

**COVER SHEET TO AMENDMENT 169-B**

**INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES**

***PERSONNEL LICENSING***

**ANNEX 1**

**TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION**

**TENTH EDITION — JULY 2006**

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

Checklist of Amendments to Annex 1		
	<i>Effective date</i>	<i>Date of applicability</i>
Tenth Edition (incorporates Amendments 1 to 167)	17 July 2006	23 November 2006
Amendment 168 (adopted by the Council on 23 February 2007)	16 July 2007	22 November 2007
Amendment 169-A (adopted by the Council on 2 March 2009)	20 July 2009	19 November 2009
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Amendment 169-B

to the

International Standards and Recommended Practices

PERSONNEL LICENSING

(Annex 1 to the Convention on International Civil Aviation)

1. Insert the following new and replacement pages in Annex 1 (Tenth Edition) to incorporate Amendment 169-B which becomes applicable on 18 November 2010:

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|---|---------------------|
| a) Page (iii)                                       | — Table of Contents |
| b) Page (ix)  | — Foreword          |
| c) Pages 1-4 to 1-9                                 | — Chapter 1         |
| d) Pages 6-1, 6-5, 6-6, 6-9, 6-11, 6-13<br>and 6-15 | — Chapter 6         |
| e) Pages APP 2-1 to APP 2-3                         | — Appendix 2        |
| f) Pages APP 4-1 and APP 4-2                        | — Appendix 4        |
| g) Page ATT B-1                                     | — Attachment B      |
| h) Pages ATT C-1 and ATT C-2                        | — Attachment C      |

2. Record the entry of this amendment on page (ii)

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<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>
167 (10th Edition)	Air Navigation Commission studies; Second meeting of the Flight Crew Licensing and Training Panel.	Revised and new medical provisions on the upper age limits for flight crew members; new personnel licensing requirements for airships and powered-lifts; introduction of the multi-crew pilot licence; amendments to the details of existing flight crew licensing Standards; amendments to the provisions on the role of flight simulation training devices in acquiring or maintaining the competencies required for the various levels of licences and ratings.	10 March 2006 17 July 2006 23 November 2006
168	Air Navigation Commission study.	The amendment concerns:  a) the replacement of the approach and area radar control ratings by approach and area control surveillance ratings to reflect the fact that surveillance systems are not limited to radar;  b) the harmonization of the Human Factors knowledge requirements for air traffic controllers with those recently adopted as part of Amendment 167 to Annex 1 for flight crew;  c) the applicability of the existing Standards on approved training for flight crew (Annex 1, 1.2.8 and Appendix 2) to the approved training required for the air traffic controller licence and ratings; and  d) new provisions for student air traffic controllers receiving instruction in an operational environment.	23 February 2007 16 July 2007 22 November 2007
169-A	Secretariat with the assistance of the Medical Provisions Study Group	Amendment introducing some new concepts in the field of aviation medicine to better address current aeromedical risks to flight safety.	2 March 2009 20 July 2009 19 November 2009
169-B	Secretariat	Amendment concerning the development of harmonized provisions relating to safety management by introducing a framework for the implementation and maintenance of a State safety programme as of 18 November 2010.	2 March 2009 20 July 2009 18 November 2010

**Instrument flight time.** Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

**Instrument ground time.** Time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

**Instrument time.** Instrument flight time or instrument ground time.

**Licensing Authority.** The Authority designated by a Contracting State as responsible for the licensing of personnel.

*Note.— In the provisions of this Annex, the Licensing Authority is deemed to have been given the following responsibilities by the Contracting State:*

- a) assessment of an applicant's qualifications to hold a licence or rating;*
- b) issue and endorsement of licences and ratings;*
- c) designation and authorization of approved persons;*
- d) approval of training courses;*
- e) approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a licence or rating; and*
- f) validation of licences issued by other Contracting States.*

**Likely.** In the context of the medical provisions in Chapter 6, **likely** means with a probability of occurring that is unacceptable to the medical assessor.

**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.

**Medical Assessment.** The evidence issued by a Contracting State that the licence holder meets specific requirements of medical fitness.

**Medical assessor.** A physician, appointed by the Licensing Authority, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

*Note 1.— Medical assessors evaluate medical reports submitted to the Licensing Authority by medical examiners.*

*Note 2.— Medical assessors are expected to maintain the currency of their professional knowledge.*

**Medical examiner.** A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.

**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.

*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.*

**Performance criteria.** Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

**Pilot (to).** To manipulate the flight controls of an aircraft during flight time.

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

**Pilot-in-command under supervision.** Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Licensing Authority.

**Powered-lift.** A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

**Problematic use of substances.** The use of one or more psycho-active substances by aviation personnel in a way that:

- a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or
- b) causes or worsens an occupational, social, mental or physical problem or disorder.

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

***Quality system.*** Documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.



**Rated air traffic controller.** An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

**Rating.** An authorization entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

**Rendering (a licence) valid.** The action taken by a Contracting State, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence.

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

**Sign a maintenance release (to).** To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in Annex 6.

**Significant.** In the context of the medical provisions in Chapter 6, **significant** means to a degree or of a nature that is likely to jeopardize flight safety.

**Solo flight time.** Flight time during which a student pilot is the sole occupant of an aircraft.

**State safety programme.** An integrated set of regulations and activities aimed at improving safety.

**Threat.** Events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

*Note.— See Attachment E of Annex 13 — Aircraft Accident and Incident Investigation for a description of operational personnel.*

**Threat management.** The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

*Note.— See Attachment C to Chapter 3 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) and Circular 314 — Threat and Error Management (TEM) in Air Traffic Control for a description of undesired states.*

## **1.2 General rules concerning licences**

*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. While Article 83 bis of the Convention entered into force on 20 June 1997 in respect of Contracting States which have ratified the related Protocol (Doc 9318), the foregoing action will remain particularly relevant for those Contracting States which do not have treaty relations under Article 83 bis. It was understood that pending entry into force of Article 83 bis of the Convention, the foregoing action 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.*

*Note 2.— International Standards and Recommended Practices are established for licensing the following personnel:*

### *a) Flight crew*

- private pilot — aeroplane, airship, helicopter or powered-lift;*
- commercial pilot — aeroplane, airship, helicopter or powered-lift;*
- multi-crew pilot — aeroplane;*
- airline transport pilot — aeroplane, helicopter or powered-lift*
- glider pilot;*
- free balloon pilot;*
- flight navigator;*
- flight engineer.*

### *b) Other personnel*

- aircraft maintenance (technician/engineer/mechanic);*
- air traffic controller;*

- *flight operations officer/flight dispatcher;*
- *aeronautical station operator.*

#### 1.2.1 Authority to act as a flight crew member

A person shall not act as a flight crew member of an aircraft unless a valid licence is held showing compliance with the specifications of this Annex and appropriate to the duties to be

performed by that person. The licence shall have been issued by the State of Registry of that aircraft or by any other Contracting State and rendered valid by the State of Registry of that aircraft.

