GOVERNMENT GAZETTE

OF THE

REPUBLIC OF NAMIBIA

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General Notice

MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

No. 163 2002

PROPOSED CIVIL AVIATION TECHNICAL STANDARDS
NAM-CATS-MR "MEDICAL CERTIFICATION"

The Ministry of Works, Transport and Communication recently initiated the project to update the current Namibian aviation legislation. There are two main reasons for updating the aviation legislation, namely, the current legislation does not adequately reflect the policies of Namibia for the aviation sector and does not reflect recent developments within SADC. The project further aims to enhance the safety of civil aviation by ensuring that the Namibian legislation complies with the minimum standards prescribed by the International Civil Aviation Organization.

In this regard the legislative reform process involves the updating of the regulations made under the Aviation Act (Act No. 74 of 1962). It also involves the issuing Technical Standards by the Director of Civil Aviation.

The Technical Standard proposed in this General Notice is one of thirty four (34) technical standards associated with the Namibian Civil Aviation Regulations, 2001.

Pursuant to the provisions of regulation 11.03.2 the Director: Civil Aviation hereby invites all interested parties to comment on the proposed NAM-CATS-MR "Medical certification".

Comments or representations should be lodged in writing and should reach the Ministry no later than 30 days from the date of publication of this notice. Correspondence should be addressed to:

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REPUBLIC OF NAMIBIA

CIVIL AVIATION

DOCUMENT NAM-CATS-MR (MEDICAL REQUIREMENTS)

NAMIBIAN CIVIL AVIATION TECHNICAL STANDARDS RELATING TO MEDICAL REQUIREMENTS

1. GENERAL

Section 22A of the Aviation Act, 1962 (as amended by section 5 of the Aviation Amendment Act, 1998) empowers the Director: Civil Aviation to issue technical standards for civil aviation on the matters which are prescribed by regulation.

The Director: Civil Aviation has pursuant to the empowerment mentioned above, on (date) issued technical standards relating to medical requirements to be known as Document NAM-CATS-MR.

2. PURPOSE

Document NAM-CATS-MR contains the standards, rules, requirements, methods, specifications, characteristics and procedures which are applicable in respect of medical requirements.

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Namibian Civil Aviation Regulations, 1999, for example, technical standard 67.00.7 refers to regulation 7 of Part 67 (no subpart) of the Regulations.

The abbreviation ACAR $\tilde{=}$ is used throughout this document when referring to any regulation.

The abbreviation ATS $\tilde{=}$ refers to any technical standard.

3. SCHEDULES AND NOTES

Guidelines and recommendations in support of any particular technical standard, are contained in schedules to, and/or notes inserted throughout the technical standards.

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The medical requirements and standards to be complied with by an applicant for, or the holder of, a Class 1, 2 or 3 medical certificate are the following:

1. General

(1) Impairment or sudden or subtle incapacitation

Applicants must be free from any risk factor, disease or disability which renders them either unable, or likely to become suddenly unable, to perform assigned duties safely. These may include effects and/or adverse effects from the treatment of any condition and drugs or substances of abuse.

(2) Medical deficiency

Applicants must be free from any of the following, if it results in a degree of functional incapacity likely to interfere with the safe operation of an aircraft of with the safe performance of their duties:

(a) Congenital or acquired abnormality;

(b) active, latent, acute or chronic disability, disease or illness;

(c) wound, injury, or outcome of operation.

Class 1 medical certificate

2. Physical and mental standards

Applicants must have no established medical history or clinical diagnosis of -

2.1 Psychiatric

(1) Any of the following conditions that are of a severity which renders the applicant incapable of safely exercising the privileges of the licence, or makes it likely that within two years of the assessment the applicant will be unable to safely exercise the privileges of the licence, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation:

(a) A psychotic disorder, unless the psychosis was of toxic origin and there has been complete recovery;

(b) alcohol or other psychoactive substance abuse or dependence;

(c) character or behaviour disorder, severe enough to have resulted in an overt act;

(d) any other psychiatric disorder.

