



GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTRE, OPP SAFDURJUNG AIRPORT, NEW DELHI

**CIVIL AVIATION REQUIREMENTS
SECTION 8 – AIRCRAFT OPERATIONS
SERIES O PART II
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**Subject: OPERATION OF COMMERCIAL AIR TRANSPORT –
AEROPLANES**

1 INTRODUCTION

- 1.1 This CAR lays down the minimum operational, equipment and instrument requirements for aeroplanes registered in India and engaged in domestic and international air transport operations.

This CAR has been issued under the provisions of Rule 133A of the Aircraft Rules, 1937 and is in conformity with ICAO Annex 6 Part I (till amendment 43)

- 1.2 Applicability: These requirements are applicable to scheduled, including scheduled commuter as well as non-scheduled air transport operations.

2 DEFINITIONS

Aerodrome Operating Minima: The limits of usability of an aerodrome for:

- a) take-off, expressed in terms of runway visual range and / or visibility and, if necessary, cloud conditions;
- b) landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range; minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and
- c) Landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) appropriate to the type and/or category of the operation.

Air traffic service (ATS). A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Aircraft Operating Manual: A manual, acceptable to the DGCA 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 the part of the operation manual.*

Air operator Permit/ certificate (AOC): A Permit /Certificate authorizing an operator to carry out specified commercial air transport operations.

Airworthy: The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

Accelerate-stop distance available (ASDA): The length of the take-off run available plus the length of stop way, if provided.

Alternate aerodrome: An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

Take-off alternate. An alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route alternate. An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en-route.

Destination alternate. An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note: The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

Altimetry system error (ASE): The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

Appropriate airworthiness requirements. The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.

Combined vision system (CVS). A system to display images from a combination

of an enhanced vision system (EVS) and a synthetic vision system (SVS).

COMAT. Operator material carried on an operator's aircraft for the operator's own purposes.

Continuing airworthiness records. Records which are related to the continuing airworthiness status of an aircraft, engine, propeller or associated part.

Continuous descent final approach (CDFA). A technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare maneuver should begin for the type of aircraft flown.

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.

Cabin crew member: A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member

Commercial air transport operation: An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

Configuration deviation list (CDL): A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

Contaminated runway. A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors.

Note.— Further information on runway surface condition descriptors can be found in the CAR section 4 Series B Part I.

Final approach segment (FAS). That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

Flight duty period. A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which

finishes when the aircraft finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member

Flight crew member a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Flight Data Analysis: A process of analysing recorded flight data in order to improve the safety of flight operations.

Flight manual: A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

Flight operations officer/flight dispatcher: A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with CAR Section 7, Series 'M' Part II, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

Flight plan: Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft

Flight recorder: Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

Automatic deployable flight recorder (ADFR). A combination flight recorder installed on the aircraft which is capable of automatically deploying from the aircraft

Flight safety documents system: A set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

Flight simulation training device: Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal guidance provided either by:

- a) A ground-based radio navigation aid; or
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

Instrument approach procedure (IAP). A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria

apply. Instrument approach procedures are classified as follows:

Non-precision approach (NPA) procedure. An instrument approach procedure designed for 2D instrument approach operations Type A.

Note.— *Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board 3 equipment are considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFAs, refer to PANS-OPS (Doc 8168), Volume I, Part II, Section 5.*

Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B.

Note. — *Refer to 4.2.8.3 for instrument approach operation types.*

Isolated aerodrome. A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

Landing distance available (LDA): The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

Large aeroplane: An aeroplane of a maximum certificated take-off mass of over 5700kg.

Maintenance † The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(†Applicable until 4 November 2020)

Maintenance †† The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(†† Applicable as of 5 November 2020)

Maintenance organization's procedures manual.† *A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.*

Maintenance release.† *A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system.*

(†Applicable until 4 November 2020)

Maintenance release.†† *A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the appropriate airworthiness requirements.*

(†† Applicable as of 5 November 2020)

Maintenance programme: A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

Master minimum equipment list (MMEL): A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

Maximum diversion time. Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

Maximum mass: Maximum certificated take-off mass.