*Note.— Article 29 of the Convention on International Civil Aviation requires that the flight crew members carry their appropriate licences on board every aircraft engaged in international air navigation.*

### 1.2.2 Method of rendering a licence valid

1.2.2.1 When a Contracting State renders valid a licence issued by another Contracting State, as an alternative to the issuance of its own licence, it shall establish validity by suitable authorization to be carried with the former licence accepting it as the equivalent of the latter. When a State limits the authorization to specific privileges, the authorization shall specify the privileges of the licence which are to be accepted as its equivalent. The validity of the authorization shall not extend beyond the period of validity of the licence. The authorization ceases to be valid if the licence upon which it was issued is revoked or suspended.

*Note.— This provision is not intended to preclude the State that issued the licence from extending, by a suitable notification, the period of validity of the licence without necessarily requiring either the physical return of the licence or the appearance of the licence holder before the Authorities of that State.*

1.2.2.2 When an authorization under 1.2.2.1 is issued for use in commercial air transport operations, the Licensing Authority shall confirm the validity of the other Contracting State's licence before issuing the authorization.

**1.2.2.3 Recommendation.—** *A pilot licence issued by a Contracting State should be rendered valid by other Contracting States for use in private flights.*

*Note.— Contracting States which, without formality, render valid a licence issued by another Contracting State for use in private flights are encouraged to notify this facility in their Aeronautical Information Publications.*

### 1.2.3 Privileges of the holder of a licence

A Contracting State shall not permit the holder of a licence to exercise privileges other than those granted by that licence.

### 1.2.4 Medical fitness

*Note 1.— Guidance material is published in the Manual of Civil Aviation Medicine (Doc 8984).*

*Note 2.— To satisfy the licensing requirements of medical fitness for the issue of various types of licences, the applicant must meet certain appropriate medical requirements which are specified as three classes of Medical Assessment. Details are given in 6.2, 6.3, 6.4 and 6.5. To provide the necessary evidence to satisfy the requirements of 1.2.4.1, the Licensing Authority issues the licence holder with the appropriate Medical Assessment, Class 1, Class 2 or Class 3. This can be done in several ways such as a suitably titled separate certificate, a statement on the licence, a national regulation stipulating that the Medical Assessment is an integral part of the licence, etc.*

1.2.4.1 An applicant for a licence shall, when applicable, hold a Medical Assessment issued in accordance with the provisions of Chapter 6.

**1.2.4.2 Recommendation.**— *From 18 November 2010 States should apply, as part of their State safety programme, basic safety management principles to the medical assessment process of licence holders, that as a minimum include:*

*a) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and*

*b) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.*

*Note.— A framework for the implementation and maintenance of a State safety programme is contained in Attachment C. Guidance on State safety programmes and safety management principles is contained in the Safety Management Manual (SMM) (Doc 9859) and the Manual of Civil Aviation Medicine (Doc 8984).*

1.2.4.3 The period of validity of a Medical Assessment shall begin on the day the medical examination is performed. The duration of the period of validity shall be in accordance with the provisions of 1.2.5.2.

1.2.4.3.1 The period of validity of a Medical Assessment may be extended, at the discretion of the Licensing Authority, up to 45 days.

*Note.— It is advisable to let the calendar day on which the Medical Assessment expires remain constant year after year by allowing the expiry date of the current Medical Assessment to be the beginning of the new validity period under the proviso that the medical examination takes place during the period of validity of the current Medical Assessment but no more than 45 days before it expires.*

1.2.4.4 Except as provided in 1.2.5.2.6, flight crew members or air traffic controllers shall not exercise the privileges of their licence unless they hold a current Medical Assessment appropriate to the licence.

1.2.4.5 Contracting States shall designate medical examiners, qualified and licensed in the practice of medicine,

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to conduct medical examinations of fitness of applicants for the issue or renewal of the licences or ratings specified in Chapters 2 and 3, and of the appropriate licences specified in Chapter 4.

1.2.4.5.1 Medical examiners shall have received training in aviation medicine and shall receive refresher training at regular intervals. Before designation, medical examiners shall demonstrate adequate competency in aviation medicine.

1.2.4.5.2 Medical examiners shall have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

*Note.— Examples of practical knowledge and experience are flight experience, simulator experience, on-site observation or any other hands-on experience deemed by the Licensing Authority to meet this requirement.*

**1.2.4.5.3 Recommendation.**— *The competence of a medical examiner should be evaluated periodically by the medical assessor.*

1.2.4.6 Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the examiner whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

1.2.4.6.1 Any false declaration to a medical examiner made by an applicant for a licence or rating shall be reported to the Licensing Authority of the issuing State for such action as may be considered appropriate.

1.2.4.7 Having completed the medical examination of the applicant in accordance with Chapter 6, the medical examiner shall coordinate the results of the examination and submit a signed report, or equivalent, to the Licensing Authority, in accordance with its requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

1.2.4.7.1 If the medical report is submitted to the Licensing Authority in electronic format, adequate identification of the examiner shall be established.

1.2.4.7.2 If the medical examination is carried out by two or more medical examiners, Contracting States shall appoint one of these to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

1.2.4.8 Contracting States shall use the services of medical assessors to evaluate reports submitted to the Licensing Authorities by medical examiners.

1.2.4.8.1 The medical examiner shall be required to submit sufficient information to the Licensing Authority to enable that Authority to undertake Medical Assessment audits.

*Note.— The purpose of such auditing is to ensure that medical examiners meet applicable standards for good medical practice and aeromedical risk assessment. Guidance on aeromedical risk assessment is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

1.2.4.9 If the medical Standards prescribed in Chapter 6 for a particular licence are not met, the appropriate Medical Assessment shall not be issued or renewed unless the following conditions are fulfilled:

- a) accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety;
- b) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and
- c) the licence is endorsed with any special limitation or limitations when the safe performance of the licenceholder's duties is dependent on compliance with such limitation or limitations.

1.2.4.10 Medical confidentiality shall be respected at all times.

1.2.4.10.1 All medical reports and records shall be securely held with accessibility restricted to authorized personnel.

1.2.4.10.2 When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of the Licensing Authority.

## 1.2.5 Validity of licences

1.2.5.1 A Contracting State, having issued a licence, shall ensure that the privileges granted by that licence, or by related ratings, are not exercised unless the holder maintains competency and meets the requirements for recent experience established by that State.

