

REFERENCE DOCUMENT TO STATE LETTER AN 11/6.1.10-07/17

PROPOSED AMENDMENTS TO

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

SEC 1 GENERAL

Rationale

CHAPTER 1.1 DEFINITIONS

When the following terms are used in the Standards, Recommended Practices and Definitions for the operation of aeroplanes in international general aviation, they have the following meanings:

Definition added from Annex 17.

Act of Unlawful Interference. These are acts or attempted acts such as to jeopardize the safety of civil aviation and air transport, i.e.

- unlawful seizure of aircraft in flight,
- unlawful seizure of aircraft on the ground,
- hostage-taking on board an aircraft or on aerodromes,
- forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility,
- introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes,
- communication of false information as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation communication facility.

Aerial work. An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

Existing definition.

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Existing definition.

Aerodrome operating minima. The limits of usability of an aerodrome for:

Existing definition.

- a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;
- c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway

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visual range and decision altitude/height (DA/H); and

- d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight. Existing definition.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface. Existing definition.

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. Alternate aerodromes include the following: Existing definition.

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

En-route alternate. An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route.

Destination alternate. An alternate aerodrome to which an aircraft may proceed 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. Existing definition.

Approach and landing operations using instrument approach procedures. Instrument approach and landing operations are classified as follows: Existing definition.

Non-precision approach and landing operations. An instrument approach and landing which utilizes lateral guidance but does not utilize vertical guidance.

Approach and landing operations with vertical guidance. An instrument approach and landing which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

Precision approach and landing operations. An instrument approach and landing using precision lateral and vertical

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guidance with minima as determined by the category of operation.

Note.— *Lateral and vertical guidance refers to the guidance provided either by:*

- a) a ground-based navigation aid; or*
- b) computer generated navigation data.*

Categories of precision approach and landing operations:

Category I (CAT I) operation. A precision instrument approach and landing with:

- a) a decision height not lower than 60 m (200 ft); and
- b) either a visibility not less than 800 m or a runway visual range not less than 550 m.

Category II (CAT II) operation. A precision instrument approach and landing with:

- a) a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft); and
- b) a runway visual range not less than 350 m.

Category IIIA (CAT IIIA) operation. A precision instrument approach and landing with:

- a) a decision height lower than 30 m (100 ft) or no decision height; and
- b) a runway visual range not less than 200 m.

Category IIIB (CAT IIIB) operation. A precision instrument approach and landing with:

- a) a decision height lower than 15 m (50 ft) or no decision height; and
- b) a runway visual range less than 200 m but not less than 50 m.

Category IIIC (CAT IIIC) operation. A precision instrument approach and landing with no decision height and no runway visual range limitations.

Note.— *Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a*

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DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).

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.

Definition added from Annex 6, Part I.

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

Existing definition.

Corporate aviation operation. The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot(s) employed to fly the aircraft.

Definition added from Annex 17.

Dangerous goods. Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

Existing definition.

Note.— Dangerous goods are classified in Annex 18, Chapter 3

Decision altitude (DA) or decision height (DH). A specified altitude or height in the precision approach or approach with vertical guidance at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Existing definition.

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold 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 Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3.— For convenience where both expressions are used they may be written in the form “decision altitude/height” and abbreviated “DA/H”.

Emergency locator transmitter (ELT). A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

Existing definition.

Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.

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Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

Extended flight over water. A flight operated over water at a distance of more than 93 km (50 NM), or 30 minutes at normal cruising speed, whichever is the lesser, away from land suitable for making an emergency landing.

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

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. Existing definition.

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

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

Flight simulation training device. Any one of the following three types of apparatus in which flight conditions are simulated on the ground: Definition added from Annex 6, Part I.

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 environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;

A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

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A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

Flight time — aeroplanes. The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

Existing definition.

Note.— Flight time as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.

General aviation operation. An aircraft operation other than a commercial air transport operation or an aerial work operation.

Existing definition.

Industry code of practice. Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization’s Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

New definition for new term.

Note.— States may accept and reference industry codes of practice in the development of regulations to meet the requirements of Annex 6, Part II.

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling¹, less than the minima specified for visual meteorological conditions.

Existing definition.

Note.— The specified minima for visual meteorological conditions are contained in Chapter 4 of Annex 2.

Large aeroplane. An aeroplane of a maximum certificated take-off mass of over 5 700 kg.

Definition added from Annex 6, Part I.

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.

Existing definition.

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.

Existing definition.

Maintenance release. A document which contains a certification confirming that the maintenance work to which it relates has

Existing definition.

¹ As defined in Annex 2

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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.

Meteorological information. Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions. Existing definition.

Minimum descent altitude (MDA) or minimum descent height (MDH). A specified altitude or height in a non-precision approach or circling approach below which descent must not be made without the required visual reference. Existing definition.

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".

Night. The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority. Existing definition.

Note.— Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

Obstacle clearance altitude (OCA) or obstacle clearance height (OCH). The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria. Existing definition.

Note 1.— Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

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Note 2.— For convenience when both expressions are used they may be written in the form “obstacle clearance altitude/height” and abbreviated “OCA/H”.

Operating base. The location from which operational control is exercised.

New definition for new term.

Note.— An operating base is normally the location where personnel involved in the operation of the aeroplane work and the records associated with the operation are located. An operating base has a degree of permanency beyond that of a regular point of call.

Operational control. The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

Definition added from Annex 6, Part I.

Operational flight plan. The operator’s plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

Definition added from Annex 6, Part I.

Operations manual. A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

Definition added from Annex 6, Part I.

Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Definition added from Annex 6, Part I.

Note.— In the context of Annex 6, Part II, the operator is not engaged in the transport of passengers, cargo or mail for remuneration or hire.

Pilot-in-command. The pilot designated by the operator or the owner, as being in command and charged with the safe conduct of a flight.

Existing definition.

Psychoactive substances. Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Existing definition.

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.

Existing definition.

Required navigation performance (RNP). A statement of the navigation performance necessary for operation within a defined airspace.

Existing definition.

Note.— Navigation performance and requirements are

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defined for a particular RNP type and/or application.

RNP type. A containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time. Existing definition.

Example.— RNP 4 represents a navigation accuracy of plus or minus 7.4 km (4 NM) on a 95 per cent containment basis.

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. Existing definition.

Safety management system. A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. Definition added from Annex 6, Part I.

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

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 (Doc 9587).

Target level of safety (TLS). A generic term representing the level of risk which is considered acceptable in particular circumstances. Existing definition.

Total vertical error (TVE). The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level). Existing definition.

Visual meteorological conditions (VMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling², equal to or better than specified minima. Existing definition.

Note.— The specified minima are contained in Chapter 4 of Annex 2.

² As defined in Annex 2

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	CHAPTER 1.2 APPLICABILITY		CHAPTER 3.1 APPLICABILITY	
<p>The Standards and Recommended Practices contained in Annex 6, Part II shall be applicable to international general aviation operations with aeroplanes.</p> <p><i>Note 1.— Standards and Recommended Practices applicable to the operation of aeroplanes by operators authorized to conduct international commercial air transport operations are to be found in Annex 6, Part I.</i></p> <p><i>Note 2.— Standards and Recommended Practices applicable to international commercial air transport operations or international general aviation operations with helicopters are to be found in Annex 6, Part III.</i></p>	<p>The Standards and Recommended Practices contained in Annex 6, Part II shall be applicable to international general aviation operations with aeroplanes as described in Section 2 and Section 3.</p> <p><i>Note 1.— Standards and Recommended Practices applicable to the operation of aeroplanes by operators authorized to conduct international commercial air transport operations are to be found in Annex 6, Part I.</i></p> <p><i>Note 2.— Standards and Recommended Practices applicable to international commercial air transport operations or international general aviation operations with helicopters are to be found in Annex 6, Part III.</i></p>	<p>Same as current applicability.</p>		<p>Defines applicability of Section III.</p>
	<p><i>Note 3.— Section 2 of Annex 6, Part II applies to all international general aviation aeroplane operations, including those covered in Section 3. Section 3 adds additional requirements for large aeroplanes, turbojet aeroplanes, and corporate aviation operations.</i></p>		<p>3.1.1 The following operations shall be subject to the Standards and Recommended Practices of Section 2, and those of Section 3: International general aviation operations with:</p> <p>a) aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg; or</p> <p>b) aeroplanes equipped with</p>	<p>Defines applicability of Section III. Numerous options were considered to identify the nature and complexity of the operation and the inherent level of safety risk where additional safety oriented mitigation was appropriate. This applicability was chosen as it clearly indicates where additional safety oriented mitigation is appropriate and that which appears to currently be utilized by civil aviation</p>

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			one or more turbojet engines.	authorities.
			3.1.2 Recommendation. — <i>An operation involving an aeroplane with a seating configuration of more than 9 passenger seats should be conducted in accordance with Section 3.</i>	The Recommendation provides for the inclusion of operations in Section III on the basis of exposure rather than the size and complexity of the aeroplane.
			<i>Note.</i> — <i>The applicability of 3.1.2 does not preclude a general aviation operator from satisfying the requirements of Section 3 where it may be to the operator's advantage.</i>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>Note 1.— Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13, that the State of Registry may be unable to fulfil its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by an operator of another State and that the Convention may not adequately specify the rights and obligations of the State of an operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the abovementioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. It was understood that pending entry into force of Article 83 bis of the Convention the foregoing action</i></p>	<p>CHAPTER 2.1 GENERAL</p> <p><i>Note 1.— Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13, that the State of Registry may be unable to fulfil its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by an operator of another State and that the Convention may not adequately specify the rights and obligations of the State of an operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the abovementioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. It was understood that pending entry into force of Article 83 bis of the Convention the foregoing action</i></p>	<p>Existing Notes.</p>	<p>3.2 Corporate aviation operations</p> <p>Recommendation.— <i>A corporate aviation operation involving three or more aircraft that are operated by pilots employed for the purpose of flying the aircraft should be conducted in accordance with Section 3.</i></p>	<p>This Recommended Practice provides for the inclusion of operations in Section III when the level of risk relates to the size and complexity of the operation rather than the aeroplane.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>would only be a matter of practical convenience and would not affect either the provisions of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis of the Convention entered into force on 20 June 1997, such transfer agreements will have effect in respect of Contracting States which have ratified the related Protocol (Doc 9318) upon fulfilment of the conditions established in Article 83 bis.</p> <p>Note 2.— In the case of international operations effected jointly with aeroplanes not all of which are registered in the same Contracting State, nothing in this Part prevents the States concerned entering into an agreement for the joint exercise of the functions placed upon the State of Registry by the provisions of the relevant Annexes.</p>	<p>would only be a matter of practical convenience and would not affect either the provisions of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis of the Convention entered into force on 20 June 1997, such transfer agreements will have effect in respect of Contracting States which have ratified the related Protocol (Doc 9318) upon fulfilment of the conditions established in Article 83 bis.</p> <p>Note 2.— In the case of international operations effected jointly with aeroplanes not all of which are registered in the same Contracting State, nothing in this Part prevents the States concerned entering into an agreement for the joint exercise of the functions placed upon the State of Registry by the provisions of the relevant Annexes.</p>		<p>Chapter 3.3 General</p>	
	<p>2.1.1 Compliance with laws, regulations and procedures</p>		<p>3.3.1 Compliance with laws, regulations and procedures</p>	
<p>3.1 The pilot-in-command shall comply with the relevant laws, regulations and procedures of the States in which the aeroplane is operated.</p> <p>Note 1.— Compliance with</p>	<p>2.1.1.1 The pilot-in-command shall comply with the laws, regulations and procedures of those States in which operations are conducted.</p> <p>Note.— Information for pilots</p>	<p>Existing provision.</p> <p>Note added as this is a</p>	<p>3.3.1.1 An operator shall ensure that all employees know that they must comply with the laws, regulations and procedures of those States in which operations are conducted.</p>	<p>Responsibility is assigned to the operator. Para 3.4.2.2 requires the operator to have an operations manual and 3.4.2.3 requires the operator to issue operational instructions to address issues such as this.</p>

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<p><i>more restrictive measures, not in contravention of the provisions of 3.1, may be required by the State of Registry</i></p> <p><i>Note 2.— Rules covering flight over the high seas are contained in Annex 2.</i></p>	<p><i>on flight procedure parameters and operational procedures is contained in PANS-OPS, Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS, 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.</i></p>	<p>significant safety issue that is not always understood.</p>	<p><i>Note. — Information for pilots on flight procedure parameters and operational procedures is contained in PANS-OPS, Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS, 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.</i></p>	
	<p>2.1.1.2 The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his or her duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The pilot-in-command 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.</p>	<p>New text from Annex 6, Part I assigning responsibility to PIC for other crew members.</p>	<p>3.3.1.2 An operator shall ensure that all pilots 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. 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.</p>	<p>Identifies the responsibilities of the operator.</p>
<p>3.2 The pilot-in-command shall be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed. The pilot-in-command shall also be responsible for the operation and</p>	<p>2.1.1.3 The pilot-in-command shall have responsibility for operational control.</p> <p><i>Note.— The rights and obligations of a State in respect to the operation of aeroplanes</i></p>	<p>Responsibilities assigned to PIC as is now the case in Annex 6, Part II.</p>	<p>3.3.1.3 The pilot-in-command is responsible for operational control. An operator shall describe the operational control system in the operations manual and identify the roles and responsibilities of those</p>	<p>The operator must describe the operational control system on the operations manual and identify the roles and responsibilities of anyone involved, including those of the pilot-in-command.</p>

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<p>safety of the aeroplane from the moment the aeroplane is ready to move for the purpose of taking off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down.</p>	<p><i>registered in that State are not affected by this provision.</i></p>		<p>personnel supporting this function involved in the system.</p> <p><i>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.</i></p>	<p>The duties and responsibilities of the pilot-in-command are addressed in Section 2.2.5.1.</p>
<p>3.3 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 Registry. Such reports shall be submitted as soon as possible and normally within ten days.</p>	<p>2.1.1.4 If an emergency situation which endangers the safety or security 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 Registry of the aeroplane. Such reports shall be submitted as soon as possible and normally within ten days.</p>	<p>Existing provision.</p>		
<p>3.4 The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane resulting in serious injury or death of any person or substantial damage to the</p>		<p>Addressed in 2.2.5.3.</p>		

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aeroplane or property.				
<p>3.5 Recommendation.— <i>The pilot-in-command should have available on board the aeroplane essential information concerning the search and rescue services in the areas over which it is intended the aeroplane will be flown.</i></p>	<p>2.1.1.5 Recommendation.— <i>The pilot-in-command should have available on board the aeroplane the essential information concerning the search and rescue services in the area over which the aeroplane will be flown.</i></p>	<p>Current provision.</p>	<p>3.3.1.4 An operator shall ensure that the pilot-in-command has 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.</p> <p><i>Note.</i>— <i>This information may be made available to the pilot by means of the operations manual or such other means as is considered appropriate.</i></p>	<p>Current Recommended Practice is made a Standard and identifies the role and responsibilities of the operator.</p>
	<p>2.1.1.6 The pilot-in-command shall ensure that flight crew members demonstrate the ability to speak and understand the language used for aeronautical radiotelephony communications as specified in Annex 1.</p>	<p>Requirement now in Annex 1.</p>	<p>3.3.1.5 An operator shall ensure that flight crew members demonstrate the ability to speak and understand the language used for aeronautical radiotelephony communications as specified in Annex 1.</p>	<p>Identifies the role and responsibilities of the operator.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			3.3.2 Safety management system	
			<p>3.3.2.1 An operator shall establish and maintain a safety management system that is appropriate to the size and complexity of the operation.</p> <p>3.3.2.2 Recommendation.— <i>The safety management system should as minimum include:</i></p> <ul style="list-style-type: none"> a) <i>a process to identify actual and potential safety hazards and assess the associated risks;</i> b) <i>a process to develop and implement remedial action necessary to maintain an acceptable level of safety; and</i> c) <i>provision for continuous monitoring and regular assessment of the appropriateness and effectiveness of safety management activities.</i> <p><i>Note.— Guidance on safety management systems is contained in the Safety Management Manual (Doc 9859) and industry codes of practice.</i></p>	<p>The operator’s SMS is the foundation upon which the programmes, systems and procedures required by this section should be built. It is also the element that can make this all function effectively without the need for operator certification.</p>
3.6 Dangerous goods.	2.1.2 Dangerous goods			
<i>Note 1.— Provisions for carriage of dangerous goods are</i>	<i>Note 1.— Provisions for carriage of dangerous goods are</i>	Existing provision.		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>contained in Annex 18.</i> <i>Note 2.— Article 35 of the Convention refers to certain classes of cargo restrictions.</i></p>	<p><i>contained in Annex 18.</i> <i>Note 2.— Article 35 of the Convention refers to certain classes of cargo restrictions.</i></p>			
<p>3.7 Use of psychoactive substances</p>	<p>2.1.3 Use of psychoactive substances</p>			
<p><i>Note.— Provisions concerning the use of psychoactive substances are contained in Annex 1, 1.2.7 and Annex 2, 2.5.</i></p>	<p><i>Note.— Provisions concerning the use of psychoactive substances are contained in Annex 1, 1.2.7 and Annex 2, 2.5.</i></p>	<p>Existing provision.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.2 FLIGHT OPERATIONS		CHAPTER 3.4 FLIGHT OPERATIONS	
4.1 Adequacy of operating facilities	2.2.1 Operating facilities		3.4.1 Operating facilities	
<p>The pilot-in-command shall not commence a flight unless it has been ascertained by every reasonable means available that the ground and/or water areas and facilities available and directly required for such flight and for the safe operation of the aeroplane are adequate, including communication facilities and navigation aids.</p> <p><i>Note.— “Reasonable means” in this Standard is intended to denote the use, at the point of departure, of information available to the pilot-in-command either through official information published by the aeronautical information services or readily obtainable from other sources.</i></p>	<p>The pilot-in-command shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aeroplane, are adequate for the type of operation under which the flight is to be conducted.</p> <p><i>Note.— “Reasonable means” in this Standard is intended to denote the use, at the point of departure, of information available to the pilot-in-command either through official information published by the aeronautical information services or readily obtainable from other sources.</i></p>	Existing provision.	<p>An operator shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aeroplane, are adequate for the type of operation under which the flight is to be conducted.</p> <p><i>Note.— “Reasonable means” in this Standard is intended to denote the use, at the point of departure, of information available to the operator either through official information published by the aeronautical information services or readily obtainable from other sources.</i></p>	Identifies the role and responsibilities of the operator.
	2.2.2 Operational management		3.4.2 Operational management	
			<p>3.4.2.1 Operator notification</p> <p>3.4.2.1.1 If an operator has an operating base in a State other than the State of Registry, the operator shall notify the State in</p>	Provides a procedure for States to maintain awareness of foreign registered aeroplanes which establish an operating base in their