Minimum descent altitude (MDA) or Minimum descent height (MDH): A specified altitude or height in a 2 D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

Note 1— Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2— the required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3— for convenience when both expressions are used they may be written in the form "minimum descent altitude/height" and abbreviated "MDA/H"

Minimum equipment list (MEL): A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

Modification. A change to the type design of an aircraft, engine or propeller.
Note.— a modification may also include the embodiment of the modification which is a maintenance task subject to a maintenance release. Further guidance on aircraft maintenance – modification and repair is contained in the Airworthiness Manual (Doc 9760).

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:

Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

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.

Note 1. — The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2.— The term RNP as previously defined as “a statement of the navigation performance, necessary for operation within a defined airspace”, has been removed from Annex 6 Part I as the concept of RNP has been overtaken by the concept of PBN.

The term RNP in Annex 6 Part I is now solely used in context of navigation

Point of no return. The last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.

Repair.† *The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear.*

(†Applicable until 4 November 2020)

Repair.†† *The restoration of an aircraft, engine, propeller or associated part to an airworthy condition, in accordance with the appropriate airworthiness requirements, after it has been damaged or subjected to wear.*

(†† Applicable as of 5 November 2020)

Required communication performance (RCP) specification A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

Required surveillance performance (RSP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Runway visual range (RVR): The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

Safe forced landing: Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

Safety management system (SMS): A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Small aeroplane: An aeroplane of a maximum certificated take-off mass of 5 700 kg or less

State of Registry: The State on whose register the aircraft is entered.

Note— In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (ICAO

Doc 9587).

State of the Aerodrome. The State in whose territory the aerodrome is located.

4.2.8.6 The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude (MDA) or minimum descent height (MDH), minimum visibility and, if necessary, cloud conditions.

Note. — For guidance on applying a continuous descent final approach (CDFA) flight technique on on-precision approach procedures refer to PANS-OPS (Doc 8168), Volume I, Part II, Section 5.

4.2.8.7 The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude (DA) or decision height (DH) and the minimum visibility or RVR.

4.2.9 Threshold crossing height for 3D instrument approach operations

An operator shall establish operational procedures designed to ensure that an aeroplane being used to conduct 3D instrument approach operations crosses the threshold by a safe margin, with the aeroplane in the landing configuration and attitude.

4.2.10 Fuel and Oil Records

4.2.10.1 The operator shall maintain fuel records to enable DGCA to ascertain that for each flight, the requirements of para 4.3.6 and 4.3.7.1 of this CAR have been complied with.

4.2.10.2 An operator shall maintain oil records to enable DGCA to ascertain that trends for oil consumption are such that an aeroplane has sufficient oil to complete each flight.

4.2.10.3 Fuel and oil records shall be retained by the operator for a period of six months.

4.2.11 Crew

4.2.11.1 *Pilot-in-command:* For each flight, the operator shall designate one pilot to act as pilot-in-command.

4.2.11.2 For each flight of an aeroplane above 49000 ft (15000 m), the operator shall maintain records so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.

4.2.12 Passengers

Rev. 10, 23rd October 2018

5.3 Obstacle data

5.3.1 The operator shall obtain details of all obstacle data to develop procedures to comply with 5.2.9.

Note.— See Annex 4 and Annex 15, Chapter 5 and Appendix 1 and PANS-AIM, Chapter 5 for methods of presentation of certain obstacle data.

5.3.2 The operator shall take account of charting accuracy when assessing compliance with 5.2.9

5.4 Additional requirements for operations of single-engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Conditions (IMC details are in Appendix B)

5.4.1 In approving operations by single-engine turbine-powered aeroplanes at night and / or in IMC, DGCA shall ensure that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety intended by the provisions of Annexes 6 and 8 is provided by:

- a) the reliability of the turbine engine;
- b) the operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programmes; and
- c) equipment and other requirements provided in accordance with Appendix B.