1.2.5.1.1. **Recommendation.**— *A Contracting State should establish maintenance of competency and recent experience requirements for pilot licences and ratings based on a systematic approach to accident prevention and should include a risk assessment process and analysis of current operations, including accident and incident data appropriate to that State.*

1.2.5.1.2. A Contracting State, having issued a licence, shall ensure that other Contracting States are enabled to be satisfied as to the validity of the licence.



*Note 1.— The maintenance of competency of flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.*

*Note 2.— Maintenance of competency may be satisfactorily recorded in the operator's records, or in the flight crew member's personal log book or licence.*

*Note 3.— Flight crew members may, to the extent deemed feasible by the State of Registry, demonstrate their continuing competency in flight simulation training devices approved by that State.*

*Note 4.— See the Manual of Criteria for the Qualification of Flight Simulators (Doc 9625).*

*Note 5.— See the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379) for guidance material on the development of a risk assessment process.*

1.2.5.2 Except as provided in 1.2.5.2.1, 1.2.5.2.2, 1.2.5.2.3, 1.2.5.2.4, 1.2.5.2.5 and 1.2.5.2.6, a Medical Assessment issued in accordance with 1.2.4.6 and 1.2.4.7 shall be valid from the date of the medical examination for a period not greater than:

60 months for the private pilot licence — aeroplane, air-ship, helicopter and powered-lift;

12 months for the commercial pilot licence — aeroplane, airship, helicopter and powered-lift;

12 months for the multi-crew pilot licence — aeroplane; 12 months for the airline transport pilot licence — aeroplane, helicopter and powered-lift;

60 months for the glider pilot licence;

60 months for the free balloon pilot licence; 12 months for the flight navigator licence;

12 months for the flight engineer licence;

48 months for the air traffic controller licence.

*Note 1.— The periods of validity listed above may be extended by up to 45 days in accordance with 1.2.4.3.1.*

*Note 2.— When calculated in accordance with 1.2.5.2 and its sub-paragraphs, the period of validity will, for the last month counted, include the day that has the same calendar number as the date of the medical examination or, if that month has no day with that number, the last day of that month.*

- 1.2.5.2.1 The period of validity of a Medical Assessment may be reduced when clinically indicated.
- 1.2.5.2.2 When the holders of airline transport pilot licences — aeroplane, helicopter and powered-lift, and commercial pilot licences — aeroplane, airship, helicopter and powered-lift, who are engaged in single-crew commercial air transport operations carrying passengers, have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.
- 1.2.5.2.3 When the holders of airline transport pilot licences — aeroplane, helicopter and powered-lift, commercial pilot licences — aeroplane, airship, helicopter and powered-lift, and multi-crew pilot licences — aeroplane, who are engaged in commercial air transport operations, have passed their 60th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.
- 1.2.5.2.4 When the holders of private pilot licences — aeroplane, airship, helicopter and powered-lift, free balloon pilot licences, glider pilot licences and air traffic controller licences have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to 24 months.
- 1.2.5.2.5 **Recommendation.**— *When the holders of private pilot licences — aeroplane, airship, helicopter and powered-lift, free balloon pilot licences, glider pilot licences and air traffic controller licences have passed their 50th birth-day, the period of validity specified in 1.2.5.2 should be further reduced to 12 months.*

*Note.— The periods of validity listed above are based on the age of the applicant at the time of undergoing the medical examination.*

- 1.2.5.2.6 *Circumstances in which a medical examination may be deferred.* The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Licensing Authority, provided that such deferment shall only be made as an exception and shall not exceed:
  - a) a single period of six months in the case of a flight crew member of an aircraft engaged in non-commercial operations;
  - b) two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations provided that in each case a favourable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such a designated medical examiner is not available, by a physician legally qualified to practise medicine in that area. A report of the medical examination shall be sent to the Licensing Authority where the licence was issued;

- c) in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by an examiner designated under 1.2.4.5 by the Contracting State in which the applicant is temporarily

located. A report of the medical examination shall be sent to the Licensing Authority where the licence was issued.

#### 1.2.6 Decrease in medical fitness

1.2.6.1 Holders of licences provided for in this Annex shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

1.2.6.1.1 **Recommendation.**— *States should ensure that licence holders are provided with clear guidelines on medical conditions that may be relevant to flight safety and when to seek clarification or guidance from a medical examiner or Licensing Authority.*

*Note.*— *Guidance on physical and mental conditions and treatments that are relevant to flight safety about which information may need to be forwarded to the Licensing Authority is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

1.2.6.1.2 **Recommendation.**— *Each Contracting State should, as far as practicable, ensure that licence holders do not exercise the privileges of their licences and related ratings during any period in which their medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of their Medical Assessment.*

#### 1.2.7 Use of psychoactive substances

1.2.7.1 Holders of licences provided for in this Annex shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.

1.2.7.2 Holders of licences provided for in this Annex shall not engage in any problematic use of substances.

1.2.7.3 **Recommendation.**— *Contracting States should ensure, as far as practicable, that all licence holders who engage in any kind of problematic use of substances are identified and removed from their safety-critical functions. Return to the safety-critical functions may be considered after successful treatment or, in cases where no treatment is necessary, after cessation of the problematic use of substances and upon determination that the person's continued performance of the function is unlikely to jeopardize safety.*

*Note.*— *Guidance on suitable methods of identification (which may include biochemical testing on such occasions as pre-employment, upon reasonable suspicion, after accidents/ incidents, at intervals, and at random) and on other prevention topics is contained in the Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654).*

#### 1.2.8 Approved training and approved training organization

*Note.— The qualifications required for the issue of personnel licences can be more readily and speedily acquired by applicants who undergo closely supervised, systematic and continuous courses of training, conforming to a planned syllabus or curriculum. Provision has accordingly been made for some reduction in the experience requirements for the issue of certain licences and ratings prescribed in these Standards and Recommended Practices, in respect of an applicant who has satisfactorily completed a course of approved training.*

1.2.8.1 Approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training.

1.2.8.2 The approval of a training organization by a State shall be dependent upon the applicant demonstrating compliance with the requirements of Appendix 2 and Appendix 4.

*Note.— Guidance on approval of a flight crew training organization can be found in the Manual on the Approval of Flight Crew Training Organizations (Doc 9841).*

#### 1.2.9 Language proficiency

1.2.9.1 Aeroplane, airship, helicopter and powered-lift pilots and those flight navigators who are required to use the radio telephone aboard an aircraft shall demonstrate the ability to speak and understand the language used for radiotelephony communications.

*Note.— Pursuant to Article 42 of the Convention on International Civil Aviation, paragraph 1.2.9.1 does not apply to personnel whose licences are originally issued prior to 5 March 2004 but, in any case, does apply to personnel whose licences remain valid after 5 March 2008.*

1.2.9.2 Air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications.

1.2.9.3 **Recommendation.**— *Flight engineers, and glider and free balloon pilots should have the ability to speak and understand the language used for radiotelephony communications.*

1.2.9.4 As of 5 March 2008, aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aero-nautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1.

