURES

11 12.1 Instructions for Emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each crew member.

11 12.2 *Emergency evacuation procedures.* The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.

12 13 AEROPLANE SYSTEMS

A description of the aeroplane systems, related controls and indications and operating instructions. (See IEM to Appendix 1 to ANTR OPS 1.1045.)

This Subpart establishes the requirements to be met by an operator and its crew members with regard to flight and duty time limitations and rest requirements for crew members under prescriptive methodology. ~~This subpart encompasses requirements and processes described in main Regulation, Certification Specifications (CSs), Acceptable Means of Compliance (AMC) and Guidance Material (GM) for implementation.~~

ANTR OPS FTL CS 1.1100 Applicability

The Certification Specifications are applicable to commercial air transport ~~(CAT) by aeroplanes for scheduled and charter~~ operations.

The BCAA has introduced the subject regulations, based upon scientific principles, knowledge and operational experience, specifying the limitations applicable to the flight time and flight duty periods for crew members as encompassed by ICAO through their studies and research. ~~These~~ These regulations establishes ~~make provision for establishing~~ the Flight Time, Flight Duty Time, Duty Period, adequate Rest Period and ~~when authorized,~~ ~~for authorizing~~ the operators ~~in establishing~~ ~~for~~ to manage the **Fatigue Risk Management System (FRMS)** ~~rest periods~~ to ensure that fatigue occurring either in a flight or successive flights, or accumulated over a period of time due to these and other tasks, does not endanger the safety of a flight.

ANTR OPS 1.1010 Conversion and Differences training

(See Appendix 1 to ANTR OPS 1.1010)

(See Appendix 2 to ANTR OPS 1.1005/1.1010/1.1015/1.1020)

(See AC OPS 1.1005/1.1010/1.1015/1.1020)

- (a) The operator shall ensure that each cabin crew member has completed appropriate training, as specified in the Operations Manual, before undertaking assigned duties as follows:
 - (1) *Conversion training*; A conversion course must be completed before being:
 - (i) First assigned by the operator to operate as a cabin crew member; or
 - (ii) Assigned to operate another aeroplane type; and
 - (2) *Differences training*. Differences training must be completed before operating:
 - (i) On a variant of an aeroplane type currently operated; or
 - (ii) With different safety equipment, safety equipment location, or normal and emergency procedures on currently operated aeroplane types or variants.
- (b) The operator shall determine the content of the conversion or differences training taking account of the cabin crew member's previous training as recorded in the cabin crew member's training records required by ANTR OPS 1.1035.
- (c) The operator shall ensure that:
 - (1) Conversion training is conducted in a structured and realistic manner, in accordance with Appendix 1 to ANTR OPS 1.1010;

- (2) Differences training is conducted in a structured manner; and
- (3) Conversion training, and if necessary differences training, includes the use of all safety equipment and all normal and emergency procedures applicable to the type or variant of aeroplane and involves training and practice on either a representative training device or on the actual aeroplane.
- (d) Conversion and Differences training programmes, in accordance with Appendix 1 to ANTR OPS 1.1010, must be approved by the BCAA.
- (e) The operator shall ensure that each cabin crew member before being first assigned to duties, completes the Operator's CRM Training and Aeroplane Type Specific CRM, in accordance with Appendix 1 to ANTR OPS 1.1010(k). Cabin crew who are already operating as cabin crew members with the operator, ~~and who have not previously completed the Operator's CRM Training, shall complete this the training by the time of the next required recurrent training and checking in accordance with Appendix 1 to ANTR OPS 1.1010 (k), including Aeroplane Type Specific CRM, as relevant.~~ shall complete the CRM training prior to being fully qualified and scheduled to operate with the present operator, regardless of their previous training and operational experience. The training will be in accordance with Appendix 1 to ANTR OPS 1.1010, including Aeroplane Type Specific CRM, as relevant.

ANTR OPS FTL 1.1205 Flight Duty Period (FDP)

(a) The operator shall:

(e) -----

(f) Unforeseen circumstances in flight operations — commander's discretion.