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>which the operating base is located.</p> <p>3.4.2.1.2. Upon notification in accordance with 3.4.2.1.1, safety and security oversight shall be coordinated between the State in which the operating base is located and the State of Registry.</p>	<p>State.</p> <p>Provides for the State in which the operating base is located to become involved in the provision of regulatory oversight. This provision is proposed so as to permit the State in which the operating base is located, to be involved in regulatory oversight to the degree it is capable and as it and the State of Registry agree.</p>
			<p>3.4.2.2 Operations manual</p> <p>3.4.2.2.1 An operator shall provide, for the use and guidance of personnel concerned, an operations manual containing all the instructions and information necessary for operations personnel to perform their duties. The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual.</p> <p><i>Note 1.— States may reference accepted and recognized industry codes of practice as the basis for the development of an operations manual.</i></p> <p><i>Note 2.— Attachment A</i></p>	<p>An operations manual is an important tool in the management of a safe operation. States may specify the content of the operations manual but are not required to approve it.</p> <p>Industry standards are available for States and operators to use as they choose.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<i>contains guidance on the organization and content of an operations manual.</i>	
	<p>2.2.2.1 Operating instructions — general</p> <p>An aeroplane shall not be taxied on the movement area of an aerodrome unless the person at the controls:</p> <ul style="list-style-type: none"> a) has been duly authorized by the owner or in the case where it is leased the lessee, or a designated agent; b) is fully competent to taxi the aeroplane; c) is qualified to use the radio if radio communications are required; and d) has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome. 	Existing provision.	<p>3.4.2.3 Operating instructions — general</p> <p>3.4.2.3.1 An operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.</p>	Identifies the role and responsibilities of the operator.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>3.4.2.3.2 Recommendation. <i>— An operator should issue operating instructions and provide information on aeroplane climb performance to enable the pilot-in-command to determine the climb gradient that can be achieved during the departure phase for the existing take-off conditions and intended take-off technique. This information should be included in the operations manual.</i></p>	<p>From Annex 6, Part I and relates to Chapter 5.</p>
			<p>3.4.2.4 In-flight simulation of emergency situations</p> <p>An operator shall ensure that when passengers are being carried, no emergency or abnormal situations shall be simulated.</p>	<p>Appropriate safety provision from Annex 6, Part I.</p>
			<p>3.4.2.5 Checklists</p> <p>Checklists shall be used by flight crews prior to, during and after all phases of operations, and in emergency, to ensure compliance with the operating procedures contained in the aircraft operating manual and the aeroplane flight manual or other documents associated with the certificate of airworthiness and otherwise in the operations manual, are followed. The design and utilization of checklists shall</p>	<p>Appropriate safety provision from Annex 6, Part I.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>observe Human Factors principles.</p> <p><i>Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).</i></p>	
			<p>3.4.2.6 Minimum flight altitudes</p> <p>An operator shall specify, for flights which are to be conducted in accordance with the instrument flight rules, the method of establishing terrain clearance altitudes.</p>	<p>Appropriate safety provision from Annex 6, Part I.</p>
<p>4.2 Aerodrome operating minima</p> <p>The pilot-in-command shall not operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, except with the specific approval of that State.</p> <p><i>Note.— It is the practice in some States to declare, for flight planning purposes, higher minima for an aerodrome when nominated as an alternate, than for the same aerodrome when planned as that of intended</i></p>	<p>2.2.2.2 Aerodrome operating minima</p> <p>The pilot-in-command shall not operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, except with the specific approval of that State.</p> <p><i>Note.— It is the practice in some States to declare, for flight planning purposes, higher minima for an aerodrome when nominated as an alternate, than for the same aerodrome when planned as that of intended</i></p>	<p>Existing provision.</p>	<p>3.4.2.7 Aerodrome operating minima</p> <p>An operator shall ensure that no pilot-in-command operates to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, except with the specific approval of that State.</p> <p><i>Note.— It is the practice in some States to declare, for flight planning purposes, higher minima for an aerodrome when nominated as an alternate, than for the same aerodrome when planned as that of intended</i></p>	<p>Identifies the role and responsibilities of the operator.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>landing.</i>	<i>landing.</i>		<i>landing.</i>	
			3.4.2.8 Fatigue management	
			<p>3.4.2.8.1 <i>Fatigue management programme.</i> An operator shall establish and implement a fatigue management programme that ensures that all operator personnel involved in the operation and maintenance of aircraft do not carry out their duties when fatigued. The programme shall address flight and duty times and be included in the operations manual.</p> <p>3.4.2.8.2 If deviations from the flight and or duty time limitations are permitted, the system shall include provisions for:</p> <ul style="list-style-type: none"> a) assessing the associated risks and applying appropriate mitigation to ensure that there is no degradation of safety; and b) identifying the management person who is authorized to approve the deviation. <p>3.4.2.8.3 In the case of deviations, the risk assessment and related mitigation shall be recorded in writing.</p>	<p>This is an important safety provision that must be linked with the operators SMS. The SMS can ensure that this performance-based Standard is effective.</p> <p>Industry codes of practice are available to assist States and operators.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>3.4.2.8.4 Deviations shall be made only with the approval of all personnel involved.</p> <p><i>Note.— Accepted industry codes of practice may be used in the development of such a programme.</i></p>	
4.3 Briefing				
<p>4.3.1 The pilot-in-command shall ensure that crew members and passengers are made familiar, by means of an oral briefing or by other means, with the location and the use of:</p> <ul style="list-style-type: none"> a) seat belts; and, as appropriate, b) emergency exits; c) life jackets; d) oxygen dispensing equipment; and e) other emergency equipment provided for individual use, including passenger emergency briefing cards. <p>4.3.2 The pilot-in-command shall ensure that all persons on board are aware of the location and general manner of use of the principal emergency equipment carried for collective</p>	<p>2.2.2.3 Passengers</p> <p>2.2.2.3.1 The pilot-in-command shall ensure that passengers are made familiar with the location and use of:</p> <ul style="list-style-type: none"> a) seat belts; b) emergency exits; c) life jackets, if the carriage of life jackets is prescribed; d) oxygen dispensing equipment, and e) other emergency equipment provided for individual use, including passenger emergency briefing cards. <p>2.2.2.3.2 The pilot-in-command shall ensure that all persons on board are aware of the location and general manner of use of the principal</p>	<p>Existing provision that has been expanded.</p>	<p>3.4.2.9 Passengers</p> <p>3.4.2.9.1 An operator shall ensure that passengers are made familiar with the location and use of:</p> <ul style="list-style-type: none"> a) seat belts; b) emergency exits; c) life jackets, if the carriage of life jackets is prescribed; d) oxygen dispensing equipment, if the provision of oxygen for the use of passengers is prescribed; and e) other emergency equipment provided for individual use, including passenger emergency briefing cards. <p>3.4.2.9.2 An operator shall ensure that all persons on board are aware of the location and</p>	<p>Identifies the role and responsibilities of the operator.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>use.</p>	<p>emergency equipment carried for collective use.</p> <p>2.2.2.3.3 In an emergency during flight, passengers shall be instructed in such emergency action as may be appropriate to the circumstances.</p> <p>2.2.2.3.4 The pilot-in-command shall ensure that during take-off and landing and whenever considered necessary, by reason of turbulence or any emergency occurring during flight, all passengers on board an aeroplane shall be secured in their seats by means of the seat belts or harnesses provided.</p>		<p>general manner of use of the principal emergency equipment carried for collective use.</p> <p>3.4.2.9.3 An operator shall ensure that in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.</p> <p>3.4.2.9.4 An operator shall ensure that during take-off and landing and whenever, by reason of turbulence or any emergency occurring during flight, the precaution is considered necessary, all passengers on board an aeroplane are secured in their seats by means of the seat belts or harnesses provided.</p>	
<p>4.4 Aeroplane airworthiness and safety precautions</p>	<p>2.2.3 Flight preparation</p>		<p>3.4.3 Flight preparation</p>	
<p>4.4.1 A flight shall not be commenced until the pilot-in-command is satisfied that:</p> <p>a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;</p> <p>b) the instruments and</p>	<p>2.2.3.1 A flight shall not be commenced until the pilot-in-command is satisfied that:</p> <p>a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;</p> <p>b) the instruments and</p>	<p>Existing provision.</p>	<p>3.4.3.1 The operator shall develop procedures to ensure that a flight is not commenced unless:</p> <p>a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;</p> <p>b) the instruments and</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>equipment installed in the aeroplane are appropriate, taking into account the expected flight conditions;</p> <p>c) any necessary maintenance has been performed in accordance with Chapter 8;</p> <p>d) the mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;</p> <p>e) any load carried is properly distributed and safely secured; and</p> <p>f) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.</p>	<p>equipment installed in the aeroplane are appropriate, taking into account the expected flight conditions;</p> <p>c) any necessary maintenance has been performed in accordance with Chapter 2.6 of the relevant Section of this Part;</p> <p>d) the mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;</p> <p>e) any load carried is properly distributed and safely secured; and</p> <p>f) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.</p>		<p>equipment installed in the aeroplane are appropriate, taking into account the expected flight conditions;</p> <p>c) any necessary maintenance has been performed in accordance with Chapter 3.8 of the relevant Section of this Part;</p> <p>d) the mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;</p> <p>e) any load carried is properly distributed and safely secured; and</p> <p>f) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.</p>	
<p>4.4.2 Recommendation.— <i>The pilot-in-command should have sufficient information on climb performance with all engines operating to enable determination of the climb gradient that can be achieved during the departure phase for</i></p>	<p>2.2.3.2 Recommendation.— <i>The pilot-in-command should have sufficient information on climb performance with all engines operating to enable determination of the climb gradient that can be achieved during the departure phase for</i></p>	<p>Existing provision.</p>	<p>3.4.3.2 Recommendation.— <i>The operator should make available sufficient information on climb performance with all engines operating to enable determination of the climb gradient that can be achieved during the departure phase for</i></p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>the existing take-off conditions and intended take-off technique.</i></p>	<p><i>the existing take-off conditions and intended take-off technique.</i></p>		<p><i>the existing take-off conditions and intended take-off technique.</i></p>	
<p>4.5 Weather reports and forecasts</p> <p>Before commencing a flight the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under the instrument flight rules, shall include: 1) a study of available current weather reports and forecasts; and 2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.</p> <p><i>Note.— The requirements for flight plans are contained in Annex 2 — Rules of the Air and Procedures for Air Navigation Services — Rules of the Air and Air Traffic Services (PANS-RAC, Doc 4444).</i></p>	<p>2.2.3.3 Flight planning</p> <p>Before commencing a flight the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under the instrument flight rules, shall include:</p> <ul style="list-style-type: none"> a) a study of available current weather reports and forecasts; and b) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions. <p><i>Note.— The requirements for flight plans are contained in Annex 2 – Rules of the Air and Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444).</i></p>	<p>Existing provision.</p>	<p>3.4.3.3 Operational flight planning</p> <p>An operator shall specify flight planning procedures to provide for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned. These procedures shall be included in the operations manual.</p>	<p>Identifies the role and responsibilities of the operator.</p>
<p>4.6 Limitations imposed by weather conditions</p>	<p>2.2.3.4 Weather conditions</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>4.6.1 Flight in accordance with the visual flight rules</p> <p>A flight, except one of purely local character in visual meteorological conditions, to be conducted in accordance with the visual flight rules shall not be commenced unless available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under the visual flight rules, will, at the appropriate time, be such as to render compliance with these rules possible.</p> <p>4.6.2 Flight in accordance with the instrument flight rules</p> <p>4.6.2.1 <i>When a destination alternate aerodrome is required.</i> A flight to be conducted in accordance with the instrument flight rules shall not be commenced unless the available information indicates that conditions, at the aerodrome of intended landing and at least one destination alternate will, at the estimated time of arrival, be at or above the aerodrome operating minima.</p>	<p>2.2.3.4.1 A flight to be conducted in accordance with the visual flight rules shall not be commenced unless current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions along the route or that part of the route to be flown under the visual flight rules will, at the appropriate time, be such as to render compliance with these rules possible.</p> <p>2.2.3.4.2 A flight to be conducted in accordance with instrument flight rules shall not be commenced unless information is available which indicates that conditions at the aerodrome of intended landing or, where a destination alternate is required, at least one destination alternate aerodrome will, at the estimated time of arrival, be at or above the aerodrome operating minima.</p> <p><i>Note.— It is the practice in some States to declare, for flight planning purposes, higher minima for an aerodrome when nominated as a destination alternate than for the same aerodrome when planned as that of intended landing.</i></p> <p>2.2.3.4.3 A flight to be</p>	<p>Provision has been restructured to reflect the structure of Annex 6, Part I.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>4.6.2.2 <i>When no destination alternate aerodrome is required.</i> A flight to be conducted in accordance with the instrument flight rules to an aerodrome when no alternate aerodrome is required shall not be commenced unless:</p> <p>a) a standard instrument approach procedure is prescribed for the aerodrome of intended landing; and</p> <p>b) available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the estimated time of arrival:</p> <p>1) a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and</p> <p>2) visibility of at least 5.5 km or of 4 km more than the minimum associated with the procedure.</p>	<p>operated in known or expected icing conditions shall not be commenced unless the aeroplane is certificated and equipped to cope with such conditions.</p> <p>2.2.3.4.4 A flight to be planned or expected to operate in suspected or known ground icing conditions shall not take off unless the aeroplane has been inspected for icing and, if necessary, has been given appropriate de-icing/anti-icing treatment. Accumulation of ice or other naturally occurring contaminants shall be removed so that the aeroplane is kept in an airworthy condition prior to take-off.</p> <p><i>Note.— Guidance material is given in the Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640).</i></p>			
	2.2.3.5 Alternate aerodromes		3.4.3.4 Alternate aerodromes	
	<p>2.2.3.5.1 <i>Destination alternate aerodromes</i></p> <p>For a flight to be conducted in</p>	Restructured as per Annex 6, Part I.	<p>3.4.3.4.1 <i>Take-off alternate aerodrome</i></p> <p>3.4.3.4.1.1 A take-off</p>	Take-off alternate is only applicable to the complexity of aeroplanes addressed by Section III.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>accordance with the instrument flight rules, at least one destination alternate aerodrome shall be selected and specified in the flight plan, unless:</p> <ul style="list-style-type: none"> a) the duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the estimated time of arrival at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions; or b) the aerodrome of intended landing is isolated and there is no suitable destination alternate aerodrome; and <ul style="list-style-type: none"> 1) a standard instrument approach procedure is prescribed for the aerodrome of intended landing; and 2) available current meteorological information indicates that the following meteorological conditions will exist from two hours before 		<p>alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.</p> <p>3.4.3.4.1.2 The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:</p> <ul style="list-style-type: none"> a) aeroplanes having two power-units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed; and b) aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed. 	

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	<p>time of arrival:</p> <p>i) a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and</p> <p>ii) visibility of at least 5.5 km or of 4 km more than the minimum associated with the procedure.</p>			
			<p>3.4.3.4.1.3 For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.</p>	
<p>4.6.3 Aerodrome operating minima</p> <p>4.6.3.1 A flight shall not be continued towards the aerodrome of intended landing unless the latest available meteorological information indicates that conditions at that aerodrome, or at least one destination alternate aerodrome, will, at the estimated time of arrival, be at or above the specified aerodrome operating minima.</p> <p>4.6.3.2 An instrument approach shall not be continued</p>		<p>Addressed in 2.2.4 In Flight Procedures.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>beyond the outer marker fix in case of precision approach, or below 300 m (1 000 ft) above the aerodrome in case of non-precision approach, unless the reported visibility or controlling RVR is above the specified minimum.</p> <p>4.6.3.3 If, after passing the outer marker fix in case of precision approach, or after descending below 300 m (1 000 ft) above the aerodrome in case of non-precision approach, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H. In any case, an aeroplane shall not continue its approach-to-land beyond a point at which the limits of the aerodrome operating minima would be infringed.</p> <p><i>Note.— Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by State criteria.</i></p>				