1.2.9.5 **Recommendation.**— *Aeroplane, airship, helicopter and powered-lift pilots, flight navigators required to use*

*the radiotelephone aboard an aircraft, air traffic controllers and aeronautical station operators should demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1.*

1.2.9.6 As of 5 March 2008, the language proficiency of aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level.

1.2.9.7 **Recommendation.**— *The language proficiency of aeroplane, airship, helicopter and powered-lift pilots, flight navigators required to use the radiotelephone aboard an aircraft, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) should be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows:*

- a) those demonstrating language proficiency at the Operational Level (Level 4) should be evaluated at least once every three years; and*
- b) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.*

*Note 1.— Formal evaluation is not required for applicants who demonstrate expert language proficiency, e.g. native and very proficient non-native speakers with a dialect or accent intelligible to the international aeronautical community.*

*Note 2.— The provisions of 1.2.9 refer to Annex 10, Volume II, Chapter 5, whereby the language used for radiotelephony communications may be the language normally used by the station on the ground or English. In practice, therefore, there will be situations whereby flight crew members will only need to speak the language normally used by the station on the ground.*

## CHAPTER 6. MEDICAL PROVISIONS FOR LICENSING

Note 1.— The Standards and Recommended Practices established in this chapter cannot, on their own, be sufficiently detailed to cover all possible individual situations. Of necessity, many decisions relating to the evaluation of medical fitness must be left to the judgement of the individual medical examiner. The evaluation must, therefore, be based on a medical examination conducted throughout in accordance with the highest standards of medical practice.

Note 2.— Predisposing factors for disease, such as obesity and smoking, may be important for determining whether further evaluation or investigation is necessary in an individual case.

Note 3.— In cases where the applicant does not fully meet the medical requirements and in complicated and unusual cases, the evaluation may have to be deferred and the case submitted to the medical assessor of the Licensing Authority for final evaluation. In such cases due regard must be given to the privileges granted by the licence applied for or held by the applicant for the Medical Assessment, and the conditions under which the licence holder is going to exercise those privileges in carrying out assigned duties.

Note 4.— Attention is called to the administrative clause in 1.2.4.9 dealing with accredited medical conclusion.

Note 5.— Guidance material to assist Licensing Authorities and medical examiners is published separately in the Manual of Civil Aviation Medicine (Doc 8984). This guidance material also contains a discussion of the terms “likely” and “significant” as used in the context of the medical provisions in Chapter 6.

Note 6.— Basic safety management principles, when applied to the medical assessment process, can help ensure that aeromedical resources are utilized effectively.

### 6.1 Medical Assessments — General

#### 6.1.1 Classes of Medical Assessment

Three classes of Medical Assessment shall be established as follows:

a) Class 1 Medical Assessment;

applies to applicants for, and holders of:

- commercial pilot licences — aeroplane, airship, helicopter and powered-lift
- multi-crew pilot licences — aeroplane
- airline transport pilot licences — aeroplane, helicopter and powered-lift

b) Class 2 Medical Assessment;

applies to applicants for, and holders of:

- flight navigator licences
- flight engineer licences
- private pilot licences — aeroplane, airship, helicopter and powered-lift
- glider pilot licences
- free balloon pilot licences

c) Class 3 Medical Assessment;

applies to applicants for, and holders of:

- air traffic controller licences.

6.1.2 The applicant for a Medical Assessment shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history. The applicant shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant's knowledge permits, and any false statement shall be dealt with in accordance with 1.2.4.6.1.

6.1.3 The medical examiner shall report to the Licensing Authority any individual case where, in the examiner's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for, or held, is not likely to jeopardize flight safety (1.2.4.9).

6.1.4 The level of medical fitness to be met for the renewal of a Medical Assessment shall be the same as that for the initial assessment except where otherwise specifically stated.

Note.— The intervals between routine medical examinations for the purpose of renewing Medical Assessments are specified in 1.2.5.2.

## 6.2 Requirements for Medical Assessments

### 6.2.1 General

An applicant for a Medical Assessment issued in accordance with the terms of 1.2.4.1 shall undergo a medical examination based on the following requirements:



- a) physical and mental;
- b) visual and colour perception; and
- c) hearing.

#### 6.2.2 Physical and mental requirements

An applicant for any class of Medical Assessment shall be required to be free from:

- a) any abnormality, congenital or acquired; or
- b) any active, latent, acute or chronic disability; or
- c) any wound, injury or sequelae from operation; or
- d) any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken;

such as would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

Note.— Use of herbal medication and alternative treatment modalities requires particular attention to possible side-effects.

#### 6.2.3 Visual acuity test requirements

6.2.3.1 The methods in use for the measurement of visual acuity are likely to lead to differing evaluations. To achieve uniformity, therefore, Contracting States shall ensure that equivalence in the methods of evaluation be obtained.

6.2.3.2 **Recommendation.**— The following should be adopted for tests of visual acuity:

- a) Visual acuity tests should be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60 cd/m<sup>2</sup>).
- b) Visual acuity should be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

#### 6.2.4 Colour perception requirements

6.2.4.1 Contracting States shall use such methods of examination as will guarantee reliable testing of colour perception.

6.2.4.2 The applicant shall be required to demonstrate the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.

6.2.4.3 The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission on Illumination (CIE).

6.2.4.4 An applicant obtaining a satisfactory result as prescribed by the Licensing Authority shall be assessed as fit. An applicant failing to obtain a satisfactory result in such a test shall be assessed as unfit unless able to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights. Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

*Note.— Guidance on suitable methods of assessing colour vision is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.2.4.4.1 **Recommendation.**— Sunglasses worn during the exercise of the privileges of the licence or rating held should be non-polarizing and of a neutral grey tint.

#### 6.2.5 Hearing test requirements

6.2.5.1 Contracting States shall use such methods of examination as will guarantee reliable testing of hearing.

6.2.5.2 Applicants shall be required to demonstrate a hearing performance sufficient for the safe exercise of their licence and rating privileges.

6.2.5.3 Applicants for Class 1 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every five years up to the age of 40 years, and thereafter not less than once every two years.

6.2.5.3.1 Alternatively, other methods providing equivalent results may be used.

6.2.5.4 Applicants for Class 3 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every four years up to the age of 40 years, and thereafter not less than once every two years.

6.2.5.4.1 Alternatively, other methods providing equivalent results may be used.

6.2.5.5 **Recommendation.**— Applicants for Class 2 Medical Assessment should be tested by pure-tone audiometry at first issue of the Assessment and, after the age of 50 years, not less than once every two years.

6.2.5.6 At medical examinations, other than those mentioned in 6.2.5.3, 6.2.5.4 and 6.2.5.5, where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests.