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, **when not in home base** shall comply with the following:

- (i) the maximum daily FDP which results after applying points (b) and (e) of point ANTR OPS FTL 1.1205 or point ANTR OPS FTL 1.1220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;
- (ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and
- (iii) the rest period following the FDP may be reduced but can never be less than 10 hours.

(2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall

reduce the actual flight duty period and/or increase the rest period in order to eliminate any

detrimental effect on flight safety.

- (3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.
- (4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.
- (5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to the competent authority not later than 28 days after the event.
- (6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the operations manual.

AMC1 to ANTR OPS FTL 1.1205(f) Flight Duty Period (FDP)

UNFORESEEN CIRCUMSTANCES IN ACTUAL FLIGHT OPERATIONS — COMMANDER'S DISCRETION

- (a) As general guidance when developing a commander's discretion policy, the operator should take into consideration the shared responsibility of management, flight and cabin crew in the case of unforeseen circumstances. The exercise of commander's discretion should be considered exceptional and should shall be avoided at home base and/or company hubs where standby or reserve crew members should be available. Operators should assess on a regular basis the series of pairings where commander's discretion has been exercised in order to be aware of possible inconsistencies in their rostering.
- (b) The operator's policy on commander's discretion should state the safety objectives, especially in the case of an extended FDP or reduced rest and should take due consideration of additional factors that might decrease a crew member's alertness levels, such as:
 - (1) WOCL encroachment;
 - (2) weather conditions;
 - (3) complexity of the operation and/or airport environment;
 - (4) aeroplane malfunctions or specifications;
 - (5) flight with training or supervisory duties;
 - (6) increased number of sectors;
 - (7) circadian disruption; and
 - (8) individual conditions of affected crew members (time since awake, sleep-related factor, workload, etc.).

ANTR OPS 1.1255 Flight crew compartment security

- (a) In all aeroplanes which are equipped with a flight crew compartment door, this door shall be capable of being locked, and means ~~or procedures acceptable to the BCAA~~ shall be provided or established by which the cabin crew can notify the flight crew in the event of suspicious activity or security breaches in the cabin.
- (b) All passenger-carrying aeroplanes ~~that are engaged in the commercial transportation of passengers: of a maximum certificated take-off mass in excess of 45 500 kg or with a Maximum Approved Passenger Seating Configuration greater than 60, on international commercial operations, shall be equipped with an approved flight crew compartment door that is capable of being locked and unlocked from each pilot's station and designed to meet the requirements of Certification Specification CS-25. The design of this door shall not hinder emergency operations, as required in Certification Specification CS-25).~~
- (1) of a maximum certificated take-off mass in excess of 54 500 kg; or
 - (2) of a maximum certificated take-off mass in excess of 45 500 kg with a passenger seating capacity greater than 19; or
 - (3) with a passenger seating capacity greater than 60
- shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. This door shall be capable of being locked and unlocked from either pilot's station.
- (c) In all aeroplanes which are equipped with a flight crew compartment door in accordance with sub-paragraph (b):
- (1) This door shall be closed ~~prior to engine start for take-off and will be locked when required by security procedure or the Commander, until engine shut down after landing, except when deemed necessary for authorised persons to access or egress in compliance with National Aviation Security Programme~~ and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorized persons; and;
 - (2) means shall be provided for monitoring from either pilot's station ~~the entire door area outside the flight crew compartment to the extent necessary to identify persons requesting entry to the flight crew compartment and to detect suspicious behaviour or potential threat.~~
- (d) All passenger-carrying aeroplanes under Commercial Air Transport Operation should be equipped with an approved flight crew compartment door, where practicable, that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. This door should be capable of being locked and unlocked from either pilot's station.

- (e) In all aeroplanes which are equipped with a flight crew compartment door in accordance with sub-paragraph (d):
 - a) the door should be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorized persons; and
 - b) means should be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.