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>2.2.4 In-flight procedures</p>		<p>3.4.4 In-flight procedures</p> <p>3.4.4.1 Precision instrument approaches – use of RVR</p>	
	<p>2.2.4.1 Aerodrome operating minima</p> <p>2.2.4.1.1 A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that aerodrome or at least one destination alternate aerodrome, in compliance with the operating minima established in accordance with 2.2.2.2.</p>		<p>3.4.4.1.1 A precision instrument approach where RVR is reported, shall not be continued beyond the final approach fix unless the controlling RVR is equal to or above the specified minimum.</p> <p>3.4.4.1.2 If, after the final approach fix is passed, the controlling RVR falls below the specified minimum, the approach may be continued to DA/H.</p> <p><i>Note. – Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by State criteria.</i></p>	
	<p>2.2.4.1.2 An instrument approach shall not be continued beyond a point at which the limits of the minima specified in the instrument approach procedure would be infringed.</p> <p>2.2.4.1.3 If, after passing the</p>	<p>The existing provision has been modified in recognition of the fact that many general aviation operations are conducted into aerodromes where weather reporting is limited or non-existent. Hence, the provision that in the case of</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>outer marker fix in case of precision approach, or after descending below 300 m (1 000 ft) above the aerodrome in case of non-precision approach, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H. In any case, an aeroplane shall not continue its approach-to-land beyond a point at which the limits of the aerodrome operating minima would be infringed.</p> <p><i>Note.— Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by State criteria.</i></p>	<p>non-precision approaches prohibits descent below 300 m (1 000 ft) above the aerodrome unless the reported visibility is above the specified minimum is considered unduly restrictive and in any case 2.2.4.1.4 prohibits infringement of the aerodrome operating minima.</p> <p>It also should be noted that the “Approach Ban” described in 4.4.3.2 has not been applied by a number of the States with a large GA population.</p>		
			<p>3.4.4.1.3 Recommendation.— <i>In the standard operating procedures recommended in 3.6.1.2 an operator should include operating procedures for conducting instrument approaches.</i></p>	<p>This additional recommendation is considered an effective safety enhancement for large and turbojet operations.</p>
4.6.4 Flight in icing		Addressed in 2.2.3.4.3.		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>conditions</p> <p>A flight to be operated in known or expected icing conditions shall not be commenced unless the aeroplane is certificated and equipped to cope with such conditions.</p>				
<p>4.7 Destination alternate aerodromes</p> <p>For a flight to be conducted in accordance with the instrument flight rules, at least one destination alternate aerodrome shall be selected and specified in the flight plan, unless:</p> <p>a) the duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the estimated time of arrival at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions; or</p> <p>b) the aerodrome of intended landing is isolated and there is no suitable destination alternate</p>		<p>Addressed in 2.2.3.5 Alternate aerodromes.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
aerodrome.				
<p>4.8 Fuel and oil supply</p> <p>4.8.1 A flight shall not be commenced unless, taking into account both the meteorological conditions and any delays that are expected in flight, the aeroplane carries sufficient fuel and oil to ensure that it can safely complete the flight, and, as applicable, the following special provisions are complied with:</p> <p>4.8.1.1 <i>Flight in accordance with the instrument flight rules.</i> At least sufficient fuel and oil shall be carried to allow the aeroplane:</p> <p>a) <i>when, in accordance with the exception contained in 4.6.2.2, a destination alternate aerodrome is not required,</i> to fly to the aerodrome to which the flight is planned and thereafter for a period of 45 minutes; or</p> <p>b) <i>when a destination alternate aerodrome is required,</i> to fly to the aerodrome to which the flight is planned, thence to an alternate aerodrome, and thereafter for a period of 45 minutes.</p>	<p>2.2.3.6 Fuel and oil supply</p> <p>2.2.3.6.1 A flight shall not be commenced unless, taking into account both the meteorological conditions and any delays that are expected in flight, the aeroplane carries sufficient fuel and oil to ensure that it can safely complete the flight. The amount of fuel to be carried must permit:</p> <p>a) when the flight is conducted in accordance with the instrument flight rules and a destination alternate aerodrome is not required in accordance with 2.2.3.5.1, flight to the aerodrome of intended landing, and after that, for at least 45 minutes at normal cruising altitude; or</p> <p>b) when the flight is conducted in accordance with the instrument flight rules and a destination alternate aerodrome is required, flight from the aerodrome of intended landing to an alternate aerodrome, and after that, for at least 45 minutes at normal cruising altitude; or</p> <p>c) when the flight is conducted</p>	<p>Existing provision for IFR. The provision has been somewhat simplified and VFR considerations have been added.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>Note.— Nothing in 4.8 precludes amendment of a flight plan in flight in order to re-plan the flight to another aerodrome, provided that the requirements of 4.8 can be complied with from the point where the flight is re-planned.</i></p>	<p>in accordance with the visual flight rules by day, flight to the aerodrome of intended landing, and after that, for at least 30 minutes at normal cruising altitude; or</p> <p>d) when the flight is conducted in accordance with the visual flight rules by night, flight to the aerodrome of intended landing and thereafter for at least 45 minutes at normal cruising altitude.</p> <p><i>Note.— Nothing in 2.2.3.6 precludes amendment of a flight plan in flight in order to re-plan the flight to another aerodrome, provided that the requirements of 2.2.3.6 can be complied with from the point where the flight is re-planned.</i></p>			
	<p>2.2.3.7 Refuelling with passengers on board</p> <p>2.2.3.7.1 Recommendation.— <i>An aeroplane should not be refuelled when passengers are embarking, on board or disembarking unless it is attended by the pilot-in-command or other qualified personnel ready to initiate and direct an evacuation of the aeroplane by the most practical and expeditious means available.</i></p>	<p>Existing provision 4.18 in Part II.</p>	<p>3.4.3.5 Refuelling with passengers on board</p> <p>3.4.3.5.1 An aeroplane shall not be refuelled when passengers are embarking, on board or disembarking unless it is properly attended by qualified personnel ready to initiate and direct an evacuation of the aeroplane by the most practical and expeditious means available.</p> <p>3.4.3.5.2 When refuelling</p>	<p>Upgraded to a Standard in Section III.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>2.2.3.7.2 Recommendation.— <i>When refuelling with passengers embarking, on board or disembarking, two-way communications should be maintained by aeroplane intercommunications system or other suitable means between the ground crew supervising the refuelling and the pilot-in-command or other qualified personnel required by 2.2.3.7.1.</i></p> <p><i>Note 1.— The provisions of 2.2.3.7.1 do not necessarily require the deployment of integral aeroplane stairs or the opening of emergency exits as a prerequisite to refuelling.</i></p> <p><i>Note 2.— Provisions concerning aircraft refuelling are contained in Annex 14, Volume I and guidance on safe refuelling practices is contained in the Airport Services Manual (Doc 9137), Parts 1 and 8.</i></p> <p><i>Note 3.— Additional precautions are required when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.</i></p>		<p>with passengers embarking, on board or disembarking, two-way communication shall be maintained by the aeroplane's intercommunication system or other suitable means between the ground crew supervising the refuelling and the qualified personnel on board the aeroplane.</p> <p><i>Note 1.— The provisions of 3.4.3.5.1 do not necessarily require the deployment of integral aeroplane stairs or the opening of emergency exits as a prerequisite to refuelling.</i></p> <p><i>Note 2.— Provisions concerning aircraft refuelling are contained in Annex 14, Volume I, and guidance on safe refuelling practices is contained in the Airport Services Manual (Doc 9137), Parts 1 and 8.</i></p> <p><i>Note 3.— Additional precautions are required when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.</i></p>	
4.9 Oxygen supply	2.2.3.8 Oxygen supply	Existing provision.	3.4.3.6 Oxygen supply	From Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE												
<p>The pilot-in-command shall ensure that breathing oxygen is available to crew members and passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crew members or harmfully affect passengers.</p> <p><i>Note.— Guidance on the carriage and use of oxygen is given in Attachment B.</i></p>	<p>The pilot-in-command shall ensure that breathing oxygen is available to crew members and passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crew members or harmfully affect passengers.</p> <p><i>Note 1.— Guidance on the carriage and use of oxygen is given in Attachment A.</i></p> <p><i>Note 2.— Approximate altitudes in the Standard Atmosphere corresponding to the values of absolute pressure used in the text are as follows:</i></p> <table border="1" data-bbox="472 922 827 1084"> <thead> <tr> <th>Absolute pressure</th> <th>Metres</th> <th>Feet</th> </tr> </thead> <tbody> <tr> <td>700 hPa</td> <td>3 000</td> <td>10 000</td> </tr> <tr> <td>620 hPa</td> <td>4 000</td> <td>13 000</td> </tr> <tr> <td>376 hPa</td> <td>7 600</td> <td>25 000</td> </tr> </tbody> </table>	Absolute pressure	Metres	Feet	700 hPa	3 000	10 000	620 hPa	4 000	13 000	376 hPa	7 600	25 000		<p>3.4.3.6.1 A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments will be less than 700 hPa shall not be commenced unless sufficient stored breathing oxygen is carried to supply:</p> <ul style="list-style-type: none"> a) all crew members and 10 per cent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 700 hPa and 620 hPa; and b) the crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 620 hPa. <p>3.4.3.6.2 A flight to be operated with a pressurized aeroplane shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 700 hPa. In addition, when</p>	
Absolute pressure	Metres	Feet														
700 hPa	3 000	10 000														
620 hPa	4 000	13 000														
376 hPa	7 600	25 000														

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>an aeroplane is operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, if operated at flight altitudes at which the atmospheric pressure is more than 376 hPa and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa, there shall be no less than a 10-minute supply for the occupants of the passenger compartment.</p>	
<p>4.10 Use of oxygen</p> <p>All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in 4.9.</p>		<p>Addressed in 2.2.4.5 Use of Oxygen.</p>		
<p>4.11 In-flight emergency instruction</p> <p>In an emergency during flight, the pilot-in-command shall ensure that all persons on board are instructed in such emergency action as may be appropriate to the circumstances.</p>		<p>Addressed in 2.2.2.11 Passengers</p>		
<p>4.12 Weather reporting by</p>	<p>2.2.4.2 Weather reporting by</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>pilots</p> <p>Recommendation.— <i>When weather conditions likely to affect the safety of other aircraft are encountered, they should be reported as soon as possible.</i></p>	<p>pilots</p> <p>Recommendation.— <i>When weather conditions likely to affect the safety of other aircraft are encountered, they should be reported as soon as possible.</i></p> <p><i>Note.</i>— <i>The procedures for making meteorological observations on board aircraft in flight and for recording and reporting them are contained in Annex 3, the PANS-ATM (Doc 4444) and the appropriate Regional Supplementary Procedures (Doc 7030).</i></p>	<p>Existing provision. Note added from Annex 6, Part I.</p>		
<p>4.13 Hazardous flight conditions</p> <p>Recommendation.— <i>Hazardous flight conditions, other than those associated with meteorological conditions, encountered en route should be reported as soon as possible. The reports so rendered should give such details as may be pertinent to the safety of other aircraft.</i></p>	<p>2.2.4.3 Hazardous flight conditions</p> <p>Recommendation.— <i>Hazardous flight conditions encountered, other than those associated with meteorological conditions, should be reported to the appropriate aeronautical station as soon as possible. The reports so rendered should give such details as may be pertinent to the safety of other aircraft.</i></p>	<p>Existing provision.</p>		
<p>4.14 Fitness of flight crew members</p> <p>The pilot-in-command shall be responsible for ensuring that a flight:</p>		<p>Addressed in 2.2.5 Duties of Pilot-in-command.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>a) will not be commenced if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs; and</p> <p>b) will not be continued beyond the nearest suitable aerodrome when flight crew members' capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness, lack of oxygen.</p>				
<p>4.15 Flight crew members at duty stations</p> <p>4.15.1 Take-off and landing</p> <p>All flight crew members required to be on flight deck duty shall be at their stations.</p> <p>4.15.2 En route</p> <p>All flight crew members required to be on flight deck duty shall remain at their stations except when their absence is necessary for the performance of duties in connection with the operation of the aeroplane, or for physiological needs.</p>	<p>2.2.4.4 Flight crew members at duty stations</p> <p>2.2.4.4.1 <i>Take-off and landing.</i> All flight crew members required to be on flight deck duty shall be at their stations.</p> <p>2.2.4.4.2 <i>En route.</i> All flight crew members required to be on flight deck duty shall remain at their stations except when their absence is necessary for the performance of duties in connection with the operation of the aeroplane or for physiological needs.</p> <p>2.2.4.4.3 <i>Seat belts.</i> All flight</p>	<p>Existing provision.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>4.15.3 Seat belts</p> <p>All flight crew members shall keep their seat belts fastened when at their stations.</p> <p>4.15.4 Safety harness</p> <p>Recommendation.— <i>When safety harnesses are provided, any flight crew member occupying a pilot's seat should keep the safety harness fastened during the take-off and landing phases; all other flight crew members should keep their safety harnesses fastened during the take-off and landing phases unless the shoulder straps interfere with the performance of their duties, in which case the shoulder straps may be unfastened but the seat belt must remain fastened.</i></p> <p><i>Note.</i>— <i>Safety harness includes shoulder strap(s) and a seat belt which may be used independently.</i></p>	<p>crew members shall keep their seat belts fastened when at their stations.</p> <p>2.2.4.4.4 <i>Safety harness.</i> When safety harnesses are provided, any flight crew member occupying a pilot's seat shall keep the safety harness fastened during the take-off and landing phases; all other flight crew members shall keep their safety harnesses fastened during the take-off and landing phases unless the shoulder straps interfere with the performance of their duties, in which case the shoulder straps may be unfastened but the seat belt must remain fastened.</p> <p><i>Note.</i>— <i>Safety harness includes shoulder strap(s) and a seat belt which may be used independently.</i></p>	<p>The existing Recommendation has been made into a Standard as it is considered an important safety provision.</p>		
	<p>2.2.4.5 Use of oxygen</p> <p>All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has</p>	<p>Existing provision.</p>	<p>3.4.4.2 Use of oxygen</p> <p>3.4.4.2.1 All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane in flight, shall use breathing oxygen continuously whenever the circumstances</p>	<p>Linked to requirements specified in 3.4.3.4.1 and 3.4.3.4.2.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>been prescribed in 2.2.3.8.</p>		<p>prevail for which its supply has been required in 3.4.3.6.1 or 3.4.3.6.2.</p> <p>3.4.4.2.2 All flight crew members of pressurized aeroplanes operating above an altitude where the atmospheric pressure is less than 376 hPa shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand.</p>	<p>From Annex 6, Part I.</p>
	<p>2.2.4.6 Safeguarding of cabin crew and passengers in pressurized aeroplanes in the event of loss of pressurization</p> <p>Recommendation.— <i>Cabin crew should be safeguarded so as to ensure reasonable probability of their retaining consciousness during any emergency descent which may be necessary in the event of loss of pressurization and, in addition, they should have such means of protection as will enable them to administer first aid to passengers during stabilized flight following the emergency. Passengers should be safeguarded by such devices or operational procedures as will ensure reasonable probability of their surviving</i></p>	<p>From Annex 6, Part I as a Recommendation.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p><i>the effects of hypoxia in the event of loss of pressurization.</i></p> <p><i>Note.— It is not envisaged that cabin crew will always be able to provide assistance to passengers during emergency descent procedures which may be required in the event of loss of pressurization.</i></p>			
<p>4.16 Instrument flight procedures</p> <p>4.16.1 One or more instrument approach procedures designed in accordance with the classification of instrument approach and landing operations shall be approved and promulgated by the State in which the aerodrome is located to serve each instrument runway or aerodrome utilized for instrument flight operations.</p> <p>4.16.2 All aeroplanes operated in accordance with instrument flight rules shall comply with the instrument flight procedures approved by the State in which the aerodrome is located.</p> <p><i>Note 1.— Definitions for the classification of instrument approach and landing operations are in Chapter 1.</i></p>	<p>2.2.4.8 Instrument flight approach procedures</p> <p>2.2.4.8.1 One or more instrument approach procedures designed in accordance with the classification of instrument approach and landing operations shall be approved and promulgated by the State in which the aerodrome is located to serve each instrument runway or aerodrome utilized for instrument flight operations.</p> <p>2.2.4.8.2 Aeroplanes operated in accordance with instrument flight rules shall comply with the instrument flight approach procedures approved by the State in which the aerodrome is located.</p> <p><i>Note 1.— Definitions for the classification of instrument approach and landing operations are in Chapter 1.1.</i></p>	<p>Existing provision modified to ensure it refers specifically to instrument approach procedures.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>Note 2.— Information for pilots on flight procedure parameters and operational procedures is contained in PANS-OPS, Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS, 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.</i></p>	<p><i>Note 2.— Information for pilots on flight procedure parameters and operational procedures is contained in PANS-OPS, Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS, 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.</i></p>			
			<p>3.4.4.3 Aeroplane operating procedures for noise abatement</p> <p>3.4.4.3.1 Recommendation. — Aeroplane operating procedures for noise abatement should comply with the provisions of PANS-OPS (Doc 8168), Volume I, Section 7, Chapter 3.</p> <p>3.4.4.3.2 Recommendation. — Noise abatement procedures specified by an operator for any one aeroplane type should be the same for all aerodromes.</p> <p><i>Note.— A single procedure may not satisfy requirements at some aerodromes.</i></p>	<p>Existing provision.</p>
<p>4.17 Instruction — general</p>		<p>Addressed in 2.2.2.3 Operating instructions – general.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>An aeroplane shall not be taxied on the movement area of an aerodrome unless the person at the controls:</p> <ul style="list-style-type: none"> a) has been duly authorized by the owner or in the case where it is leased the lessee, or a designated agent; b) is fully competent to taxi the aeroplane; c) is qualified to use the radio telephone if radio communications are required; and d) has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome. 				
<p>4.18 Refuelling with passengers on board</p> <p>4.18.1 Recommendation.— <i>An aeroplane should not be refuelled when passengers are embarking, on board or disembarking unless it is attended by the pilot-in-</i></p>		<p>Addressed in 2.2.3.7 Refuelling with passengers on board</p>		<p>Addressed in 2.2.3.7 Refuelling with passengers on board.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p><i>command or other qualified personnel ready to initiate and direct an evacuation of the aeroplane by the most practical and expeditious means available.</i></p> <p>4.18.2 Recommendation.— <i>When refuelling with passengers embarking, on board or disembarking, two-way communications should be maintained by aeroplane intercommunications system or other suitable means between the ground crew supervising the refuelling and the pilot-in-command or other qualified personnel required by 4.18.1.</i></p> <p><i>Note 1.— The provisions of 4.18.1 do not necessarily require the deployment of integral aeroplane stairs or the opening of emergency exits as a prerequisite to refuelling.</i></p> <p><i>Note 2.— Provisions concerning aircraft refuelling are contained in Annex 14, Volume I and guidance on safe refuelling practices is contained in the Airport Services Manual (Doc 9137), Parts 1 and 8.</i></p> <p><i>Note 3.— Additional precautions are required when refuelling with fuels other than aviation kerosene or when</i></p>				