*Note 1.— Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

*Note 2.— Guidance on hazards of medications and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.13 Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

6.3.2.13.1 Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

6.3.2.14 Applicants with sequelae of disease of, or surgical intervention on, any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, shall be assessed as unfit.

6.3.2.14.1 **Recommendation.**— An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

6.3.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.3.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

*Note.— Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.16.1 Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note.— Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

*Note.— Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.*

6.3.2.18 Applicants with renal or genitourinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.3.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

*Note.— Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.19 Applicants with sequelae of disease of or surgical procedures on the kidneys or the genitourinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.3.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

6.3.2.20 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

*Note 1.— Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.*

*Note 2.— Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.3.2.21.1 **Recommendation.**— For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.3.2.21, the fit assessment should be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

6.3.2.22 Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

6.3.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures

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which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

*Note.— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.*

6.3.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.2.25 There shall be:

- a) no disturbance of vestibular function;
- b) no significant dysfunction of the Eustachian tubes; and
- c) no unhealed perforation of the tympanic membranes.

6.3.2.25.1 A single dry perforation of the tympanic membrane need not render the applicant unfit.

*Note.— Guidance on testing of the vestibular function is contained in Manual of Civil Aviation Medicine (Doc 8984).*

6.3.2.26 There shall be:

- a) no nasal obstruction; and
- b) no malformation nor any disease of the buccal cavity or upper respiratory tract

which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.2.27 Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

### 6.3.3 Visual requirements

The medical examination shall be based on the following requirements.

6.3.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.3.2 Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

- a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

*Note 1.— 6.3.3.2 b) is the subject of Standards in Annex 6, Part I.*

*Note 2.— An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Licensing Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.*

6.3.3.2.1 Applicants may use contact lenses to meet this requirement provided that:

- a) the lenses are monofocal and non-tinted;
- b) the lenses are well tolerated; and
- c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

*Note.— Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.*

6.3.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

*Note.— If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.*

6.3.3.2.3 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

*Note 1.— The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.*

*Note 2.— Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.3.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless

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*Note.*— Guidance on the subject is contained in the *Manual of Civil Aviation Medicine (Doc 8984)*.

6.4.2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

6.4.2.9 There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

6.4.2.9.1 **Recommendation.**— Chest radiography should form part of the initial and periodic examinations in cases where asymptomatic pulmonary disease can be expected.

6.4.2.10 Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.4.2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

6.4.2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note.*— Guidance on hazards of medication and drugs is contained in the *Manual of Civil Aviation Medicine (Doc 8984)*.

6.4.2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

6.4.2.12.1 Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit.

*Note 1.*— Guidance on assessment of respiratory diseases is contained in the *Manual of Civil Aviation Medicine (Doc 8984)*.

*Note 2.*— Guidance on hazards of medication and drugs is contained in the *Manual of Civil Aviation Medicine (Doc 8984)*.

6.4.2.13 Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

6.4.2.13.1 Applicants with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

6.4.2.14 Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, shall be assessed as unfit

6.4.2.14.1 **Recommendation.**— An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

6.4.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.4.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

*Note.— Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.2.16.1 Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note.— Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

*Note.— Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.*

6.4.2.18 Applicants with renal or genitourinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.4.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

*Note.— Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.2.19 Applicants with sequelae of disease of, or surgical procedures on, the kidneys or the genitourinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.4.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

6.4.2.20 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

*Note 1.— Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.*

*Note 2.— Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.4.2.21.1 **Recommendation.**— For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.4.2.21, the fit assessment should be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

6.4.2.22 Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

6.4.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

*Note.— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.*

6.4.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.2.25 There shall be:

- a) no disturbance of the vestibular function;
- b) no significant dysfunction of the Eustachian tubes; and
- c) no unhealed perforation of the tympanic membranes.

6.4.2.25.1 A single dry perforation of the tympanic membrane need not render the applicant unfit.

*Note.—Guidance on testing of the vestibular function is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.2.26 There shall be:

- a) no nasal obstruction; and
- b) no malformation nor any disease of the buccal cavity or upper respiratory tract;

which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.2.27 Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

### 6.4.3 Visual requirements

The medical examination shall be based on the following requirements.

6.4.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.3.2 Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

- a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

*Note.— An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Licensing Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.*

6.4.3.2.1 Applicants may use contact lenses to meet this requirement provided that:

- a) the lenses are monofocal and non-tinted;
- b) the lenses are well tolerated; and
- c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

*Note.— Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.*

6.4.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

*Note.— If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.*

6.4.3.2.3 **Recommendation.**— Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 should be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

*Note 1.— The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.*

*Note 2.— Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.4.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

6.4.3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.4.3.2, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with 6.4.3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

*Note 1.— N5 refers to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).*

Note 2.— An applicant who needs near correction to meet the requirement will require “look-over”, bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3.— Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of the reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

6.4.3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

6.4.3.5 The applicant shall be required to have normal fields of vision.

6.4.3.6 The applicant shall be required to have normal binocular function.

6.4.3.6.1 Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

#### 6.4.4 Hearing requirements

*Note.— Attention is called to 2.7.1.3.1 on requirements for the issue of instrument rating to applicants who hold a private pilot licence.*

6.4.4.1 Applicants who are unable to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner and with the back turned to the examiner, shall be assessed as unfit.

6.4.4.2 When tested by pure-tone audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, shall be assessed as unfit.

6.4.4.3 **Recommendation.**— An applicant who does not meet the requirements in 6.4.4.1 or 6.4.4.2 should undergo further testing in accordance with 6.3.4.1.1.

#### 6.5 Class 3 Medical Assessment

##### 6.5.1 Assessment issue and renewal

6.5.1.1 An applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

6.5.1.2 Except where otherwise stated in this section, holders of air traffic controller licences shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.5.1.3 When the Licensing Authority is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 3 Medical Assessment shall be issued to the applicant.

## 6.5.2 Physical and mental requirements

6.5.2.1 The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable to perform duties safely.

6.5.2.2 The applicant shall have no established medical history or clinical diagnosis of:

- a) an organic mental disorder;
- b) a mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;
- c) schizophrenia or a schizotypal or delusional disorder;
- d) a mood (affective) disorder;
- e) a neurotic, stress-related or somatoform disorder;
- f) a behavioural syndrome associated with physiological disturbances or physical factors;
- g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
- h) mental retardation;
- i) a disorder of psychological development;
- j) a behavioural or emotional disorder, with onset in childhood or adolescence; or
- k) a mental disorder not otherwise specified;

such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

6.5.2.2.1 **Recommendation.**— An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.



*Note 1.— Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

*Note 2.— Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements which may be useful for their application to medical assessment.*

6.5.2.3 The applicant shall have no established medical history or clinical diagnosis of any of the following:

- a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
- b) epilepsy; or
- c) any disturbance of consciousness without satisfactory medical explanation of cause.