5.4.2 All single-engine turbine-powered aeroplanes operated at night and/or in IMC shall have an engine trend monitoring system, and those aeroplanes for which the individual certificate of airworthiness is first issued on or after 1st January 2005 shall have an automatic trend monitoring system.

6 AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

6.1 General

6.1.1 In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness, the instruments, equipment and flight documents prescribed in the following paragraphs, shall be installed or carried, as appropriate, in aeroplanes according to the aeroplane used and to the circumstances under which the flight is to be conducted. The prescribed instruments and equipment including their installation shall be of approved type.

6.1.2 An aeroplane shall carry a certified true copy of the air operator permit specified in 4.2.1, and a copy of the operations specifications relevant to the aeroplane type, issued in conjunction with the permit.

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13. SECURITY

In the context of this CAR, the word security is used in the sense of prevention of illicit acts against civil aviation.

13.1 Domestic commercial operations

The security requirements contained in this paragraph shall be followed in respect of domestic and international air transport operations.

13.2 Security of the flight crew compartment

13.2.1 In all aeroplanes which are equipped with a flight crew compartment door, this door shall be capable of being locked, and means shall be provided by which cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.

13.2.2 All passenger-carrying aeroplanes

a) of a maximum certificated take-off mass in excess of 54 500 kg; or

b) of a maximum certificated take-off mass in excess of 45 500 kg with a passenger seating capacity greater than 19; or

c) 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.

13.2.3 In all aeroplanes which are equipped with a flight crew compartment door in accordance with 13.2.2:

a) this door shall 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 shall 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 behavior or potential threat. All new aircraft to be imported after 1st of Jan ,2008 should have cockpit door surveillance system (CDSS) installed at the time of import. Aircraft already importing should comply with this requirement during their next 'C' check falling after 1st Jan,2008.

Instructions and the Aircraft (Carriage of Dangerous Goods) Rules, 2003 to enable operator personnel to:

- 1) identify and reject undeclared or misdeclared dangerous goods, including COMAT classified as dangerous goods;

- 2) report to the DGCA and the State in which it occurred any;
 - a) occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail; and
 - b) dangerous goods accidents and incidents;
- 3) report to the DGCA and the State of Origin any occasions when dangerous goods are discovered to have been carried;
 - a) when not loaded, segregated, separated or secured in accordance with the Technical Instructions Part 7, Chapter 2; and
 - b) without information having been provided to the pilot-in-command;
- 4) accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and
- 5) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.

Note.— Article 35 of the Convention refers to certain classes of cargo restrictions.

14.2 Provision of information

The operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo are informed of the operator's operational approval and limitations with regard to the transport of dangerous goods.

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ATTACHMENT I. RESCUE AND FIRE FIGHTING SERVICES (RFFS) LEVELS

Supplementary to Chapter 4, 4.1.4

1. PURPOSE AND SCOPE

1.1 Introduction

The purpose of this Attachment is to provide guidance for assessing the level of RFFS deemed acceptable by aeroplane operators using aerodromes for different differing purposes. This guidance does not relieve the operator from the obligation to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

1.2 Basic concepts

1.2.1 For flight planning purposes, an aeroplane operator should utilize an aerodrome whose RFFS category, as required by Annex 14, Volume I, Chapter 9, 9.2, matches or exceeds the aeroplane's RFFS category. Some aerodromes currently used do not, however, meet these requirements. Furthermore, Annex 14, Volume I provisions relate to the level of aerodrome RFFS to be provided for aeroplanes normally using an aerodrome; hence, this level of RFFS protection does not take into account aeroplanes for which the aerodrome is selected as an alternative aerodrome.

1.2.3 In order to determine the acceptability of an aerodrome RFFS protection level, the operator should consider:

- a) *for a departure or destination aerodrome*, the difference between the aerodrome RFFS category and the aeroplane RFFS category, and the frequency of flights to that aerodrome; and
- b) *for an alternate aerodrome*, the difference between the aerodrome RFFS category and the aeroplane RFFS category, and the probability that this alternate aerodrome will be used.