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.</i>				
	2.2.5 Duties of pilot-in-command		3.4.5 Duties of pilot-in-command	
	<p>2.2.5.1 The pilot-in-command shall be responsible for the operation, safety and security of the aeroplane and the safety of all crew members, passengers and cargo on board.</p> <p>2.2.5.2 The pilot-in-command shall be responsible for ensuring that a flight:</p> <p>a) will not be commenced if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of any psychoactive substance; and</p> <p>b) will not be continued beyond the nearest suitable aerodrome when flight crew members' capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.</p>	Combines provisions from Annex 6, Parts I and II.		
			3.4.5.1 The pilot-in-command shall ensure that the check-lists specified in 3.4.2.5 are	From Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>complied with in detail.</p>	
	<p>2.2.5.3 The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane, resulting in serious injury or death of any person or substantial damage to the aeroplane or property.</p> <p><i>Note.— A definition of the term “serious injury” is contained in Annex 13.</i></p>	<p>Existing provision. (see 3.4 of current text).</p>	<p>3.4.5.2 The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane, resulting in serious injury or death of any person or substantial damage to the aeroplane or property. In the event that the pilot-in-command is incapacitated the operator shall take the forgoing action.</p> <p><i>Note.— A definition of the term “serious injury” is contained in Annex 13.</i></p>	<p>Identifies the role and responsibilities of the operator.</p>
			<p>3.4.5.3 The pilot-in-command shall be responsible for reporting all known or suspected defects in the aeroplane, to the operator, at the termination of the flight.</p> <p>3.4.5.4 The pilot-in-command shall be responsible for the journey log book or the general declaration containing the information listed in 2.8.2.</p> <p><i>Note.— By virtue of Resolution A10-36 of the Tenth Session of the Assembly (Caracas, June–July 1956) “the General Declaration, [described in Annex 9] when</i></p>	<p>From Annex 6, Part I. This is considered necessary in an operation with more than one pilot.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>prepared so as to contain all the information required by Article 34 [of the Convention on International Civil Aviation] with respect to the journey log book, may be considered by Contracting States to be an acceptable form of journey log book”.</i></p>	
	<p>2.2.6 Cabin baggage (take-off and landing)</p> <p>The pilot-in-command shall ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is securely stowed.</p>	<p>Uses wording similar to Annex 6, Part I made relevant to cabin baggage.</p>	<p>3.4.6 Cabin baggage (take-off and landing)</p> <p>An operator shall specify procedures to ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is adequately and securely stowed.</p>	<p>Identifies the role and responsibilities of the operator.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.3 AEROPLANE PERFORMANCE OPERATING LIMITATIONS		CHAPTER 3.5 AEROPLANE PERFORMANCE OPERATING LIMITATIONS	
	2.3.1 General		3.5.1 General	
<p>5.1 An aeroplane shall be operated:</p> <ul style="list-style-type: none"> a) in compliance with the terms of its airworthiness certificate or equivalent approved document; b) within the operating limitations prescribed by the certifying authority of the State of Registry; and c) within the mass limitations imposed by compliance with the applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized, in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated. <p>5.2 Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the certifying authority of the State of Registry</p>	<p>2.3.1.1 An aeroplane shall be operated:</p> <ul style="list-style-type: none"> a) in compliance with the terms of its airworthiness certificate or equivalent approved document; b) within the operating limitations prescribed by the certifying authority of the State of Registry; and c) if applicable, within the mass limitations imposed by compliance with the applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated. <p>2.3.1.2 Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the certifying</p>	<p>Existing provision.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
for visual presentation, shall be displayed in the aeroplane.	authority of the State of Registry for visual presentation, shall be displayed in the aeroplane.			
	2.3.1.3 The pilot-in-command shall use available information to determine that aeroplane performance will permit the take-off and departure to be carried out safely.	New provision to specify that the pilot in command shall use available information to determine aircraft performance.		
<i>Note.— The Standards of Annex 8 — Airworthiness of Aircraft, Parts IIIA and IIIB, apply to all aeroplanes of over 5 700 kg maximum certificated take-off mass intended for the carriage of passengers or cargo or mail in international air navigation.</i>			Recommendation.— For aeroplanes for which Parts IIIA and IIIB of Annex 8 is not applicable because of the exemption provided for in Article 41 of the Convention, the State of Registry should ensure that the level of performance specified in 3.5.2 should be met as far as practicable.	Existing Annex 6, Part I provision.
			3.5.2 Applicable to aeroplanes certificated in accordance with Parts IIIA and IIIB of Annex 8	These provisions from Annex 6, Part I are considered appropriate for the aeroplanes and operations addressed in this Section.
			3.5.2.1 The Standards contained in 3.5.2.2 to 3.5.2.9 inclusive are applicable to the aeroplanes to which Parts IIIA and IIIB of Annex 8 are applicable. <i>Note.— The Standards of Annex 8 — Airworthiness of Aircraft, Parts IIIA and IIIB, apply to all aeroplanes of over 5 700 kg maximum certificated take-off mass intended for the</i>	Annex 8 Part IIIA requires that an aeroplane of over 5 700 kg shall have not less than two power plants. Single engine aeroplanes will therefore be < 5 700 kg and not subjected to nor limited by the provisions of 3.5.3.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<i>carriage of passengers or cargo or mail in international air navigation.</i>	
			3.5.2.2 An aeroplane shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.	
			3.5.2.3 The State of Registry shall take such precautions as are reasonably possible to ensure that the general level of safety contemplated by these provisions is maintained under all expected operating conditions, including those not covered specifically by the provisions of this chapter.	
			3.5.2.4 A flight shall not be commenced unless the performance information provided in the flight manual indicates that the Standards of 3.5.2.5 to 3.5.2.9 can be complied with for the flight to be undertaken.	
			3.5.2.5 In applying the Standards of this chapter, account shall be taken of all factors that significantly affect the performance of the aeroplane (such as: mass, operating procedures, the pressure-altitude	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>appropriate to the elevation of the aerodrome, temperature, wind, runway gradient and condition of runway, i.e. presence of slush, water and/or ice, for landplanes, water surface condition for seaplanes). Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aeroplane is being operated.</p>	
			<p>3.5.2.6 Mass limitations</p> <p>a) The mass of the aeroplane at the start of take-off shall not exceed the mass at which 3.5.2.7 is complied with, nor the mass at which 3.5.2.8 and 3.5.2.9 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying 3.5.2.8 and 3.5.2.9 and, in respect of alternate aerodromes, 3.5.2.6 c) and 3.5.2.9.</p> <p>b) In no case shall the mass at the start of take-off exceed the maximum take-off mass</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>specified in the flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition.</p> <p>c) In no case shall the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure-altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.</p> <p>d) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated.</p> <p>3.5.2.7 <i>Take-off.</i> The aeroplane shall be able, in the event of a critical power-unit failing at any point in the take-off, either to discontinue the take-off and stop within the accelerate-stop distance available [or runway available], or to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with 3.5.2.8.</p> <p><i>Note.—“An adequate margin” referred to in this provision is illustrated by the appropriate examples included in Attachment C to Annex 6, Part I.</i></p> <p>3.5.2.7.1 In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>3.5.2.8 <i>En route — one power-unit inoperative.</i> The aeroplane shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, to continue the flight to an aerodrome at which the Standard of 3.5.2.9 can be met, without flying below the minimum obstacle clearance altitude at any point.</p>	
			<p>3.5.2.9 <i>Landing.</i> The aeroplane shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.4 AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS		CHAPTER 3.6 AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS	
<i>Note.— Specifications for the provision of aeroplane communication and navigation equipment are contained in Chapter 7.</i>	<i>Note.— Specifications for the provision of aeroplane communication and navigation equipment are contained in Chapter 2.5.</i>		<i>Note.— Specifications for the provision of aeroplane communication and navigation equipment are contained in Chapter 3.7.</i>	
6.1 All aeroplanes on all flights	2.4.1 General		3.6.1 General	
6.1.1 General 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 approved or accepted by the State of Registry.	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 acceptable to the State of Registry.	Existing provision.	3.6.1.1 Where a Master Minimum Equipment List (MMEL) is established for the aircraft type, the operator shall include in the operations manual a Minimum Equipment List (MEL) approved by the State of Registry of the aeroplane which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative. <i>Note.— Attachment B contains guidance on the minimum equipment list.</i>	Introduces a MEL requirement. A MEL is essential for the operation of aeroplanes addressed in this section.
			3.6.1.2 Recommendation.— <i>An operator should provide operations staff and flight crew with standard operating procedures, for each aircraft type operated, containing the normal, abnormal and</i>	Standard operating procedures are an important safety tool.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>emergency procedures relating to the operation of the aircraft. The manual shall be consistent with the aircraft flight manual and checklists to be used. The design of the manual should observe Human Factors principles</i></p> <p><i>Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).</i></p>	
	2.4.2 Aeroplanes on all flights		3.6.2 Aeroplanes on all flights	
<p>6.1.2 Instruments An aeroplane shall be equipped with instruments which will enable the flight crew to control the flight path of the aeroplane, carry out any required procedural manoeuvre, and observe the operating limitations of the aeroplane in the expected operating conditions.</p>	<p>2.4.2.1 An aeroplane shall be equipped with instruments which will enable the flight crew to control the flight path of the aeroplane, carry out any required procedural manoeuvres and observe the operating limitations of the aeroplane in the expected operating conditions.</p>	Existing provision.		
<p>6.1.3 Equipment</p> <p>6.1.3.1 All aeroplanes on all flights.</p> <p>6.1.3.1.1 All aeroplanes on all flights shall be equipped with:</p> <p>a) an accessible first-aid kit;</p> <p>b) portable fire extinguishers of</p>	<p>2.4.2.2 Aeroplanes on all flights shall be equipped with:</p> <p>a) an accessible first-aid kit;</p> <p>b) portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane. At least one shall be located in:</p>	Existing provision with slight modification to add journey log book and modernize the provision related to fuses.	<p>3.6.2.1 In addition to the requirements contained in 2.4.2.2, an aeroplane shall be equipped with:</p> <p>a) accessible and adequate medical supplies appropriate to the number of passengers the aeroplane is authorized to carry.</p>	From Annex 6, Part II considered appropriate for the operation of aeroplanes addressed in this section.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane. At least one shall be located in:</p> <p>1) the pilot's compartment; and</p> <p>2) each passenger compartment that is separate from the pilot's compartment and not readily accessible to the pilot or co-pilot;</p> <p>c) 1) a seat or berth for each person over an age to be determined by the State of Registry; and</p> <p>2) a seat belt for each seat and restraining belts for each berth;</p> <p>d) the following manuals, charts and information:</p> <p>1) the flight manual or other documents or information concerning any operating limitations prescribed for the aeroplane by the certifying authority of the State of Registry, required for the application of Chapter 5;</p>	<p>1) the pilot's compartment; and</p> <p>2) each passenger compartment that is separate from the pilot's compartment and not readily accessible to the pilot or co-pilot;</p> <p>c) 1) a seat or berth for each person over an age to be determined by the State of Registry; and</p> <p>2) a seat belt for each seat and restraining belts for each berth;</p> <p>d) the following manuals, charts and information:</p> <p>1) the flight manual or other documents or information concerning any operating limitations prescribed for the aeroplane by the certifying authority of the State of Registry, required for the application of Chapter 2.3;</p> <p>2) current and suitable charts for the route of the proposed flight and all routes along which it is reasonable to expect that</p>		<p>b) Recommendation.— <i>Medical supplies should comprise one or more first-aid kits.</i></p> <p><i>Note.— Guidance on the types, number, location and contents of the medical supplies is given in Attachment B to Annex 6, Part 1.</i></p> <p>c) a safety harness for each flight crew seat. The safety harness for each pilot seat shall incorporate a device which will automatically restrain the occupant's torso in the event of rapid deceleration;</p> <p>d) Recommendation.— <i>The safety harness for each pilot seat should incorporate a device to prevent a suddenly incapacitated pilot from interfering with the flight controls.</i></p> <p><i>Note.— Safety harness includes shoulder straps and a seat belt which may be used independently.</i></p> <p>e) means of ensuring that the following information and instructions are conveyed to passengers:</p> <p>1) when seat belts are to be</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>2) current and suitable charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;</p> <p>3) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and</p> <p>4) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2;</p> <p>e) spare electrical fuses of appropriate ratings for replacement of those accessible in flight.</p>	<p>the flight may be diverted;</p> <p>3) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft;</p> <p>4) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2; and</p> <p>5) the journey log book for the aeroplane;</p> <p>e) where the aeroplane is fitted with fuses that are accessible in flight, spare electrical fuses of appropriate ratings for replacement of those fuses.</p>		<p>fastened;</p> <p>2) when and how oxygen equipment is to be used if the carriage of oxygen is required;</p> <p>3) restrictions on smoking;</p> <p>4) location and use of life jackets or equivalent individual flotation devices where their carriage is required;</p> <p>5) location of emergency equipment; and</p> <p>6) location and method of opening emergency exits.</p>	
<p>6.1.3.1.2 Recommendation.— <i>All aeroplanes on all flights should be equipped with the ground-air signal codes for search and rescue purposes.</i></p>	<p>2.4.2.3 Recommendation.— <i>Aeroplanes on all flights should be equipped with the ground-air signal codes for search and rescue purposes.</i></p>		<p>3.6.2.2 An aeroplane shall carry:</p> <p>a) the operations manual prescribed in 3.4.2.2, or those parts of it that pertain to flight operations;</p> <p>b) the flight manual for the aeroplane, or other documents containing performance data required for the application of Chapter 3.5 and any other information necessary for</p>	<p>This provision reflects the additional items required by this Section.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>the operation of the aeroplane within the terms of its certificate of airworthiness, unless these data are available in the operations manual; and</p> <p>c) the checklists to which 3.4.2.5 refers.</p>	
<p>6.1.3.1.3 Recommendation.— <i>All aeroplanes on all flights should be equipped with a safety harness for each flight crew member seat.</i></p> <p><i>Note.— Safety harness includes shoulder strap(s) and a seat belt which may be used independently.</i></p>	<p>2.4.2.34 Recommendation.— <i>Aeroplanes on all flights should be equipped with a safety harness for each flight crew member seat.</i></p> <p><i>Note.— Safety harness includes shoulder strap(s) and a seat belt which may be used independently.</i></p>	Existing provision.		
<p>6.1.4 Marking of break-in points</p> <p>6.1.4.1 If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aeroplane, such areas shall be marked as shown below (see figure following). The colour of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background.</p> <p>6.1.4.2 If the corner markings are more than 2 m apart, intermediate lines 9 cm x 3 cm shall be inserted so that there is</p>	<p>2.4.2.45 Marking of break-in points</p> <p>2.4.2.45.1 If areas of the fuselage suitable for break-in by rescue crews in emergency are marked on an aeroplane such areas shall be marked as shown below (see figure following). The colour of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background.</p> <p>2.4.2.45.2 If the corner markings are more than 2 m apart, intermediate lines 9 cm x 3 cm shall be inserted so that</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>no more than 2 m between adjacent markings.</p> <p><i>Note.— This Standard does not require any aeroplane to have break-in areas.</i></p>	<p>there is no more than 2 m between adjacent markings.</p> <p><i>Note.— This Standard does not require any aeroplane to have break-in areas.</i></p>			
			<p>3.6.3 Flight recorders</p>	
			<p><i>Note 1.— Flight recorders comprise two systems, a flight data recorder and a cockpit voice recorder.</i></p> <p><i>Note 2.— Combination recorders (FDR/CVR) can only be used to meet the flight recorder equipage requirements as specifically indicated in this Annex.</i></p> <p><i>Note 3.— Detailed guidance on flight recorders is contained in Attachment C.</i></p>	<p>The Flight recorder requirements are currently under review by the Flight Recorder Panel. Pending completion of these deliberations, the current requirements from Annex 6, Part II were used.</p>
			<p>3.6.3.1 Flight data recorders — types</p>	
			<p>3.6.3.1.1 A Type I flight data recorder shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation.</p> <p>3.6.3.1.2 A Type II flight data recorder shall record the parameters required to determine accurately the aeroplane flight</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>path, speed, attitude, engine power and configuration of lift and drag devices.</p> <p>3.6.3.1.3 The use of engraving metal foil flight data recorders shall be discontinued by 1 January 1995.</p>	
			<p>3.6.3.1.4 Recommendation.— <i>The use of analogue flight data recorders using frequency modulation (FM) should be discontinued by 5 November 1998.</i></p>	
			<p>3.6.3.1.4.1 The use of photographic film flight data recorders shall be discontinued from 1 January 2003.</p>	
			<p>3.6.3.1.5 All aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2005, which utilize data link communications and are required to carry a cockpit voice recorder (CVR), shall record on a flight recorder, all data link communications to and from the aeroplane. The minimum recording duration shall be equal to the duration of the CVR, and shall be correlated to the recorded cockpit audio.</p>	
			<p>3.6.3.1.5.1 From 1 January 2007, all aeroplanes which utilize data link communications and are</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>required to carry a CVR, shall record on a flight recorder, all data link communications to and from the aeroplane. The minimum recording duration shall be equal to the duration of the CVR, and shall be correlated to the recorded cockpit audio.</p>	
			<p>3.6.3.1.5.2 Sufficient information to derive the content of the data link communications message, and, whenever practical, the time the message was displayed to or generated by the crew shall be recorded.</p> <p><i>Note.— Data link communications include, but are not limited to, automatic dependent surveillance (ADS), controller-pilot data link communications (CPDLC), data link-flight information services (D-FIS) and aeronautical operational control (AOC) messages.</i></p>	
			<p>3.6.3.1.6 Recommendation.— All aeroplanes of a maximum certificated take-off mass over 5 700 kg, required to be equipped with a flight data recorder and a cockpit voice recorder, may alternatively be equipped with two combination recorders (FDR/CVR).</p> <p>3.6.3.1.7 Recommendation. —</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>All aeroplanes of a maximum certificated take-off mass of 5 700 kg or less, required to be equipped with a flight data recorder and/or a cockpit voice recorder, may alternatively be equipped with one combination recorder (FDR/CVR).</i></p>	
			<p>3.6.3.1.8 A Type IA flight data recorder shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation. The parameters that satisfy the requirements for a Type IA flight data recorder are listed in the paragraphs below. The parameters without an asterisk (*) are mandatory parameters which shall be recorded. In addition, the parameters designated by an asterisk (*) shall be recorded if an information data source for the parameter is used by aeroplane systems or the flight crew to operate the aeroplane.</p>	
			<p>3.6.3.1.8.1 The following parameters satisfy the requirements for flight path and speed:</p> <ul style="list-style-type: none"> - Pressure altitude - Indicated airspeed or calibrated airspeed - Air – ground status and each 	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			landing gear air-ground sensor when practicable – Total or outside air temperature – Heading (primary flight crew reference) – Normal acceleration – Lateral acceleration – Longitudinal acceleration (body axis) – Time or relative time count – Navigation data*: drift angle, wind speed, wind direction, latitude/longitude – Groundspeed* – Radio altitude*	
			3.6.3.1.8.2 The following parameters satisfy the requirements for attitude: – Pitch attitude – Roll attitude – Yaw or sideslip angle* – Angle of attack*	
			3.6.3.1.8.3 The following parameters satisfy the requirements for engine power: – Engine thrust/power: propulsive thrust/power on each engine, cockpit thrust/power lever position – Thrust reverse status* – Engine thrust command* – Engine thrust target* – Engine bleed valve position*	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<ul style="list-style-type: none"> - Additional engine parameters*: EPR, N₁, indicated vibration level, N₂, EGT, TLA, fuel flow, fuel cut-off lever position, N₃ 	
			<p>3.6.3.1.8.4 The following parameters satisfy the requirements for configuration:</p> <ul style="list-style-type: none"> - Pitch trim surface position - Flaps*: trailing edge flap position, cockpit control selection - Slats*: leading edge flap (slat) position, cockpit control selection - Landing gear*: landing gear, gear selector position - Yaw trim surface position* - Roll trim surface position* - Cockpit trim control input position pitch* - Cockpit trim control input position roll* - Cockpit trim control input position yaw* - Ground spoiler and speed brake*: ground spoiler position, ground spoiler selection, speed brake position, speed brake selection - De-icing and/or anti-icing systems selection* - Hydraulic pressure (each system)* - Fuel quantity* 	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<ul style="list-style-type: none"> - AC electrical bus status* - DC electrical bus status* - APU bleed valve position* - Computed centre of gravity* 	
			<p>3.6.3.1.8.5 The following parameters satisfy the requirements for operation:</p> <ul style="list-style-type: none"> - Warnings - Primary flight control surface and primary flight control pilot input: pitch axis, roll axis, yaw axis - Marker beacon passage - Each navigation receiver frequency selection - Manual radio transmission keying and CVR/FDR synchronization reference - Autopilot/autothrottle/AFCS mode and engagement status* - Selected barometric setting*: pilot, first officer - Selected altitude (all pilot selectable modes of operation)* - Selected speed (all pilot selectable modes of operation)* - Selected mach (all pilot selectable modes of operation)* - Selected vertical speed (all pilot selectable modes of operation)* - Selected heading (all pilot selectable modes of operation)* 	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<ul style="list-style-type: none"> - Selected flight path (all pilot selectable modes of operation)*: course/DSTRK, path angle - Selected decision height* - EFIS display format*: pilot, first officer - Multi-function/engine/alerts display format* - GPWS/TAWS/GCAS status*: selection of terrain display mode including pop-up display status, terrain alerts, both cautions and warnings, and advisories, on/off switch position - Low pressure warning*: hydraulic pressure, pneumatic pressure - Computer failure* - Loss of cabin pressure* - TCAS/ACAS (traffic alert and collision avoidance system/airborne collision avoidance system)* - Ice detection* - Engine warning each engine vibration* - Engine warning each engine over temperature* - Engine warning each engine oil pressure low* - Engine warning each engine over speed* - Wind shear warning* - Operational stall protection, stick shaker and pusher activation* - All cockpit flight control 	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>input forces*: control wheel, control column, rudder pedal cockpit input forces</p> <ul style="list-style-type: none"> - Vertical deviation*: ILS glide path, MLS elevation, GNSS approach path - Horizontal deviation*: ILS localizer, MLS azimuth, GNSS approach path - DME 1 and 2 distances* - Primary navigation system reference*: GNSS, INS, VOR/DME, MLS, Loran C, ILS - Brakes*: left and right brake pressure, left and right brake pedal position - Date* - Event marker* - Head up display in use* - Para visual display on* 	
			<p><i>Note 1.— Parameter requirements, including range, sampling, accuracy and resolution, as contained in the Minimum Operational Performance Specification (MOPS) document for Flight Recorder Systems of the European Organization for Civil Aviation Equipment (EUROCAE) or equivalent documents.</i></p> <p><i>Note 2.— The number of parameters to be recorded will depend on aeroplane complexity. Parameters without an (*) are to</i></p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>be recorded regardless of aeroplane complexity. Those parameters designated by an (*) are to be recorded if an information source for the parameter is used by aeroplane systems and/or flight crew to operate the aeroplane.</i></p>	
			<p>3.6.3.2 Flight data recorders — duration</p>	
			<p>Types I and II flight data recorders shall be capable of retaining the information recorded during at least the last 25 hours of their operation.</p>	
			<p>3.6.3.3 Flight data recorders — aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 1989</p>	
			<p>3.6.3.3.1 All aeroplanes of a maximum certificated take-off mass of over 27 000 kg shall be equipped with a Type I flight data recorder.</p> <p>3.6.3.3.2 Recommendation.— <i>All aeroplanes of a maximum certificated take-off mass of over 5 700 kg up to and including 27 000 kg should be equipped with a Type II flight data recorder.</i></p>	
			<p>3.6.3.4 Flight data recorders —</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2005.	
			All aeroplanes of a maximum certificated take-off mass of over 5 700 kg shall be equipped with a Type IA flight data recorder.	
			3.6.3.5 Cockpit voice recorders — aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 1987	
			<p><i>Note.</i> — Cockpit voice recorder performance requirements are as contained in the Minimum Operational Performance Specifications (MOPS) document for Flight Recorder Systems of the European Organization for Civil Aviation Equipment (EUROCAE) or equivalent documents.</p> <p>3.6.3.5.1 All aeroplanes of a maximum certificated take-off mass of over 27 000 kg shall be equipped with a cockpit voice recorder, the objective of which is the recording of the aural environment on the flight deck during flight time.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>3.6.3.5.2 Recommendation.— <i>All aeroplanes of a maximum certificated take-off mass of over 5 700 kg up to and including 27 000 kg should be equipped with a cockpit voice recorder, the objective of which is the recording of the aural environment on the flight deck during flight time.</i></p>	
			<p>3.6.3.6 Cockpit voice recorders — duration</p>	
			<p>3.6.3.6.1 A cockpit voice recorder shall be capable of retaining the information recorded during at least the last 30 minutes of its operation.</p> <p>3.6.3.6.2 Recommendation.— <i>A cockpit voice recorder, installed in aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1990, should be capable of retaining the information recorded during at least the last two hours of its operation.</i></p> <p>3.6.3.6.3 A cockpit voice recorder, installed in aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>of airworthiness is first issued after 1 January 2003, shall be capable of retaining the information recorded during at least the last two hours of its operation.</p>	
			<p>3.6.3.7 Flight recorders — construction and installation</p>	
			<p>Flight recorders shall be constructed, located and installed so as to provide maximum practical protection for the recordings in order that the recorded information may be preserved, recovered and transcribed. Flight recorders shall meet the prescribed crashworthiness and fire protection specifications.</p> <p><i>Note.— Industry crashworthiness and fire protection specifications can be found in documents such as the European Organization for Civil Aviation Equipment (EUROCAE) documents ED55 and ED56A.</i></p>	
			<p>3.6.3.8 Flight recorders — operation</p>	
			<p>3.6.3.8.1 Flight recorders shall not be switched off during flight time.</p> <p>3.6.3.8.2 To preserve flight</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>recorder records, flight recorders shall be de-activated upon completion of flight time following an accident or incident. The flight recorders shall not be re-activated before their disposition as determined in accordance with Annex 13.</p> <p><i>Note 1.— The need for removal of the flight recorder records from the aircraft will be determined by the investigation authority in the State conducting the investigation with due regard to the seriousness of an occurrence and the circumstances, including the impact on the operation.</i></p> <p><i>Note 2.— The pilot-in-command's responsibilities regarding the retention of flight recorder records are contained in 3.6.3.9.</i></p>	
			3.6.3.9 Flight recorder records	
			<p>The pilot-in-command shall ensure, to the extent possible, in the event the aeroplane becomes involved in an accident or incident, the preservation of all related flight recorder records, and if necessary the associated flight recorders, and their retention in safe custody pending their disposition as determined in accordance with Annex 13.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			3.6.3.10 Flight recorders — continued serviceability	
			<p>Operational checks and evaluations of recordings from the flight data and cockpit voice recorder systems shall be conducted to ensure the continued serviceability of the recorders.</p> <p><i>Note.— Procedures for the inspections of the flight data and cockpit voice recorder systems are given in Attachment C.</i></p>	
6.2 All aeroplanes operated as VFR flights	2.4.3 Aeroplanes operated as VFR flights			
<p>6.2.1 All aeroplanes when operated as VFR flights shall be equipped with:</p> <ul style="list-style-type: none"> a) a magnetic compass; b) an accurate timepiece indicating the time in hours, minutes and seconds; c) a sensitive pressure altimeter; d) an airspeed indicator; and e) such additional instruments or equipment as may be prescribed by the appropriate authority. 	<p>2.4.3.1 Aeroplanes when operated as VFR flights shall be equipped with:</p> <ul style="list-style-type: none"> a) means of measuring and displaying: <ul style="list-style-type: none"> 1) magnetic heading; 2) the time in hours, minutes and seconds; 3) pressure altitude; 4) indicated airspeed; and b) such additional equipment as may be prescribed by the appropriate authority. 	<p>Existing provision modernized to be relevant to modern aircraft with glass cockpits, etc.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.2.2 Recommendation.— <i>VFR flights which are operated as controlled flights should be equipped in accordance with 6.6.</i></p>	<p>2.4.3.2 Recommendation.— <i>VFR flights which are operated as controlled flights should be equipped in accordance with 2.4.7.</i></p>	<p>This provision is currently under review and will be addressed when the review is completed.</p>		
<p>6.3 All aeroplanes on flights over water</p>	<p>2.4.4 Aeroplanes on flights over water</p>			
<p>6.3.1 Seaplanes</p> <p>All seaplanes for all flights shall be equipped with:</p> <ul style="list-style-type: none"> a) one life jacket, or equivalent individual floatation device, for each person on board, stowed in a position readily accessible from the seat or berth; b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable; c) one anchor; d) one sea anchor (drogue), when necessary to assist in manoeuvring. <p><i>Note.— “Seaplanes” includes amphibians operated as seaplanes.</i></p>	<p>2.4.4.1 Seaplanes</p> <p>Seaplanes for all flights shall be equipped with:</p> <ul style="list-style-type: none"> a) one life jacket, or equivalent individual floatation device, for each person on board, stowed in a position readily accessible from the seat or berth; b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable; c) one anchor; and d) one sea anchor (drogue), when necessary to assist in manoeuvring. <p><i>Note.— “Seaplanes” includes amphibians operated as seaplanes.</i></p>	<p>Existing provision.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.3.2 Landplanes</p> <p>6.3.2.1 Single-engined aeroplanes</p> <p>Recommendation.— <i>All single-engined landplanes when flying en route over water beyond gliding distance from the shore should carry one life jacket or equivalent individual floatation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.</i></p> <p><i>Note.</i>— “Landplanes” includes amphibians operated as landplanes.</p>	<p>2.4.4.2 Landplanes</p> <p>2.4.4.2.1 Single-engined landplanes</p> <p>Recommendation.— <i>All single-engined landplanes:</i></p> <p><i>a) when flying en route over water beyond gliding distance from the shore;</i> <i>or</i></p> <p><i>b) when taking off or landing at an aerodrome where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of a ditching;</i></p> <p><i>should carry one life jacket or equivalent individual floatation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.</i></p> <p><i>Note.</i>— “Landplanes” includes amphibians operated as landplanes.</p>	<p>Recommendation is aligned with the requirement from Part I.</p>		
<p>6.3.3 All aeroplanes on extended flights over water</p> <p>All aeroplanes when operated on</p>	<p>2.4.4.3 Aeroplanes on extended flights over water</p> <p>2.4.4.3.1 All aeroplanes</p>		<p>3.6.3.11 Aeroplanes operated on extended flights over-water</p> <p>3.6.3.11.1 The operator of an</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>extended flights over water shall be equipped with:</p> <p>a) when the aeroplane may be over water at a distance of more than 93 km (50 NM) away from land suitable for making an emergency landing:</p> <p>— one life jacket or equivalent individual floatation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided;</p> <p>b) when over water away from land suitable for making an emergency landing at a distance of more than 185 km (100 NM), in the case of single-engined aeroplanes, and more than 370 km (200 NM), in the case of multi-engined aeroplanes capable of continuing flight with one engine inoperative:</p> <p>1) life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency, provided with such life-saving equipment including</p>	<p>operated on extended flights over water shall be equipped with, at a minimum, one life jacket or equivalent individual floatation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.</p> <p>2.4.4.3.2 The pilot-in-command of an aeroplane operated on an extended flight over water shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching. The pilot-in-command shall take into account the operating environment and conditions such as, but not limited to, sea state and sea and air temperatures, the distance from land suitable for making an emergency landing, and the availability of search and rescue facilities. Based upon the assessment of these risks, the pilot in command shall, in addition to the equipment required in 2.4.4.3.1, ensure that the aeroplane is equipped with:</p> <p>a) life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency, provided with such lifesaving equipment, including means of sustaining life, as is</p>	<p>Considering the wide variety of risk levels associated with water temperature and environmental factors, this performance based standard is considered more appropriate than specifying limits by distance.</p>	<p>aeroplane operated on an extended flight over water shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching. The operator shall take into account the operating environment and conditions such as, but not limited to, sea state and sea and air temperatures, the distance from land suitable for making an emergency landing, and the availability of search and rescue facilities. Based upon the assessment of these risks, the operator shall, in addition to the equipment required in 2.4.4.3, ensure that the aeroplane is appropriately equipped with:</p> <p>a) life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency, provided with such lifesaving equipment, including means of sustaining life, as is appropriate to the flight to be undertaken; and</p> <p>b) equipment for making the distress signals described in Annex 2.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>means of sustaining life as is appropriate to the flight to be undertaken; and</p> <p>2) equipment for making the pyrotechnical distress signals described in Annex 2.</p>	<p>appropriate to the flight to be undertaken; and</p> <p>b) equipment for making the distress signals described in Annex 2.</p>			
			<p>3.6.3.11.2 Each life jacket and equivalent individual flotation device, when carried in accordance with 2.4.4.3, shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons, except where the requirement of 2.4.4.3.1 is met by the provision of individual flotation devices other than life jackets.</p>	<p>From Annex 6, Part I</p>
<p>6.4 All aeroplanes on flights over designated land areas</p>	<p>2.4.5 Aeroplanes on flights over designated land areas</p>			
<p>Aeroplanes when operated across land areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment (including means of sustaining life) as may be appropriate to the area overflown.</p>	<p>Aeroplanes, when operated across land areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult, shall be equipped with such signalling devices and life-saving equipment (including means of sustaining life) as may be appropriate to the area overflown.</p>	<p>Existing provision. Replies to State letter on ELTs may contain info related to this issue.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
6.5 All aeroplanes on high altitude flights	2.4.6 Aeroplanes on high altitude flights			
6.5.1 All aeroplanes intended to be operated at high altitudes shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in 4.9.	2.4.6.1 Aeroplanes intended to be operated at high altitudes shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in 2.2.3.8.	Existing provision.		
6.5.2 Aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 1990 Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurization.	2.4.6.2 <i>Aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 1990</i> Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurization.	Existing provision.		
6.5.3 Aeroplanes for which the individual certificate of airworthiness is first issued before 1 January 1990 Recommendation.— <i>Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa should be equipped with a device to provide positive warning to the flight crew of any dangerous</i>	2.4.6.3 <i>Aeroplanes for which the individual certificate of airworthiness is first issued before 1 January 1990</i> Recommendation.— <i>Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa should be equipped with a device to provide positive warning to the flight crew of any dangerous</i>	Existing provision.	3.6.3.12 <i>Aeroplanes for which the individual certificate of airworthiness is first issued before 1 January 1990.</i> 3.6.3.12.1 Pressurized aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss	Considering the aeroplanes addressed in Section III, the Recommendation in Section II is a Standard in Section III.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>loss of pressurization.</i>	<i>loss of pressurization</i>		of pressurization.	
			3.6.3.12.2 An aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa in personnel compartments shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in 3.4.3.6.1.	Linkage to the requirement in 3.4.3.4.1
			3.6.3.12.3 An aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa but which is provided with means of maintaining pressures greater than 700 hPa in personnel compartments shall be provided with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in 3.4.3.6.2.	Linkage to the requirement in 3.4.3.4.2
			3.6.4 Aeroplanes in icing conditions	
			Aeroplanes shall be equipped with suitable de-icing and/or anti-icing devices when operated in circumstances in which icing conditions are reported to exist or are expected to be encountered.	From Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.6 All aeroplanes operated in accordance with the instrument flight rules</p>	<p>2.4.7 Aeroplanes operated in accordance with instrument flight rules</p>		<p>3.6.5 Aeroplanes operated in accordance with instrument flight rules</p>	
<p>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:</p> <ul style="list-style-type: none"> a) a magnetic compass; b) an accurate timepiece indicating the time in hours, minutes and seconds; c) a sensitive pressure altimeter; <p><i>Note.— Due to the long history of misreadings, the use of drum-pointer altimeters is not recommended.</i></p> <ul style="list-style-type: none"> d) an airspeed indicating system with a means of preventing malfunctioning due to either condensation or icing; e) a turn and slip indicator; f) an attitude indicator (artificial horizon); 	<p>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:</p> <ul style="list-style-type: none"> a) a means of measuring and displaying: <ul style="list-style-type: none"> 1) magnetic heading (standby compass); 2) the time in hours, minutes and seconds; 3) pressure altitude; 4) indicated airspeed, with a means of preventing malfunctioning due to either condensation or icing; 5) turn and slip; 6) aircraft attitude; and 7) stabilized aircraft heading; <p><i>Note.— The requirements of 5), 6) and 7), may be met by combinations of instruments or by integrated flight director systems provided that the safeguards against total failure, inherent in the three separate instruments, are retained.</i></p> <ul style="list-style-type: none"> 8) whether the supply of power 	<p>Existing provision modernized to be relevant to modern aircraft with glass cockpits, etc.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>g) a heading indicator (directional gyroscope);</p> <p><i>Note.— The requirements of e), f) and g), may be met by combinations of instruments or by integrated flight director systems provided that the safeguards against total failure, inherent in the three separate instruments, are retained.</i></p> <p>h) means of indicating whether the supply of power to the gyroscopic instruments is adequate;</p> <p>i) a means of indicating in the flight crew compartment the outside air temperature;</p> <p>j) a rate-of-climb and descent indicator; and</p> <p>k) such additional instruments or equipment as may be prescribed by the appropriate authority.</p>	<p>to the gyroscopic instruments is adequate;</p> <p>9) the outside air temperature;</p> <p>10) rate-of-climb and descent; and</p> <p>b) such additional instruments or equipment as may be prescribed by the appropriate authority.</p>			
			<p>3.6.5.1 In addition to the requirements contained in 2.4.7, 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 two independent altitude</p>	<p>Considered appropriate considering the aeroplanes and operations addressed in Section III.</p> <p>Existing provision from Annex 6, Part I.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			measuring and display systems.	
			<p>3.6.5.2 Aeroplanes over 5 700 kg — Emergency power supply for electrically operated attitude indicating instruments</p> <p>3.6.5.2.1 Aeroplanes of a maximum certificated take-off mass of over 5 700 kg newly introduced into service after 1 January 1975 shall be fitted with an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the pilot-in-command. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument panel that the attitude indicator(s) is being operated by emergency power.</p> <p>3.6.5.2.2 Recommendation – <i>Aircraft with advanced cockpit automation systems (glass cockpits) should have system redundancy that provides the flight crew with attitude, heading, airspeed and altitude indications in case of failure of the primary system or display.</i></p>	<p>Considered appropriate considering the aeroplanes and operations addressed in Section III.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>3.6.5.2.3 Instruments that are used by any one pilot shall be so arranged as to permit the pilot to see their indications readily from his or her station, with the minimum practicable deviation from the position and line of vision normally assumed when looking forward along the flight path.</p>	
<p>6.7 All aeroplanes when operated at night</p>	<p>2.4.8 Aeroplanes when operated at night</p>			
<p>All aeroplanes, when operated at night, shall be equipped with:</p> <p>a) all the equipment specified in 6.6;</p> <p>b) the lights required by Annex 2 for aircraft in flight or operating on the movement area of an aerodrome;</p> <p><i>Note.— Specifications for lights meeting the requirements of Annex 2 for navigation lights are contained in the Appendix. The general characteristics of lights are specified in Annex 8. Detailed specifications for lights meeting the requirements of Annex 2 for aircraft in flight or operating on the movement area of an aerodrome are contained in the Airworthiness Manual (Doc</i></p>	<p>Aeroplanes, when operated at night, shall be equipped with:</p> <p>a) the equipment specified in 2.4.7;</p> <p>b) the lights required by Annex 2 for aircraft in flight or operating on the movement area of an aerodrome;</p> <p><i>Note.— Specifications for lights meeting the requirements of Annex 2 for navigation lights are contained in Appendix 1. The general characteristics of lights are specified in Annex 8. Detailed specifications for lights meeting the requirements of Annex 2 for aircraft in flight or operating on the movement area of an aerodrome are contained in the Airworthiness Manual (Doc 9760).</i></p>	<p>Existing provision modernized to relate to glass cockpits, etc.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>9760).</p> <p>c) a landing light;</p> <p>d) illumination for all flight instruments and equipment that are essential for the safe operation of the aeroplane;</p> <p>e) lights in all passenger compartments; and</p> <p>f) an electric torch for each crew member station.</p>	<p>c) a landing light;</p> <p>d) illumination for all flight instruments and equipment that are essential for the safe operation of the aeroplane that are used by the flight crew;</p> <p>e) lights in all passenger compartments; and</p> <p>f) an independent portable light for each crew member station.</p>			
			<p>3.6.6 Pressurized aeroplanes when carrying passengers — weather detecting equipment</p>	
			<p>Pressurized aeroplanes when carrying passengers shall be equipped with operative weather detecting equipment capable of detecting thunderstorms whenever such aeroplanes are being operated in areas where such conditions, may be expected to exist along the route either at night or under instrument meteorological conditions.</p>	<p>Considered appropriate considering the aeroplanes and operations addressed in Section III.</p>
			<p><i>3.6.7 Aeroplanes operated above 15 000 m (49 000 ft) — radiation indicator.</i></p>	
			<p>Recommendation.— <i>Aeroplanes intended to be</i></p>	<p>Changed to an Recommended Practice as a result of a</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>primarily operated above 15 000 m (49 000 ft) shall carry equipment 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.</i></p> <p><i>Note.— The equipment is calibrated on the basis of assumptions acceptable to the appropriate national authorities.</i></p>	<p>discussion in ANC ad hoc group. Provision from Annex 6, Part I that has been modified to be appropriate for aeroplanes that are primarily operated above 49 000 feet.</p>
<p>6.8 All aeroplanes complying with the noise certification Standards in Annex 16, Volume I</p>	<p>2.4.9 Aeroplanes complying with the noise certification Standards in Annex 16, Volume I</p>			
<p>An aeroplane shall carry a document attesting noise certification.</p> <p><i>Note.— The attestation may be contained in any document, carried on board, approved by the State of Registry.</i></p>	<p>An aeroplane shall carry a document attesting noise certification.</p> <p><i>Note.— The attestation may be contained in any document, carried on board, approved by the State of Registry..</i></p>	<p>Existing provision.</p>		
	<p>2.4.10 Mach number indicator</p>			
	<p>Aeroplanes with speed limitations expressed in terms of Mach number shall be equipped with a means of displaying Mach number.</p>	<p>Existing provision.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.9 Aeroplanes required to be equipped with ground proximity warning systems (GPWS)</p>	<p>2.4.11 Aeroplanes required to be equipped with ground proximity warning systems (GPWS)</p>		<p>3.6.8 Aeroplanes required to be equipped with ground proximity warning systems (GPWS)</p>	
<p>6.9.1 All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers, for which the individual certificate of airworthiness is first issued on or after 1 January 2004, shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</p>		<p>Obsolete after 1 January 2007.</p>		<p>Current requirement.</p>
<p>6.9.2 From 1 January 2007, all turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers, shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</p>	<p>2.4.11.1 All turbine-engined aeroplanes authorized to carry more than nine passengers shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</p>	<p>Requirements applicable, after 1 January 2007, to all general aviation operations.</p>	<p>3.6.8.1 All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers, shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</p>	<p>Important safety consideration.</p>
<p>6.9.3 Recommendation.— <i>All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less and authorized to carry more than five but not more than nine passengers should be equipped with a ground proximity warning</i></p>	<p>2.4.11.2 Recommendation.— <i>All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less and authorized to carry more than five but not more than nine passengers should be equipped with a ground proximity warning</i></p>	<p>Existing provisions.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>system which has a forward looking terrain avoidance function.</i>	<i>system which has a forward looking terrain avoidance function.</i>			
<p>6.9.4 Recommendation.— <i>All piston-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers should be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</i></p>	<p>2.4.11.3 Recommendation.— <i>All piston-engined aeroplanes authorized to carry more than nine passengers should be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</i></p>	<p>Current requirement adjusted because of weight differentiation between Sections II and III.</p>	<p>3.6.8.2 Recommendation.— <i>All piston-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers should be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</i></p>	<p>From Annex 6, Part I</p>
<p>6.9.5 A ground proximity warning system shall provide automatically a timely and distinctive warning to the flight crew when the aeroplane is in potentially hazardous proximity to the earth's surface.</p>	<p>2.4.11.4 A ground proximity warning system shall provide automatically a timely and distinctive warning to the flight crew when the aeroplane is in potentially hazardous proximity to the earth's surface.</p>	<p>Existing provision.</p>		
<p>6.9.6 A ground proximity warning system shall provide, as a minimum, warnings of at least the following circumstances:</p> <ul style="list-style-type: none"> a) excessive descent rate; b) excessive altitude loss after take-off or go-around; and c) unsafe terrain clearance. 	<p>2.4.11.5 A ground proximity warning system shall provide, as a minimum, warnings of at least the following circumstances:</p> <ul style="list-style-type: none"> a) excessive descent rate; b) excessive terrain closure rate; c) excessive altitude loss after take-off or go-around; d) unsafe terrain clearance while not in landing configuration; <ul style="list-style-type: none"> 1) gear not locked down; 2) flaps not in a landing position; and e) excessive descent below the instrument glide path. 	<p>Existing provision in Annex 6, Part I.</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.9.7 Recommendation.— <i>All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorized to carry more than nine passengers, should be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.</i></p>		Addressed in 3.6.15.		
<p>6.10 Flight recorders</p>		Addressed in 2.4.14.		
<p>6.11 Mach number indicator</p>				
<p>All aeroplanes with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.</p> <p><i>Note.— This does not preclude the use of the airspeed indicator to derive Mach number for ATS purposes.</i></p>		Addressed in 2.4.10.		
			<p>3.6.9 Aeroplanes carrying passengers — cabin crew seats</p>	From Annex 6, Part I
			<p>3.6.9.1 Aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 1981</p> <p>Aeroplanes shall be equipped with a forward or rearward facing (within 15 degrees of the longitudinal axis of the aeroplane) seat, fitted with a</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>safety harness for the use of each cabin crew member required to satisfy the intent of 3.12.1 in respect of emergency evacuation.</p>	
			<p>3.6.9.2 Aeroplanes for which the individual certificate of airworthiness was first issued before 1 January 1981</p> <p>3.6.9.2.1 Recommendation.— <i>Aeroplanes should be equipped with a forward or rearward facing (within 15 degrees of the longitudinal axis of the aeroplane) seat, fitted with a safety harness for the use of each cabin crew member required to satisfy the intent of 3.12.1 in respect of emergency evacuation.</i></p> <p><i>Note.</i>— <i>Safety harness includes shoulder straps and a seat belt which may be used independently.</i></p>	
			<p>3.6.9.2.2 Cabin crew seats provided in accordance with 3.6.9.1 or 3.6.9.2.1 shall be located near floor level and other emergency exits as required by the State of Registry for emergency evacuation.</p>	
<p>6.12 Emergency locator transmitter (ELT)</p>	<p>2.4.12 Emergency locator transmitter (ELT)</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
6.12.1 Except as provided for in 6.12.2, until 1 January 2005 all aeroplanes operated on extended flights over water as described in 6.3.3 b) and when operated on flights over designated land areas as described in 6.4 shall be equipped with one ELT.	2.4.12.1 Recommendation. — <i>All aeroplanes should carry an automatic ELT.</i>	These provisions are currently under consideration by the Air Navigation Commission and will be updated when a decision is reached.		
6.12.2 All aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2002, operated on extended flights over water as described in 6.3.3 b) and when operated on flights over designated land areas as described in 6.4 shall be equipped with one automatic ELT.	2.4.12.2 Except as provided for in 2.4.12.3, from 1 July 2008, all aeroplanes shall be equipped with at least one ELT of any type.			
6.12.3 From 1 January 2005, all aeroplanes operated on extended flights over water as described in 6.3.3 b) and when operated on flights over designated land areas as described in 6.4 shall be equipped with one automatic ELT.	2.4.12.3 All aeroplanes for which the individual certificate of airworthiness is first issued after 1 July 2008 shall be equipped with at least one automatic ELT.			
6.12.4 Recommendation. — <i>All aeroplanes should carry an automatic ELT.</i>	2.4.12.4 ELT equipment carried to satisfy the requirements of 2.4.12.1, 2.4.12.2 and 2.4.12.3 shall operate in accordance with the relevant provisions of Annex 10, Volume III. <i>Note.— The judicious choice of numbers of ELTs, their</i>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p><i>type and placement on aircraft, and associated floatable life support systems, will ensure the greatest chance of ELT activation in the event of an accident for aircraft operating over water or land, including areas especially difficult for search and rescue. Placement of transmitter units is a vital factor in ensuring optimal crash and fire protection. The placement of the control and switching devices (activation monitors) of automatic fixed ELTs and their associated operational procedures will also take into consideration the need for rapid detection of inadvertent activation and convenient manual switching by crew members.</i></p>			
<p>6.12.5 ELT equipment carried to satisfy the requirements of 6.12.1, 6.12.2, 6.12.3 and 6.12.4 shall operate in accordance with the relevant provisions of Annex 10, Volume III.</p>				
			<p>3.6.10 Aeroplanes required to be equipped with an airborne collision avoidance system (ACAS)</p>	<p>Exiting provision.</p>
			<p>3.6.10.1 Recommendation.— <i>All turbine-engined aeroplanes of a maximum certificated</i></p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>take-off mass in excess of 15 000 kg, or authorized to carry more than 30 passengers, for which the individual airworthiness certificate is first issued after 24 November 2005, should be equipped with an airborne collision avoidance system (ACAS II).</i></p>	
			<p>3.6.10.2 All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg or authorized to carry more than 30 passengers, for which the individual airworthiness certificate is first issued after 1 January 2007, shall be equipped with an airborne collision avoidance system (ACAS II).</p>	
			<p>3.6.10.3 Recommendation. <i>All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg but not exceeding 15 000 kg, or authorized to carry more than 19 passengers, for which the individual airworthiness certificate is first issued after 1 January 2008, should be equipped with an airborne collision avoidance system (ACAS II).</i></p>	
<p>6.13 Aeroplanes required</p>	<p>2.4.13 Aeroplanes required to</p>		<p>3.6.11 Aeroplanes required to</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
to be equipped with a pressure-altitude reporting transponder	be equipped with a pressure-altitude reporting transponder		be equipped with a pressure-altitude reporting transponder	
6.13.1 From 1 January 2003, unless exempted by the appropriate authorities, all aeroplanes shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV.	Unless exempted by the appropriate authorities, aeroplanes shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV. <i>Note.— This provision is intended to support the effectiveness of ACAS as well as to improve the effectiveness of air traffic services.</i>	Existing provision.		
6.13.2 Recommendation. — <i>All aeroplanes should be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV.</i> <i>Note.— The provisions in 6.13.1 and 6.13.2 are intended to support the effectiveness of ACAS as well as to improve the effectiveness of air traffic services. Effective dates for carriage requirements of ACAS are contained in Annex 6, Part I, 6.18.1 and 6.18.2. The intent is also for aircraft not equipped with pressure-altitude reporting transponders to be operated so as not to share airspace used by</i>			3.6.11.1 Aeroplanes shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Annex 10, Volume IV. <i>Note.— This provision is intended to improve the effectiveness of air traffic services as well as airborne collision avoidance systems.</i>	Existing Recommendation has been made a Standard in Section III.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>aircraft equipped with airborne collision avoidance systems. To this end, exemptions from the carriage requirement for pressure-altitude reporting transponders could be given by designating airspace where such carriage is not required</i>				
6.14 Aeroplanes required to be equipped with an airborne collision avoidance system (ACAS II)				See 3.6.13 Aeroplanes required to be equipped with an airborne collision avoidance system (ACAS II)
6.14.1 Recommendation. — <i>All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg, or authorized to carry more than 30 passengers, for which the individual airworthiness certificate is first issued after 24 November 2005, should be equipped with an airborne collision avoidance system (ACAS II).</i>				
6.14.2 All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg, or authorized to carry more than 30 passengers, for which the individual airworthiness certificate is first issued after 1 January 2007, shall be equipped with an airborne collision avoidance system (ACAS II).				