6.5.2.4 The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.5 The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.5.1 An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.5.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence and rating privileges.

*Note.— Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.6 Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

6.5.2.6.1 Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less frequently than every two years.



*Note 1.— The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify*

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*disqualification without further thorough cardiovascular investigation.*

*Note 2.— Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.7 The systolic and diastolic blood pressures shall be within normal limits.

6.5.2.7.1 The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence privileges.

*Note.— Guidance on this subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

6.5.2.9 There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms.

*Note.— Chest radiography is usually not necessary but may be indicated in cases where asymptomatic pulmonary disease can be expected.*

6.5.2.10 Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.5.2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms shall be assessed as unfit.

6.5.2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note.— Guidance on hazards of medications is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

6.5.2.12.1 Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit.

*Note 1.— Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

*Note 2.— Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.13 Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

6.5.2.14 Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation, in particular any obstructions due to stricture or compression, shall be assessed as unfit.

6.5.2.14.1 **Recommendation**— An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa, with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation.

6.5.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.5.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

*Note.— Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.16.1 Applicants with non-insulin-treated diabetes shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note.— Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.5.2.18 Applicants with renal or genitourinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.5.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

*Note.— Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.19 Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genitourinary tract, in

particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.5.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

6.5.2.20 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

*Note 1.— Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.*

*Note 2.— Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.5.2.21.1 **Recommendation.**— During the gestational period, precautions should be taken for the timely relief of an air traffic controller in the event of early onset of labour or other complications.

6.5.2.21.2 **Recommendation.**— For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.5.2.21, the fit assessment should be limited to the period until the end of the 34th week of gestation.

6.5.2.22 Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

6.5.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

*Note.*— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

6.5.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.25 There shall be no malformation nor any disease of the nose, buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.26 Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

### 6.5.3 Visual requirements

The medical examination shall be based on the following requirements.

6.5.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.3.2 Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

- a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

*Note.— An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Licensing Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.*

6.5.3.2.1 Applicants may use contact lenses to meet this requirement provided that:

- a) the lenses are monofocal and non-tinted;
- b) the lenses are well tolerated; and
- c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

*Note.— Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re- examination provided the history of their contact lens prescription is known.*

6.5.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

*Note.— If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.*

6.5.3.2.3 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

*Note 1.— The purpose of the required ophthalmic examination is (1) to ascertain normal vision performance, and (2) to identify any significant pathology.*

*Note 2.— Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).*

6.5.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

6.5.3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.5.3.2, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with 6.5.3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

*Note 1.— N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).*

*Note 2.— An applicant who needs near correction to meet the requirement will require “look-over”, bifocal or perhaps multi-focal lenses in order to read radar screens, visual displays and written or printed material and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic control duties. However, it should be realized that single-vision near correction significantly reduces distant visual acuity.*

*Note 3.— Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the air traffic control duties the applicant is likely to perform.*

6.5.3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

6.5.3.5 The applicant shall be required to have normal fields of vision.

6.5.3.6 The applicant shall be required to have normal binocular function.

6.5.3.6.1 Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

#### 6.5.4 Hearing requirements

6.5.4.1 The applicant, when tested on a pure-tone audio- meter shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz.

6.5.4.1.1 An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experienced in a typical air traffic control working environment.

*Note 1.— The frequency composition of the background noise is defined only to the extent that the frequency range 600 to 4 800 Hz (speech frequency range) is adequately represented.*

*Note 2.— In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.*

6.5.4.1.2 Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant’s licence and ratings are valid may be used.

## **APPENDIX 2. APPROVED TRAINING ORGANIZATION**

**(Chapter 1, 1.2.8.2 refers)**

### **1. Issue of approval**

1.1 The issuance of an approval for a training organization and the continued validity of the approval shall depend upon the training organization being in compliance with the requirements of this Appendix.

1.2 The approval document shall contain at least the following:

- a) organization's name and location;
- b) date of issue and period of validity (where appropriate);
- c) terms of approval.

### **2. Training and procedures manual**

2.1 The training organization shall provide a training and procedures manual for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information:

- a) a general description of the scope of training authorized under the organization's terms of approval;
- b) the content of the training programmes offered including the courseware and equipment to be used;
- c) a description of the organization's quality assurance system in accordance with 5;
- d) a description of the organization's facilities;
- e) the name, duties and qualification of the person designated as responsible for compliance with the requirements of the approval in 7.1;
- f) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in 7.2;
- g) a description of the procedures used to establish and maintain the competence of instructional personnel as required by 7.3;
- h) a description of the method used for the completion and retention of the training records required by 8;



i) a description, when applicable, of additional training needed to comply with an operator's procedures and requirements; and

j) when a State has authorized an approved training organization to conduct the testing required for the issuance of a licence or rating in accordance with 10, a description of the selection, role and duties of the authorized personnel, as well as the applicable requirements established by the Licensing Authority.

2.2 The training organization shall ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.

2.3 Copies of all amendments to the training and procedures manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

### **3. Training programmes**

3.1 A Licensing Authority may approve a training programme for a private pilot licence, commercial pilot licence or instrument rating that allows an alternative means of compliance with the experience requirements established by Annex 1, provided that the approved training organization demonstrates to the satisfaction of the Licensing Authority that the training provides a level of competency at least equivalent to that provided by the minimum experience requirements for personnel not receiving such approved training.

3.2 When a Licensing Authority approves a training programme for a multi-crew pilot licence, the approved training organization shall demonstrate to the satisfaction of the Licensing Authority that the training provides a level of competency in multi-crew operations at least equal to that met by holders of a commercial pilot licence, instrument rating and type rating for an aeroplane certificated for operation with a minimum crew of at least two pilots.

*Note.— Guidance on the approval of training programmes can be found in the Manual on the Approval of Flight Crew Training Organizations (Doc 9841).*

## 4. Safety management

4.1 States shall require, as part of their State safety programme, that an approved training organization that is exposed to safety risks during the provision of its services implement a safety management system acceptable to the State that, as a minimum:

- a) identifies safety hazards;
- b) ensures the implementation of remedial action necessary to maintain agreed safety performance;
- c) provides for continuous monitoring and regular assessment of the safety performance; and
- d) aims at a continuous improvement of the overall performance of the safety management system.

*Note.— Guidance on defining safety performance is contained in the Safety Management Manual (SMM) (Doc 9859).*

4.2 A safety management system shall clearly define lines of safety accountability throughout the approved training organization, including a direct accountability for safety on the part of senior management.

*Note 1.— The framework for the implementation and maintenance of a safety management system is contained in Appendix 4. Guidance on safety management systems is contained in the Safety Management Manual (SMM) (Doc 9859).*

*Note 2.— A framework for the implementation and maintenance of a State safety programme is contained in Attachment C.*

## 5. Quality assurance system

The training organization shall establish a quality assurance system, acceptable to the Licensing Authority granting the approval, which ensures that training and instructional practices comply with all relevant requirements.