1.2.4 The intention is that the operator will consider the available RFFS as one element of a risk assessment process conducted under their Safety Management System, to ensure that the overall safety of the operation can be maximised. This risk assessment would also include considerations of aerodrome facilities, availability, terrain, weather conditions etc. to ensure that the most appropriate aerodrome was selected.

Note.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

1.2.5 The following guidance is intended to assist operators in making the assessment required by Chapter 4, 4.1.4 with due consideration of the basic principles described in 1.2.1 to 1.2.4. It is not intended that this guidance limit or regulate the operation of an aerodrome.

2. GLOSSARY OF TERMS

Aerodrome RFFS category. The RFFS category for a given aerodrome, as published in the appropriate Aeronautical Information Publication (AIP).

Aeroplane RFFS category. The category derived from Annex 14, Volume I, Table 9-1 for a given aeroplane type.

Temporary downgrade. RFFS category as notified, including by NOTAM, and resulting from the downgrade of the level of RFFS protection available at an aerodrome.

3. ACCEPTABLE AERODROME RFFS CATEGORY

3.1 Planning

3.1.1 In principle, the published RFFS category for each of the aerodromes used for a given flight should be equal to or better than the aeroplane's RFFS category. However, if the aeroplane's RFFS category is not available at one or more of the aerodromes required to be specified in the operational flight plan, the operator should ensure that the aerodrome has a level of RFFS category which is deemed acceptable based on a risk assessment conducted as part of the operator's safety management system (SMS). When establishing acceptable levels of RFFS category for these situations, the operator may use the criteria in Table I-1-1 and Table I-1-2. Notwithstanding these criteria, the operator may determine other acceptable levels of RFFS category in accordance with paragraph 3.1.3 of Attachment I.

3.1.1.1 Intended operations to aerodromes with RFFS categories below the levels specified in Annex 14, Volume I, Chapter 9, 9.2, should be coordinated between the aeroplane operator and the aerodrome operator.

3.1.1.2 For departure and destination aerodromes, during flight planning, the acceptable RFFS protection level should equal or exceed the values specified in Table I-1-1.

**Table I-1-1. Acceptable aerodrome category
for rescue and fire fighting (departure and destination aerodrome)**

Aerodromes (Required to be specified in the operational flight plan) <i>Note.— If an individual aerodrome serves more than one purpose, the highest required category corresponding to that purpose at the time of expected use applies.</i>	Acceptable aerodrome RFFS category (Based on published aerodrome RFFS category, including any modification by NOTAM)
Departure and destination aerodrome	RFFS category for each aerodrome should be equal to or better than the aeroplane RFFS category.

	<p>Where a suitable risk assessment has been conducted by the operator:</p> <p>One category below the aeroplane RFFS category, or</p> <p>Two categories below the aeroplane RFFS category, in the case of a temporary downgrade of 72 hours or less but not lower than aerodrome RFFS Category 4 for aeroplanes with maximum certificated take-off mass of over 27 000 kg and not lower than Category 1 for other aeroplanes.</p>
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3.1.1.3 So as to comply with the operational regulations applicable to a given flight, the operator selects alternate aerodrome(s) for various uses. During flight planning, the acceptable aerodrome RFFS category at a selected alternate aerodrome may equal or exceed the values specified as follows.

Table I-1-2. Acceptable aerodrome category for rescue and firefighting (alternate aerodromes)