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>6.14.3 Recommendation.— <i>All turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg but not exceeding 15 000 kg, or authorized to carry more than 19 passengers, for which the individual airworthiness certificate is first issued after 1 January 2008, should be equipped with an airborne collision avoidance system (ACAS II).</i></p>				
<p>6.15 Microphones <i>Recommendation.</i>— <i>All flight crew members required to be on flight deck duty should communicate through boom or throat microphones below the transition level/altitude.</i></p>	<p>2.4.14 Microphones <i>Recommendation.</i>— <i>When operating under the instrument flight rules all flight crew members required to be on flight deck duty should communicate through boom or throat microphones below the transition level/altitude.</i></p>	<p>Existing provision. Recommendation in Section II.</p>	<p>3.6.12 Microphones All flight crew members required to be on flight deck duty shall communicate through boom or throat microphones below the transition level/altitude.</p>	<p>Existing provision from Annex 6, Part I.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.5 AEROPLANE COMMUNICATION AND NAVIGATION EQUIPMENT		CHAPTER 3.7 AEROPLANE COMMUNICATION AND NAVIGATION EQUIPMENT	
7.1 Communication equipment	2.5.1 Communication equipment	Existing provision.	3.7.1 Communication equipment	
<p>7.1.1 An aeroplane to be operated in accordance with the instrument flight rules or at night shall be provided with radio communication equipment. Such equipment shall be capable of conducting two-way communication with those aeronautical stations and on those frequencies prescribed by the appropriate authority.</p> <p><i>Note.— The requirements of 7.1.1 are considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions which are normal for the route.</i></p>	<p>2.5.1.1 An aeroplane to be operated in accordance with the instrument flight rules or at night shall be provided with radio communication equipment. Such equipment shall be capable of conducting two-way communication with those aeronautical stations and on those frequencies prescribed by the appropriate authority.</p> <p><i>Note. — The requirements of 2.5.1.1 are considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions which are normal for the route.</i></p>			
<p>7.1.2 When compliance with 7.1.1 requires that more than one communication equipment unit be provided, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.</p>	<p>2.5.1.2 When compliance with 2.5.1.1 requires that more than one communication equipment unit be provided, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.</p>			
<p>7.1.3 An aeroplane to be operated in accordance with the visual flight rules, but as a</p>	<p>2.5.1.3 An aeroplane to be operated in accordance with the visual flight rules, but as a</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
controlled flight, shall, unless exempted by the appropriate authority, be provided with radio communication equipment capable of conducting two-way communication at any time during flight with such aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.	controlled flight, shall, unless exempted by the appropriate authority, be provided with radio communication equipment capable of conducting two-way communication at any time during flight with such aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.			
7.1.4 An aeroplane to be operated on a flight to which the provisions of 6.3.3 or 6.4 apply shall, unless exempted by the appropriate authority, be provided with radio communication equipment capable of conducting two-way communication at any time during flight with such aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.	2.5.1.4 An aeroplane to be operated on a flight to which the provisions of 2.4.4.3.1 or 2.4.5 apply shall, unless exempted by the appropriate authority, be provided with radio communication equipment capable of conducting two-way communication at any time during flight with such aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.			
7.1.5 The radio communication equipment required in accordance with 7.1.1 to 7.1.4 shall provide for communication on the aeronautical emergency frequency 121.5 MHz.	2.5.1.5 The radio communication equipment required in accordance with 2.5.1.1 to 2.5.1.4 shall provide for communication on the aeronautical emergency frequency 121.5 MHz.			
	2.5.1.6 For flights in defined portions of airspace or on routes where an RCP type has been prescribed, an aeroplane shall, in addition to the requirements specified in 2.5.1.1 to 2.5.1.5:		In addition to the requirements of 2.5.1.1 to 2.5.1.5, an aeroplane shall be provided with radio communication equipment capable of: a) conducting two-way	Added provision for this class of aeroplanes from Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p>a) be provided with communication equipment which will enable it to operate in accordance with the prescribed RCP type(s); and</p> <p>b) be authorized by the State of Registry for operations in such airspace.</p> <p><i>Note.— Information on RCP and associated procedures, and guidance concerning the approval process, are contained in the Manual on Required Communication Performance (RCP) (in preparation). This document also contains references to other documents produced by States and international bodies concerning communication systems and RCP.</i></p>		<p>communication for aerodrome control purposes;</p> <p>b) receiving meteorological information at any time during flight; and</p> <p>c) conducting two-way communication at any time during flight with at least one aeronautical station and with such other aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.</p> <p><i>Note.— The requirements of 3.7.1 are considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions which are normal for the route.</i></p>	
<p>7.2 Navigation equipment</p>	<p>2.5.2 Navigation equipment</p>	<p>Existing provision.</p>		
<p>7.2.1 An aeroplane shall be provided with navigation equipment which will enable it to proceed:</p> <p>a) in accordance with the flight plan; and</p> <p>b) in accordance with the requirements of air traffic services; except when, if not so precluded</p>	<p>2.5.2.1 An aeroplane shall be provided with navigation equipment which will enable it to proceed:</p> <p>a) in accordance with the flight plan; and</p> <p>b) in accordance with the requirements of air traffic services; except when, if not so precluded by the appropriate authority,</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>by the appropriate authority, navigation for flights under the visual flight rules is accomplished by visual reference to landmarks at least every 110 km (60 NM).</p>	<p>navigation for flights under the visual flight rules is accomplished by visual reference to landmarks.</p>			
<p>7.2.2 For flights in defined portions of airspace or on routes where an RNP type has been prescribed, an aeroplane shall, in addition to the requirements specified in 7.2.1:</p> <p>a) be provided with navigation equipment which will enable it to operate in accordance with the prescribed RNP type(s); and</p> <p>b) be authorized by the State of Registry for operations in such airspace.</p> <p><i>Note.— Information on RNP and associated procedures, and guidance concerning the approval process, are contained in the Manual on Required Navigation Performance (RNP) (Doc 9613). This document also contains a comprehensive list of references to other documents produced by States and international bodies concerning navigation systems and RNP.</i></p>	<p>2.5.2.2 For flights in defined portions of airspace or on routes where an RNP type has been prescribed, an aeroplane shall, in addition to the requirements specified in 2.5.2.1:</p> <p>a) be provided with navigation equipment which will enable it to operate in accordance with the prescribed RNP type(s); and</p> <p>b) be authorized by the State of Registry for operations in such airspace.</p> <p><i>Note.— Information on RNP and associated procedures, and guidance concerning the approval process, are contained in the Manual on Required Navigation Performance (RNP) (Doc 9613). This document also contains a comprehensive list of references to other documents produced by States and international bodies concerning navigation systems and RNP.</i></p>			
<p>7.2.3 For flights in defined</p>	<p>2.5.2.3 For flights in defined</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>portions of airspace where, based on Regional Air Navigation Agreement, minimum navigation performance specifications (MNPS) are prescribed, an aeroplane shall be provided with navigation equipment which:</p> <ul style="list-style-type: none"> a) 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 b) has been authorized by the State of Registry for MNPS operations concerned. <p><i>Note.— The prescribed minimum navigation performance specifications and the procedures governing their application are published in Regional Supplementary Procedures (Doc 7030).</i></p>	<p>portions of airspace where, based on Regional Air Navigation Agreement, minimum navigation performance specifications (MNPS) are prescribed, an aeroplane shall be provided with navigation equipment which:</p> <ul style="list-style-type: none"> a) 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 b) has been authorized by the State of Registry for MNPS operations concerned. <p><i>Note.— The prescribed minimum navigation performance specifications and the procedures governing their application are published in the Regional Supplementary Procedures (Doc 7030).</i></p>			
<p>7.2.4 For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, an aeroplane:</p> <ul style="list-style-type: none"> a) shall be provided with equipment which is capable of: 	<p>2.5.2.4 For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, an aeroplane:</p> <ul style="list-style-type: none"> a) shall be provided with equipment which is capable of: 			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>1) indicating to the flight crew the flight level being flown;</p> <p>2) automatically maintaining a selected flight level;</p> <p>3) providing an alert to the flight crew when a deviation occurs from the selected flight level. The threshold for the alert shall not exceed \pm 90 m (300 ft); and</p> <p>4) automatically reporting pressure-altitude; and</p> <p>b) shall be authorized by the State of Registry for operation in the airspace concerned.</p>	<p>1) indicating to the flight crew the flight level being flown;</p> <p>2) automatically maintaining a selected flight level;</p> <p>3) providing an alert to the flight crew when a deviation occurs from the selected flight level. The threshold for the alert shall not exceed \pm 90 m (300 ft); and</p> <p>4) automatically reporting pressure-altitude; and</p> <p>b) shall be authorized by the State of Registry for operation in the airspace concerned.</p>			
<p>7.2.5 Prior to granting the RVSM approval required in accordance with 7.2.4 b), the State shall be satisfied that:</p> <p>a) the vertical navigation performance capability of the aeroplane satisfies the requirements specified in Appendix 2;</p> <p>b) the operator has instituted appropriate procedures in respect of continued airworthiness (maintenance and repair) practices and programmes; and</p>	<p>2.5.2.5 Prior to granting the RVSM approval required in accordance with 2.5.2.4 b), the State shall be satisfied that:</p> <p>a) the vertical navigation performance capability of the aeroplane satisfies the requirements specified in Appendix 2;</p> <p>b) the owner/operator has instituted appropriate procedures in respect of continued airworthiness (maintenance and repair) practices and programmes; and</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>c) the operator has instituted appropriate flight crew procedures for operations in RVSM airspace.</p> <p><i>Note.— An RVSM approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance.</i></p>	<p>c) the owner/operator has instituted appropriate flight crew procedures for operations in RVSM airspace.</p> <p><i>Note.— An RVSM approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance.</i></p>			
<p>7.2.6 The State of the Operator, in consultation with the State of Registry if appropriate, shall ensure that, in respect of those aeroplanes mentioned in 7.2.4, adequate provisions exist for:</p> <p>a) receiving the reports of height-keeping performance issued by the monitoring agencies established in accordance with Annex 11, 3.3.4.1; and</p> <p>taking immediate corrective action for individual aircraft, or aircraft type groups, identified in such reports as not complying with the height-keeping requirements for operation in airspace where RVSM is applied.</p>	<p>2.5.2.6 The State of Registry shall ensure that, in respect of those aeroplanes mentioned in 2.5.2.4, adequate provisions exist for:</p> <p>a) receiving the reports of height-keeping performance issued by the monitoring agencies established in accordance with Annex 11, 3.3.5.1; and</p> <p>b) taking immediate corrective action for individual aircraft, or aircraft type groups, identified in such reports as not complying with the height-keeping requirements for operation in airspace where RVSM is applied.</p>			
<p>7.2.7 All States that are</p>	<p>2.5.2.7 All States that are</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>responsible for airspace where RVSM has been implemented, or have issued RVSM approvals to operators within their State, shall establish provisions and procedures which ensure that appropriate action will be taken in respect of aircraft and operators found to be operating in RVSM airspace without a valid RVSM approval.</p> <p><i>Note 1.— These provisions and procedures need to address both the situation where the aircraft in question was operating without approval in the airspace of the State, and the situation where an operator for which the State has regulatory oversight responsibility is found to be operating without the required approval in the airspace of another State.</i></p> <p><i>Note 2.— Guidance material relating to the approval for operation in RVSM airspace is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).</i></p>	<p>responsible for airspace where RVSM has been implemented, or have issued RVSM approvals to operators within their State, shall establish provisions and procedures which ensure that appropriate action will be taken in respect of aircraft and operators found to be operating in RVSM airspace without a valid RVSM approval.</p> <p><i>Note 1.— These provisions and procedures need to address both the situation where the aircraft in question was operating without approval in the airspace of the State, and the situation where an operator for which the State has regulatory oversight responsibility is found to be operating without the required approval in the airspace of another State.</i></p> <p><i>Note 2.— Guidance material relating to the approval for operation in RVSM airspace is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).</i></p>			
<p>7.2.8 The aeroplane shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any</p>	<p>2.5.2.8 The aeroplane shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>stage of the flight, the remaining equipment will enable the aeroplane to navigate in accordance with 7.2.1 and where applicable 7.2.2, 7.2.3 and 7.2.4.</p> <p><i>Note 1.— This requirement may be met by means other than the duplication of equipment.</i></p> <p><i>Note 2.— Guidance material relating to aircraft equipment necessary for flight in airspace where RVSM is applied is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).</i></p>	<p>stage of the flight, the remaining equipment will enable the aeroplane to navigate in accordance with 2.5.2.1 and where applicable 2.5.2.2, 2.5.2.3 and 2.5.2.4.</p> <p><i>Note 1.— This requirement may be met by means other than the duplication of equipment.</i></p> <p><i>Note 2.— Guidance material relating to aircraft equipment necessary for flight in airspace where a 300 m (1 000 ft) VSM is applied above FL 290 is contained in the Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive (Doc 9574).</i></p>			
<p>7.2.9 On flights in which it is intended to land in instrument meteorological conditions, an aeroplane shall be provided with radio equipment capable of receiving signals providing guidance to a point from which a visual landing can be effected. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in instrument meteorological conditions and for any designated alternate aerodromes.</p>	<p>2.5.2.9 On flights in which it is intended to land in instrument meteorological conditions, an aeroplane shall be provided with radio equipment capable of receiving signals providing guidance to a point from which a visual landing can be effected. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in instrument meteorological conditions and for any designated alternate aerodromes.</p>			
			<p>3.7.2 Installation</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>The equipment installation shall be such that the failure of any single unit required for either communications or navigation purposes or both will not result in the failure of another unit required for communications or navigation purposes.</p>	<p>New requirement based on Annex 6, Part I.</p>
			<p>3.7.3 Electronic navigation data management</p>	
			<p>3.7.3.1 An operator of an aeroplane shall not employ electronic navigation data products that have been processed for application in the air and on the ground unless the State of Registry has approved the operator's procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them. The State of Registry shall ensure that the operator continues to monitor both process and products.</p> <p><i>Note.— Guidance relating to the processes that data suppliers may follow is contained in RTCA DO-200A/EUROCAE ED-76 and RTCA DO-201A/EUROCAE ED-77.</i></p>	<p>New requirement based on Annex 6, Part I.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			3.7.3.2 An operator shall implement procedures that ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aeroplanes that require it.	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.6 AEROPLANE MAINTENANCE		CHAPTER 3.8 AEROPLANE MAINTENANCE	
<p><i>Note 1.— For the purpose of this chapter “aeroplane” includes: powerplants, propellers, components, accessories, instruments, equipment and apparatus including emergency equipment.</i></p> <p><i>Note 2.— Guidance on continuing airworthiness requirements is contained in the Airworthiness Manual (Doc 9760).</i></p>	<p><i>Note 1.— For the purpose of this chapter “aeroplane” includes: powerplants, propellers, components, accessories, instruments, equipment and apparatus including emergency equipment.</i></p> <p><i>Note 2.— Guidance on continuing airworthiness requirements is contained in the Airworthiness Manual (Doc 9760).</i></p> <p><i>Note 3.— States are encouraged to conduct a risk assessment when implementing manufacturers maintenance recommendations.</i></p>			
8.1 Responsibilities	2.6.1 Owner’s maintenance responsibilities	Existing provision reorganized.	3.8.1 Operator’s maintenance responsibilities	
<p>8.1.1 The owner of an aeroplane, or in the case where it is leased, the lessee, shall ensure that:</p> <ul style="list-style-type: none"> a) the aeroplane is maintained in an airworthy condition; b) the operational and emergency equipment necessary for the intended flight is serviceable; c) the Certificate of 	<p>2.6.1.1 The owner of an aeroplane, or in the case where it is leased, the lessee, shall ensure that, in accordance with procedures acceptable to the State of Registry:</p> <ul style="list-style-type: none"> a) the aeroplane is maintained in an airworthy condition; b) the operational and emergency equipment necessary for an intended flight is serviceable; and c) the Certificate of 		<p>3.8.1.1 An operator shall comply with the requirements of 2.6.1.</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>Airworthiness of the aeroplane remains valid; and</p> <p>d) the maintenance of the aeroplane is performed in accordance with a maintenance programme acceptable to the State of Registry.</p>	<p>Airworthiness of the aeroplane remains valid.</p>			
<p>8.1.2 The aeroplane shall not be operated unless it is maintained and released to service under a system acceptable to the State of Registry.</p>	<p>2.6.1.2 The owner or the lessee shall not operate the aeroplane unless it is maintained and released to service under a system acceptable to the State of Registry.</p>			
<p>8.1.3 When the maintenance release is not issued by an approved maintenance organization in accordance with Annex 6, Part I, 8.7, the person signing the maintenance release shall be licensed in accordance with Annex 1.</p>	<p>2.6.1.3 When the maintenance release is not issued by an approved maintenance organization in accordance with Annex 6, Part I, paragraph 8.7, the person signing the maintenance release shall be licensed in accordance with Annex 1.</p>			
	<p>2.6.1.4 The owner or the lessee shall ensure that the maintenance of the aeroplane is performed in accordance with a maintenance programme acceptable to the State of Registry.</p>			
			<p>3.8.1.2 Recommendation.— <i>An operator should ensure that all maintenance personnel receive initial and continuation training acceptable to the State of Registry and appropriate to</i></p>	<p>From industry code of practice. With complex modern aircraft, training of maintenance personnel is very important.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p><i>their assigned tasks and responsibilities. This should include human factors and coordination with other maintenance personnel and flight crew.</i></p> <p><i>Note.— Guidance material on the application of human factors principles can be found in the Human Factors Training Manual (Doc 9683).</i></p>	
			<p>3.8.2 Operator’s maintenance control manual</p>	
			<p>Recommendation.— <i>An operator should provide a maintenance control manual for the use and guidance of maintenance and operating personnel.</i></p> <p><i>Note.— States may provide guidance material as outlined in 3.11.2 or reference accepted industry codes of practice.</i></p>	<p>From Annex 6, Part I as a Recommendation.</p>
			<p>3.8.3 Maintenance programme</p>	
			<p>3.8.3.1 An operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, acceptable to the State of Registry, containing the information required by 3.11.2. The design and application of</p>	<p>From Annex 6, Part I. Appropriate for this class of aeroplanes and operations.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>the operator's maintenance programme shall observe human factors principles according to the State of Registry guidance material.</p> <p><i>Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).</i></p>	
			<p>3.8.3.2 Copies of all amendments to the maintenance programme shall be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.</p>	
<p>8.2 Maintenance records</p>	<p>2.6.2 Maintenance records</p>	<p>Existing provision with minor revisions.</p>		
<p>8.2.1 The owner shall ensure that the following records are kept for the periods mentioned in 8.2.2:</p> <ul style="list-style-type: none"> a) the total time in service (hours, calendar time and cycles, as appropriate) of the aeroplane and all life limited components; b) the current status of compliance with all mandatory continuing airworthiness information; c) appropriate details of modifications and repairs; d) the time in service (hours, 	<p>2.6.2.1 The owner of an aeroplane, or in the case where it is leased, the lessee, shall ensure that the following records are kept for the periods mentioned in 2.6.2.2:</p> <ul style="list-style-type: none"> a) the total time in service (hours, calendar time and cycles, as appropriate) of the aeroplane and all life limited components; b) the current status of compliance with all applicable mandatory continuing airworthiness information; 			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>calendar time and cycles, as appropriate) since last overhaul of the aeroplane or its components subject to a mandatory overhaul life;</p> <p>e) the current status of the aeroplane's compliance with the maintenance programme; and</p> <p>f) the detailed maintenance records to show that all requirements for signing a maintenance release have been met.</p>	<p>c) appropriate details of modifications and repairs;</p> <p>d) the time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aeroplane or its components subject to a mandatory overhaul life;</p> <p>e) the current status of the aeroplane's compliance with the maintenance programme; and</p> <p>f) the detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.</p>			
<p>8.2.2 The records referred to in 8.2.1 a) to e) shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in 8.2.1 f) for a minimum period of one year after the signing of the maintenance release.</p>	<p>2.6.2.2 The records in 2.6.2.1 a) to e) shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service and the records in 2.6.2.1 f) for a minimum period of one year after the signing of the maintenance release.</p>			
<p>8.2.3 The lessee of an aeroplane shall comply with the requirements of 8.2.1 and 8.2.2, as applicable, while the aeroplane is leased.</p> <p><i>Note.— Maintenance records or related documents, other than a valid certificate of airworthiness, need not be</i></p>	<p>2.6.2.3 In the event of a temporary change of owner or lessee, the records shall be made available to the new owner or lessee. In the event of any permanent change of owner or lessee, the records shall be transferred to the new owner or lessee.</p>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>carried in the aeroplane during international flights.</i>	<p><i>Note 1.— Maintenance records or related documents, other than a valid certificate of airworthiness, need not be carried in the aeroplane during international flights.</i></p> <p><i>Note 2.— In the context of 2.6.2.3, a judgement on what should be considered as a temporary change of owner or lessee will need to be made by the State of Registry in the light of the need to exercise control over the records, which will depend on access to them and the opportunity to update them.</i></p>			
8.3 Continuing airworthiness information			3.8.4 Continuing airworthiness information	
The owner of an aeroplane over 5 700 kg maximum certificated take-off mass, or in the case where it is leased, the lessee, shall, as prescribed by the State of Registry, ensure that the information resulting from maintenance and operational experience with respect to continuing airworthiness, is transmitted as required by Annex 8, Part II, 4.3.5 and 4.3.8.			An operator of an aeroplane over 5 700 kg maximum certificated take-off mass shall, as prescribed by the State of Registry, ensure that the information resulting from maintenance and operational experience with respect to continuing airworthiness, is transmitted as required by Annex 8, Part II, 4.2.3 f) and 4.2.4.	Existing provision.
8.4 Modifications and repairs	2.6.3 Modifications and repairs			
All modifications and repairs shall comply with airworthiness requirements acceptable to the	All modifications and repairs shall comply with airworthiness requirements acceptable to the	Existing provision.		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.	State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.			
8.5 Maintenance release	2.6.4 Maintenance release		3.8.5 Maintenance release	
8.5.1 A maintenance release shall be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work performed has been completed satisfactorily.	2.6.4.1 A maintenance release shall be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work was performed has been completed satisfactorily and in accordance with data and procedures acceptable to the State of Registry.	Existing provision with some modification.	3.8.5.1 A maintenance release shall be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work was performed in accordance with the maintenance programme or other data and procedures acceptable to the State of Registry.	
8.5.2 A maintenance release shall contain a certification including: a) basic details of the maintenance carried out; b) date such maintenance was completed; c) when applicable, the identity of the approved maintenance organization; and d) the identity of the person or persons signing the release.	2.6.4.2 A maintenance release shall contain a certification including: a) basic details of the maintenance performed; b) date such maintenance was completed; c) when applicable, the identity of the approved maintenance organization; and d) the identity of the authorized person or persons signing the release.		3.8.5.2 A maintenance release shall contain a certification including: a) basic details of the maintenance performed; b) date such maintenance was completed; c) when applicable, the identity of the approved maintenance organization; and d) the identity of the person or persons signing the release.	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	CHAPTER 2.7 AEROPLANE FLIGHT CREW		CHAPTER 3.9 AEROPLANE FLIGHT CREW	
	2.7.1 Composition of the flight crew		3.9.1 Composition of the flight crew	
	The number and composition of the flight crew shall not be less than that specified in the flight manual or other documents associated with the certificate of airworthiness.	Existing provision.	3.9.1.1 Designation of pilot-in-command For each flight the operator shall designate a pilot to act as pilot-in-command.	
			3.9.1.2 Flight engineer When a separate flight engineer's station is incorporated in the design of an aeroplane, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew member, holding a flight engineer licence, without interference with regular duties.	From Annex 6, Part I.
			3.9.2 Flight crew member emergency duties	
			An operator shall, 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. Recurrent training in accomplishing these functions	From Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			shall be contained in the operator's training programme and shall 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.	
			3.9.3 Flight crew member training programmes	
			3.9.3.1 An operator shall establish and maintain a training programme that is designed to ensure that a person who receives training acquires and maintains the competency to perform assigned duties, including skills related to human performance. Ground and flight training programmes shall be established either through internal programmes or through a training services provider, and include or make reference to a syllabus for those training programmes in the company operations manual. The training programme shall include training to competency for all equipment installed.	New provision based on Annex 6, Part I.
			3.9.3.2 Recommendation. — <i>Flight simulators should be used to the maximum extent practicable for initial and annual recurrent training.</i>	From industry code of practice.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
9.1 Qualifications	2.7.2 Qualifications		3.9.4 Qualifications	
<p>9.1.1 The pilot-in-command shall ensure that the licences of each flight crew member have been issued or rendered valid by the State of Registry, and are properly rated and of current validity, and shall be satisfied that flight crew members have maintained competence.</p>	<p>2.7.2.1 The pilot-in-command shall:</p> <ul style="list-style-type: none"> a) ensure that each flight crew member hold a valid licence issued by the State of Registry, or if issued by another Contracting State, rendered valid by the State of Registry; b) ensure that the flight crew members are properly rated; and c) be satisfied that flight crew members have maintained competency. 	<p>Existing provision.</p>	<p>3.9.4.1 Flight crew member licensing</p> <p>3.9.4.1.1 An operator shall:</p> <ul style="list-style-type: none"> a) ensure that each flight crew member assigned to duty holds a valid licence issued by the State of Registry, or if issued by another Contracting State, rendered valid by the State of Registry; b) ensure that the flight crew members are properly rated; and c) be satisfied that flight crew members are competent to carry out assigned duties. 	<p>Identifies the role and responsibilities of the operator.</p>
<p>9.1.2 The pilot-in-command of an aeroplane equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions.</p> <p><i>Note 1.— Procedures for the use of ACAS II equipment are specified in the Procedures for Air Navigation Services — Aircraft Operations</i></p>	<p>2.7.2.2 The pilot-in-command of an aeroplane equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions.</p> <p><i>Note 1.— Procedures for the use of ACAS II equipment are specified in the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS,</i></p>		<p>3.9.4.1.2 The operator of an aeroplane equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions.</p> <p><i>Note 1.— Procedures for the use of ACAS II equipment are specified in the Procedures for Air Navigation Services — Aircraft Operations</i></p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>(PANS-OPS, Doc 8168), Volume I — Flight Procedures. ACAS II Training Guidelines for Pilots are provided in PANS-OPS, Volume I, Attachment A to Part VIII.</p> <p>Note 2.— Appropriate training, to the satisfaction of the State, to competency in the use of ACAS II equipment and the avoidance of collisions may be evidenced, for example, by:</p> <p>a) possession of a type rating for an aeroplane equipped with ACAS II, where the operation and use of ACAS II are included in the training syllabus for the type rating; or</p> <p>b) possession of a document issued by a training organization or person approved by the State to conduct training for pilots in the use of ACAS II, indicating that the holder has been trained in accordance with the guidelines referred to in Note 1; or</p> <p>c) a comprehensive pre-flight briefing by a pilot who has been trained in the use of ACAS II in accordance with the guidelines referred to in</p>	<p>Doc 8168), Volume I — Flight Procedures. ACAS II Training Guidelines for Pilots are provided in PANS-OPS, Volume I, Attachment A to Part VIII.</p> <p>Note 2.— Appropriate training, to the satisfaction of the State, to competency in the use of ACAS II equipment and the avoidance of collisions may be evidenced, for example, by:</p> <p>a) possession of a type rating for an aeroplane equipped with ACAS II, where the operation and use of ACAS II are included in the training syllabus for the type rating; or</p> <p>b) possession of a document issued by a training organization or person approved by the State to conduct training for pilots in the use of ACAS II, indicating that the holder has been trained in accordance with the guidelines referred to in Note 1; or</p> <p>c) a comprehensive pre-flight briefing by a pilot who has been trained in the use of ACAS II in accordance with the guidelines referred to in Note 1.</p>		<p>(PANS-OPS, Doc 8168), Volume I — Flight Procedures. ACAS II Training Guidelines for Pilots are provided in PANS-OPS, Volume I, Attachment A to Part III, Section 3, Chapter 3.</p> <p>Note 2.— Appropriate training, to the satisfaction of the State, to competency in the use of ACAS II equipment and the avoidance of collisions may be evidenced, for example, by:</p> <p>a) possession of a type rating for an aeroplane equipped with ACAS II, where the operation and use of ACAS II are included in the training syllabus for the type rating; or</p> <p>b) possession of a document issued by a training organization or person approved by the State to conduct training for pilots in the use of ACAS II, indicating that the holder has been trained in accordance with the guidelines referred to in Note 1; or</p> <p>c) a comprehensive pre-flight briefing by a pilot who has been trained in the use of ACAS II in accordance with the guidelines referred to in</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<i>Note 1.</i>			<i>Note 1.</i>	
			<p>3.9.4.2 Recent experience — pilot-in-command</p> <p>An operator shall not assign a pilot to act as pilot-in-command of an aeroplane unless, that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.</p>	<p>From Annex 6, Part I modified to include a flight simulator approved for the purpose.</p>
			<p>3.9.4.3 Recent experience — co-pilot</p> <p>An operator shall not assign a co-pilot to operate at the flight controls of an aeroplane during take-off and landing unless that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.</p>	<p>From Annex 6, Part I slightly modified.</p>
			<p>3.9.4.4 Pilot proficiency checks</p> <p>An operator shall ensure that piloting technique and the ability to execute emergency procedures is checked periodically in such a way as to demonstrate the pilot's competence. Where the operation may be conducted</p>	<p>From industry code of practice.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>under instrument flight rules, an operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a check pilot of the operator or a representative of the State issuing the pilot licence.</p> <p><i>Note.— The periodicity of the checks referred to in 3.9.4.4 is dependent upon the complexity of both the aeroplane and the operation.</i></p>	
<p>9.2 Composition of the flight crew</p>				
<p>The number and composition of the flight crew shall not be less than that specified in the flight manual or other documents associated with the certificate of airworthiness.</p>		<p>Addressed in 2.7.1 Composition of the flight crew</p>		