## 6. Facilities

6.1 The facilities and working environment shall be appropriate for the task to be performed and be acceptable to the Licensing Authority.

6.2 The training organization shall have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.

6.3 Synthetic training devices shall be qualified according to requirements established by the State and their use shall be approved by the Licensing Authority to ensure that they are appropriate to the task.

*Note.— The Manual of Criteria for the Qualification of Flight Simulators (Doc 9625) provides guidance on the approval of flight simulators.*

## **7. Personnel**

7.1 The training organization shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organization.

7.2 The organization shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

7.3 The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to the Licensing Authority.

7.4 The training organization shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training programme established by the training organization shall include training in knowledge and skills related to human performance.

*Note.—* Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (Doc 9683).

## **8. Records**

8.1 The training organization shall retain detailed student records to show that all requirements of the training course have been met as agreed by the Licensing Authority.

8.2 The training organization shall maintain a system for recording the qualifications and training of instructional and examining staff, where appropriate.

8.3 The records required by 8.1 shall be kept for a minimum period of two years after completion of the training. The records required by 8.2 shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a function for the training organization.

## **9. Oversight**

Contracting States shall maintain an effective oversight programme of the approved training organization to ensure continuing compliance with the approval requirements.

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## **10. Evaluation and checking**

When a State has authorized an approved training organization to conduct the testing required for the issuance of a licence or rating, the testing shall be conducted by personnel authorized by the Licensing Authority or designated by the training organization in accordance with criteria approved by the Licensing Authority.

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## **APPENDIX 4. FRAMEWORK FOR SAFETY MANAGEMENT SYSTEMS (SMS)**

**(Chapter 1, 1.2.8.2 refers)**

This appendix specifies the framework for the implementation and maintenance of a safety management system (SMS) by an approved training organization. An SMS is a management system for the management of safety by an organization. The framework includes four components and twelve elements representing the minimum requirements for SMS implementation. The implementation of the framework shall be commensurate with the size of the organization and the complexity of the services provided. This appendix also includes a brief description of each element of the framework.

### **1. Safety policy and objectives**

- 1.1 Management commitment and responsibility
- 1.2 Safety accountabilities
- 1.3 Appointment of key safety personnel
- 1.4 Coordination of emergency response planning
- 1.5 SMS documentation

### **2. Safety risk management**

- 2.1 Hazard identification
- 2.2 Safety risk assessment and mitigation

### **3. Safety assurance**

- 3.1 Safety performance monitoring and measurement
- 3.2 The management of change
- 3.3 Continuous improvement of the SMS

### **4. Safety promotion**

- 4.1 Training and education
- 4.2 Safety communication

### **1. Safety policy and objectives**

- 1.1 Management commitment and responsibility

The approved training organization shall define the organization's safety policy which shall be in accordance with inter- national and national requirements, and which shall be signed by the accountable executive of the organization. The safety policy shall reflect organizational commitments regarding safety; shall include a clear statement about the provision of the necessary resources for the implementation of the safety policy; and shall be communicated, with visible endorsement, throughout the organization. The safety policy shall include the safety reporting procedures; shall clearly indicate which types of operational behaviours are unacceptable; and shall include the conditions under which disciplinary action would not apply. The safety policy shall be periodically reviewed to ensure it remains relevant and appropriate to the organization.

## 1.2 Safety accountabilities

The approved training organization shall identify the account- able executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the approved training organization, for the implementation and maintenance of the SMS. The approved training organization shall also identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS. Safety responsibilities, accountabilities and authorities shall be documented and communicated throughout the organization, and shall include a definition of the levels of management with authority to make decisions regarding safety risk tolerability.

## 1.3 Appointment of key safety personnel

The approved training organization shall identify a safety manager to be the responsible individual and focal point for the implementation and maintenance of an effective SMS.

## 1.4 Coordination of emergency response planning

The approved training organization shall ensure that an emergency response plan that provides for the orderly and efficient transition from normal to emergency operations and the return to normal operations is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its services.

## 1.5 SMS documentation

The approved training organization shall develop an SMS implementation plan, endorsed by senior management of the organization, that defines the organization's approach to the

management of safety in a manner that meets the organization's safety objectives. The approved training organization shall develop and maintain SMS documentation describing the safety policy and objectives, the SMS requirements, the SMS processes and procedures, the accountabilities, responsibilities and authorities for processes and procedures, and the SMS outputs. Also as part of the SMS documentation, the approved training organization shall develop and maintain a safety management systems manual (SMSM), to communicate its approach to the management of safety throughout the organization.

## **2. Safety risk management**

### **2.1 Hazard identification**

The approved training organization shall develop and maintain a formal process that ensures that hazards in operations are identified. Hazard identification shall be based on a combination of reactive, proactive and predictive methods of safety data collection.

### **2.2 Safety risk assessment and mitigation**

The approved training organization shall develop and maintain a formal process that ensures analysis, assessment and control of the safety risks in training operations.

## **3. Safety assurance**

### **3.1 Safety performance monitoring and measurement**

The approved training organization shall develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls. The safety performance of the organization shall be verified in reference to the safety performance indicators and safety performance targets of the SMS.

### **3.2 The management of change**

The approved training organization shall develop and maintain a formal process to identify changes within the organization which may affect established processes and services; to describe the arrangements to ensure safety performance before implementing changes; and to eliminate or modify safety risk controls that are no longer needed or effective due to changes in the operational environment.



### 3.3 Continuous improvement of the SMS

The approved training organization shall develop and maintain a formal process to identify the causes of substandard performance of the SMS, determine the implications of substandard performance of the SMS in operations, and eliminate or mitigate such causes.

## 4. Safety promotion

### 4.1 Training and education

The approved training organization shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform the SMS duties. The scope of the safety training shall be appropriate to each individual's involvement in the SMS.

### 4.2 Safety communication

The approved training organization shall develop and maintain formal means for safety communication that ensures that all personnel are fully aware of the SMS, conveys safety-critical information, and explains why particular safety actions are taken and why safety procedures are introduced or changed.

## **ATTACHMENT B**

### **MULTI-CREW PILOT LICENCE — AEROPLANE LEVELS OF COMPETENCY**

#### **1. Core flying skills**

The level of competency at which the applicant shall have complied with the requirements for the private pilot licence specified in Chapter 2, 2.3, including night flight requirements, and, in addition, have completed, smoothly and with accuracy, all procedures and manoeuvres related to upset training and flight with reference solely to instruments. From the outset, all training is conducted in an integrated multicrew, competency-based and threat and error management (TEM) environment. Initial training and instructional input levels are high as core skills are being embedded in the ab initio application. Assessment at this level confirms that control of the aeroplane is maintained at all times in a manner such that the successful outcome of a procedure or a manoeuvre is assured.