<p>Aerodromes (Required to be specified in the operational flight plan) <i>Note.— If an individual aerodrome serves more than one purpose, the highest required category corresponding to that purpose at the time of expected use applies.</i></p>	<p>Acceptable aerodrome RFFS protection level (Based on published aerodrome RFFS category, including any modification by NOTAM)</p>
<p>Take-off alternate and destination alternate aerodromes</p>	<p>Where a suitable risk assessment has been conducted by the operator:</p> <p>Two categories below the aeroplane RFFS category, or</p> <p>Three categories below the aeroplane RFFS category in the case of a temporary downgrade of 72 hours or less but not lower than aerodrome RFFS Category 4 for aeroplanes with maximum certificated take-off mass of over 27 000 kg and not lower than Category 1 for other aeroplanes.</p>
<p>En-route alternate aerodromes</p>	<ul style="list-style-type: none"> • If at least 30 minutes notice is given to the aerodrome operator prior to the arrival of the aeroplane, a minimum of RFFS Category 4 for aeroplanes with maximum certificated take-off mass of over 27 000 kg, and RFFS Category 1 for other aeroplanes.

	<ul style="list-style-type: none"> • If less than 30 minutes notice can be given to the aerodrome operator prior to the arrival of the aeroplane: <ul style="list-style-type: none"> - Two categories below the aeroplane RFFS category; or - Three categories below the aeroplane RFFS category in the case of a temporary downgrade of 72 hours or less. but not lower than aerodrome RFFS Category 4 for aeroplanes with maximum certificated take-off mass of over 27 000 kg and not lower than Category 1 for other aeroplanes.
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3.1.3 Variations

3.1.3.1 Notwithstanding the guidance developed in 3.1.1, an aerodrome RFFS category below the protection levels defined in Tables I-1-1 and I-1-2 may be acceptable if other considerations prevail, such as weather conditions, runway(s) characteristics, or length of diversion. Such variation should be based on a specific risk assessment conducted by the operator as part of its safety management system.

3.1.3.2 Variations to the aerodrome RFFS category may concern, amongst other cases:

- a) an occasional flight; or
- b) temporary downgrades exceeding 72 hours.

Where applicable, a variation may be used for a group of aerodromes selected for the same purpose, for a given aeroplane type.

3.1.3.3 The aforementioned variations may be based on additional or other criteria relevant to the type of operations. For instance, the 72-hour threshold for RFFS temporary downgrades may not be relevant for a single flight to or from the aerodrome concerned, such as a non-scheduled flight, whereas it is fully relevant for operations carried out on a continuous and daily basis. A variation may be time limited. A variation may also be modified to reflect the changes of the RFFS protection level available at the aerodrome(s) concerned. In accordance with Annex 6, Part I, Chapter 4, 4.1.5, the variations and their validity period should be included in the operations manual.

3.1.3.4 For variations to the acceptable RFFS category at departure and destination aerodromes, the aeroplane operator's specific safety risk assessment for an aerodrome intended to be used as a departure or destination aerodrome may be based on the following elements:

- a) the frequency of flights intended by the aeroplane operator in relation to a lowered aerodrome RFFS category;
- b) coordination between the aeroplane operator and the aerodrome operator (for instance, reducing intervention time by prepositioning the existing RFFS means along the runway before the intended take-off or landing).

3.1.3.5 For regular flights, the coordination should take into account the principles of Annex 14, Volume I, Chapter 9, 9.2.5 and 9.2.6 which are applicable to the aerodrome operator, as well as the possibilities to modulate the aerodrome RFFS category available on a daily cycle or seasonal cycle.

3.1.3.6 For variations in acceptable RFFS for an alternate aerodrome, the aeroplane operator's specific safety risk assessment for an aerodrome selected as a take-off alternate aerodrome, a destination alternate aerodrome or an en-route alternate aerodrome may be based on the following elements:

- a) the probability of effective use of the aerodrome concerned; and
- b) the frequency of selection of the aerodrome for the respective purpose of use.

3.2 In flight

3.2.1 The information contained in the operations manual according to Annex 6, Part I, Chapter 4, 4.1.5 about the aerodrome RFFS category acceptable at the planning stage (including Tables I-1-1, I-1-2 and, where usable, the variations under the specifications in 3.1.3) is applicable at the in-flight re-planning point.

3.2.2 In flight, the pilot-in-command may decide to land at an aerodrome regardless of the RFFS category if, in the pilot's judgement after due consideration of all prevailing circumstances, to do so would be safer than to divert.