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
Chapter 10. Flight Operations Officer/Flight Dispatcher			CHAPTER 3.10 FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER	
		Not applicable.	Recommendation. — <i>An operator should ensure that any person assigned as a flight operations officer/flight dispatcher is trained and maintains familiarization with all features of the operation which are pertinent to their duties, including knowledge and skills related to human factors.</i>	From Annex 6, Part I as a Recommendation.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
Chapter 11. Manuals, Logs And Records	CHAPTER 2.8 MANUALS, LOGS AND RECORDS		Chapter 3.11 Manuals, Logs And Records	
	<p><i>Note.— The following documents are associated with this Annex but are not included in this chapter:</i></p> <p>Maintenance records — see 2.6.2.</p>		<p><i>Note.— The following documents are associated with this Annex but are not included in this chapter:</i></p> <p>Operational flight plan — see 3.4.3.3.</p>	
	2.8.1 Flight manual			
	<p><i>Note.— The aeroplane flight manual contains the information specified in Annex 8.</i></p> <p>The aeroplane flight manual shall be updated by implementing changes made mandatory by the State of Registry.</p>	Required for linkage to specified requirements.		
			3.11.1 Operator’s maintenance control manual	
			<p>An operator’s maintenance control manual when provided in accordance with 3.8.2, may be issued in separate parts, shall be developed according to Industry Codes of Practice or to the State of Registry guidance material, containing information about:</p> <ul style="list-style-type: none"> a) the means for complying with the procedures required by 3.8.1.1; b) the means for recording 	Required for linkage to specified requirements in other chapters.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>names and duties of the person or persons required by 3.8.1.1;</p> <p>c) the maintenance programme required by 3.8.3.1;</p> <p>d) the methods used for the completion and retention of the operator's maintenance records required by 3.8.5;</p> <p>e) the procedures for complying with the service information reporting requirements of Annex 8, Part II, 4.2.3 f) and 4.2.4;</p> <p>f) the procedures for implementing action resulting from mandatory continuing airworthiness information;</p> <p>g) a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme, in order to correct any deficiency in that programme;</p> <p>h) the aircraft types and models to which the manual applies;</p> <p>i) the procedures for ensuring that unserviceabilities affecting airworthiness are</p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<p>recorded and rectified; and</p> <p>j) procedures for advising the State of Registry of significant in-service occurrences.</p>	
			<p>3.11.2 Maintenance programme</p>	
			<p>3.11.2.1 A maintenance programme for each aeroplane as required by 3.8.3 shall contain the following information:</p> <p>a) maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aeroplane;</p> <p>b) when applicable, a continuing structural integrity programme;</p> <p>c) procedures for changing or deviating from a) and b) above as approved by the State of Registry; and</p> <p>d) when applicable and approved by the State of Registry, condition monitoring and reliability programme descriptions for aircraft systems, components and powerplants.</p>	<p>Required for linkage to specified requirements in other chapters.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			3.11.2.2 Maintenance tasks and intervals that have been specified as mandatory in approval of the type design or approved changes to the maintenance programme, shall be identified as such.	Required for linkage to specified requirements in other chapters. Existing provision from Annex 6, Part I.
			3.11.2.3 Recommendation. — <i>The maintenance programme should be based on maintenance programme information made available by the State of Design or by the organization responsible for the type design, and any additional applicable experience.</i>	Required for linkage to specified requirements in other chapters. Existing provision from Annex 6, Part I.
	2.8.2 Journey log book			
	2.8.2.1 A journey log book shall be maintained for every aeroplane engaged in international air navigation in which shall be entered particulars of the aeroplane, its crew and each journey.	Required for linkage to specified requirements in other chapters. Existing provision from Annex 6, Part I.		
	2.8.2.2 Recommendation – <i>The aeroplane journey log should contain the following items:</i> <i>a) aeroplane nationality and registration;</i> <i>b) date;</i> <i>c) crew member names and duty assignments.</i>			