#### **2. Level 1 (Basic)**

The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that if the successful outcome of a procedure or manoeuvre is in doubt, corrective action is taken. Performance in the generic cockpit environment does not yet consistently meet the Standards of knowledge, operational skills and level of achievement required in the core competencies. Continual training input is required to meet an acceptable initial operating standard. Specific performance improvement/personal development plans will be agreed and the details recorded. Applicants will be continuously assessed as to their suitability to progress to further training and assessment in successive phases.

#### **3. Level 2 (Intermediate)**

The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that the successful outcome of a procedure or manoeuvre is assured. The training received at Level 2 shall be conducted under the instrument flight rules, but need not be specific to any one type of aeroplane. On completion of Level 2, the applicant shall demonstrate levels of knowledge and operational skills that are adequate in the environment and achieves the basic standard in the core capability. Training support may be required with a specific development plan to maintain or improve aircraft handling, behavioural performance in leadership or team management. Improvement and development to attain the Standard is the key performance objective. Any core competency assessed as less than satisfactory should include supporting evidence and a remedial plan.

#### **4. Level 3 (Advanced)**

The level of competency required to operate and interact as a co-pilot in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, under visual and instrument conditions. Assessment confirms that control of the aeroplane or situation is maintained at all times in such a manner that the successful outcome of a procedure or manoeuvre is assured. The applicant shall consistently demonstrate the knowledge, skills and attitudes required for the safe operation of an applicable aeroplane type as specified in the performance criteria.

Note.— Material on the development of performance criteria can be found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

*Annex 1*

*ATT B-1*

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## **ATTACHMENT C. FRAMEWORK FOR THE STATE SAFETY PROGRAMME (SSP)**

This attachment introduces a framework for the implementation and maintenance of a State safety programme (SSP) by a State. An SSP is a management system for the management of safety by the State. The framework contemplates four components and eleven elements, outlined hereunder. The implementation of an SSP is commensurate with the size and complexity of the State's aviation system, and may require coordination among multiple authorities responsible for individual elements of civil aviation functions in the State. The SSP framework introduced in this attachment, and the safety management system (SMS) framework specified in Appendix 4, must be viewed as complementary, yet distinct, frameworks. This attachment also includes a brief description of each element of the framework.

### **1. State safety policy and objectives**

- 1.1 State safety legislative framework
- 1.2 State safety responsibilities and accountabilities
- 1.3 Accident and incident investigation
- 1.4 Enforcement policy

### **2. State safety risk management**

- 2.1 Safety requirements for the service provider's SMS
- 2.2 Agreement on the service provider's safety performance

### **3. State safety assurance**

- 3.1 Safety oversight
- 3.2 Safety data collection, analysis and exchange
- 3.3 Safety-data-driven targeting of oversight of areas of greater concern or need

### **4. State safety promotion**

- 4.1 Internal training, communication and dissemination of safety information
- 4.2 External training, communication and dissemination of safety information

Note.— Within the context of this attachment the term service provider” refers to any organization providing aviation services. The term includes approved training organizations that are exposed to safety risks during the provision of their services, aircraft operators, approved maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic services providers and certified aerodromes, as applicable.

## **1. State safety policy and objectives**

### **1.1 State safety legislative framework**

The State has promulgated a national safety legislative framework and specific regulations, in compliance with international and national standards, that define how the State will conduct the management of safety in the State. This includes the participation of State aviation organizations in specific activities related to the management of safety in the State, and the establishment of the roles, responsibilities and relationships of such organizations. The safety legislative framework and specific regulations are periodically reviewed to ensure they remain relevant and appropriate to the State.

### **1.2 State safety responsibilities and accountabilities**

The State has identified, defined and documented the requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP. This includes the directives to plan, organize, develop, maintain, control and continuously improve the SSP in a manner that meets the State's safety objectives. It also includes a clear statement about the provision of the necessary resources for the implementation of the SSP.

### **1.3 Accident and incident investigation**

The State has established an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, and not the apportioning of blame or liability. Such investigations are in support of the management of safety in the State. In the operation of the SSP, the State maintains the independence of the accident and incident investigation organization from other State aviation organizations.

### **1.4 Enforcement policy**

The State has promulgated an enforcement policy that establishes the conditions and circumstances under which service providers are allowed to deal with, and resolve, events involving certain safety deviations, internally, within the context of the service provider's safety management system

(SMS), and to the satisfaction of the appropriate State authority. The enforcement policy also establishes the conditions and circumstances under which to deal with safety deviations through established enforcement procedures.

## **2. State safety risk management**

### **2.1 Safety requirements for the service provider's SMS**

The State has established the controls which govern how service providers will identify hazards and manage safety risks. These include the requirements, specific operating regulations and implementation policies for the service provider's SMS. The requirements, specific operating regulations and implementation policies are periodically reviewed to ensure they remain relevant and appropriate to the service providers.

### **2.2 Agreement on the service provider's safety performance**

The State has agreed with individual service providers on the safety performance of their SMS. The agreed safety performance of an individual service provider's SMS is periodically reviewed to ensure it remains relevant and appropriate to the service providers.

## **3. State safety assurance**

### **3.1 Safety oversight**

The State has established mechanisms to ensure effective monitoring of the eight critical elements of the safety oversight function. The State has also established mechanisms to ensure that the identification of hazards and the management of safety risks by service providers follow established regulatory controls (requirements, specific operating regulations and implementation policies). These mechanisms include inspections, audits and surveys to ensure that regulatory safety risk controls are appropriately integrated into the service provider's SMS, that they are being practised as designed, and that the regulatory controls have the intended effect on safety risks.

### **3.2 Safety data collection, analysis and exchange**

The State has established mechanisms to ensure the capture and storage of data on hazards and safety risks at both an individual and aggregate State level. The State has also established mechanisms to develop information from the stored data, and to actively exchange safety information with service providers and/or other States as appropriate.

### 3.3 Safety-data-driven targeting of oversight of areas of greater concern or need

The State has established procedures to prioritize inspections, audits and surveys towards those areas of greater safety concern or need, as identified by the analysis of data on hazards, their consequences in operations, and the assessed safety risks.

## 4. State safety promotion

### 4.1 Internal training, communication and dissemination of safety information

The State provides training and fosters awareness and two-way communication of safety-relevant information to support, within the State aviation organizations, the development of an organizational culture that fosters an effective and efficient SSP.

### 4.2 External training, communication and dissemination of safety information

The State provides education and promotes awareness of safety risks and two-way communication of safety-relevant information to support, among service providers, the development of an organizational culture that fosters an effective and efficient SMS.

— END —