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
	<p><i>d) departure and arrival points and times,</i></p> <p><i>e) purpose of flight,</i></p> <p><i>f) observations regarding the flight, and</i></p> <p><i>g) signature of the pilot-in-command.</i></p>			
	<p>2.8.3 Records of emergency and survival equipment carried</p>			
	<p>The owner of the aeroplane, or in the case where it is leased, the lessee, shall at all times have available for immediate communication to rescue coordination centres, lists containing information on the emergency and survival equipment carried on board the aeroplane engaged in international air navigation. The information shall include, as applicable, the number, colour and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.</p>	<p>Required for linkage to specified requirements in other chapters.</p>		
			<p>3.11.3 Flight recorder records</p>	
			<p>The owner of the aeroplane, or in the case where it is leased, the lessee, shall ensure, to the extent possible, in the event the aeroplane becomes involved in</p>	<p>Required for linkage to specified requirements in other chapters.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			an accident or incident, the preservation of all related flight recorder records and, if necessary, the associated flight recorders, and their retention in safe custody pending their disposition as determined in accordance with Annex 13.	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
Chapter 12. Cabin Crew			CHAPTER 3.12 CABIN CREW	
			3.12.1 Assignment of emergency duties	
			The requirement for cabin crew for each type of aeroplane, shall be determined by the operator, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The operator shall assign these functions for each type of aeroplane.	From Annex 6, Part I and industry code of practice.
			3.12.2 Cabin crew at emergency evacuation stations	
			When cabin crew are required by a State authority, each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with 3.6.9 during take-off and landing and whenever the pilot-in-command so directs.	From Annex 6, Part I.
			3.12.3 Protection of cabin crew during flight	
			Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and	From Annex 6, Part I.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			whenever the pilot-in-command so directs.	
			3.12.4 Training	
			3.12.4.1 An operator shall ensure that a training programme is completed by all persons before being assigned as a cabin crew member.	From Annex 6, Part I and industry code of practice.
			<p>3.12.4.2 Recommendation.— <i>An operator should establish and maintain a cabin crew training programme that is designed to ensure that a person who receives training acquires the competency to perform their assigned duties and includes or makes reference to a syllabus for the training programme in the company operations manual. The training programme should include human factors training.</i></p> <p><i>Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).</i></p>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
Chapter 13. Security	CHAPTER 2.9 SECURITY		Chapter 3.13 Security	
	2.9.1 Security of aircraft			
	The pilot-in-command shall be responsible for the security of the aircraft during its operation.	New requirement linked to Annex 17.		
	2.9.2 Reporting acts of unlawful interference			
	Following an act of unlawful interference, the pilot-in-command shall submit a report of such an act to the designated local authority. <i>Note.— In the context of this Chapter, the word “security” is used in the sense of prevention of acts of unlawful interference against civil aviation.</i>	New requirement linked to Annex 17.		
			3.13.1 Security Programme	
			Recommendation.— <i>Each Contracting State should ensure that each entity conducting general aviation operations, including corporate aviation operations, using aircraft with a maximum take-off mass greater than 5 700 kg, has established, implemented and maintained a written operator security programme that meets the requirements of the national civil aviation security programme of that State.</i>	New requirement linked to Annex 17.

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			<i>Note.— Accepted industry codes of practice may be used as the basis for the development of a written operator security programme.</i>	

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
<p>APPENDIX 1 - LIGHTS TO BE DISPLAYED BY AEROPLANES <i>(Note.— See Chapter 6)</i></p>	<p>APPENDIX 1 - LIGHTS TO BE DISPLAYED BY AEROPLANES <i>Note.— See 2.4.8</i></p>	<p>Existing material.</p>	<p>ATTACHMENT A - COMPANY OPERATIONS MANUAL <i>Supplementary to 3.4.2.2</i></p> <p>The following is the suggested content of a company operations manual. It may be issued in separate parts corresponding to specific aspects of an operation. It should include the instructions and information necessary to enable the personnel concerned to perform their duties safely and shall contain at least the following information:</p> <ul style="list-style-type: none"> a) table of contents; b) amendment control page and list of effective pages, unless the entire document is re-issued with each amendment and the document has an effective date on it; c) duties, responsibilities and succession of management and operating personnel; d) operator safety management system; e) operational control system; f) MEL procedures (where applicable); g) normal flight operations; h) SOPs; i) weather limitations; j) flight and duty time limitations; k) emergency operations; l) accidents/incidents consideration; m) personnel qualifications and 	<p>From industry code of practice.</p>

CURRENT TEXT	SEC 2 GENERAL AVIATION OPERATIONS	RATIONALE	SEC 3 LARGE AND TURBOJET AEROPLANE OPERATIONS	RATIONALE
			training; n) record keeping; and o) a description of the maintenance control system.	
APPENDIX 2 - ALTIMETRY SYSTEM PERFORMANCE REQUIREMENTS FOR OPERATIONS IN RVSM AIRSPACE <i>(Note.— See Chapter 7, 7.2.5)</i>	APPENDIX 2 - ALTIMETRY SYSTEM PERFORMANCE REQUIREMENTS FOR OPERATIONS IN RVSM AIRSPACE <i>(Note.— See 2.5.2.5)</i>	Existing material.	ATTACHMENT B - MINIMUM EQUIPMENT LIST (MEL) <i>Supplementary to 3.6.1.1</i>	From Annex 6, Part I.
ATTACHMENT A - FLIGHT RECORDERS <i>Supplementary to 6.10</i>			ATTACHMENT C - FLIGHT RECORDERS <i>Supplementary to 3.6.3</i>	Existing material.
ATTACHMENT B - CARRIAGE AND USE OF OXYGEN <i>Supplementary to 4.9</i>	ATTACHMENT A - CARRIAGE AND USE OF OXYGEN <i>Supplementary to 2.2.3.8</i>	Existing material.		