(2) An applicant who has a history of psychoactive substance abuse or dependence may apply for an exemption to the designated body or institution if the following circumstances exist:

(a) The applicant has been under medical treatment for psychoactive substance abuse and the medical practitioner concerned, approved by the designated body or institution, certifies that the applicant is free from the effects of psychoactive substance abuse;

(b) the applicant provides the name of a sponsor who is prepared to certify that the applicant no longer takes a psychoactive substance in any form. Such a sponsor must be a person acceptable to the designated body or institution for this purpose;

(c) the applicant signs an undertaking not to take any psychoactive substance while holding a valid licence.

2.2 **Neurological**

(1) Any disease, injury or abnormality of the nervous system, the effects of which, according to medical conclusion, are likely to interfere with the safe exercise of the privileges of the licence or cause sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. In particular, the following are not acceptable:

(a) Epilepsy;

(b) any seizure disorder;

(c) any disturbance of conscious-ness without satisfactory medical explanation of the cause;

(d) migraine;

(e) incapacitated headaches.

(2) The relevant protocols are contained in Schedules 1, 2, 3 and 4.

2.3 **Musculoskeletal**

Any active disease of the bones, joints, muscles, or tendons, or any significant functional limitation from any previous congenital or acquired disease or injury will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Functional abnormalities affecting the bones, joints, muscles, or tendons, compatible with the safe exercise of the privileges of the licence, may be assessed as fit. An appropriate demonstration of ability via a skill test may be required.

2.4 **Gastrointestinal**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the digestive tract and its attachments, including the biliary system and hernial orifices, of a severity likely to cause obstruction, significant functional disorder or infection, or sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 5.

2.5 **Respiratory**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the lungs, mediastinum, pleura, chest wall or respiratory passages of a severity likely to cause infection, functional disorder or sudden or subtle incapacitation at altitude, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocols are contained in Schedules 6, 7, 8 and 9.

2.6 **Cardiovascular**

(1) Any disease or abnormality, or result of disease or surgical operation, which affects the heart or circulatory system and is of a severity likely to cause functional disorder or sudden or subtle incapacitation. Evidence of myocardial infarction, or significant hypertension, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) Disorders of cardiac rhythm requiring a pacemaker will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Applicants with evidence strongly suggestive of coronary artery disease, including the presence of excessive cardiovascular risk factors, will be assessed as unfit unless adequate myocardial perfusion can be demonstrated and reversible risk factors controlled.

(3) The relevant protocols are contained in Schedules 10 and 11.

2.7 **Metabolic, nutritional and endocrine**

(1) Any metabolic, nutritional or endocrine disorders likely to interfere with the safe exercise of the privileges of the licence, or to cause sudden or subtle incapacitation will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Any applicant with a diagnosis of metabolic, nutritional or endocrine disorder will generally be assessed as unfit, but may be considered for special certification by the designated body or institution.

(2) The relevant protocols are contained in Schedules 12, 13, 14, 15 and 16.

2.8 **Haematologic and immunologic**

(1) Any active disease of the lymphatic system or of the blood will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Those with chronic diseases of these systems in a state of remission may be assessed as fit, provided appropriate specialist reports permit medical conclusion that the condition is not likely to affect the safe exercise of the privileges of the licence. Applicants with any infectious diseases, the effects of which are likely to impede the safe exercise of the privileges of the licence or cause sudden or subtle incapacitation, must be assessed as unfit until such time as effective and acceptable treatment has removed such effects.

(2) The relevant protocols are contained in Schedules 15, 16, 17 and 18.

2.9 **Genitourinary**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the kidneys, urine, urinary tract, menstrual function or genital organs, to a degree likely to impede the safe exercise of the privileges of the licence, or cause sudden or subtle incapacitation such that the applicant will be unable to safely exercise the privileges of the licence will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 19.

2.10 **Oncology**

The relevant protocols are contained in Schedules 3, 5, 18, 19 and 20.

3. Visual standards

3.1 **General**

(1) An applicant may not have -

(a) any condition or congenital abnormality of either eye or its attachments likely to impede the safe exercise of the privileges of the licence;

(b) any abnormality of visual fields or significant defect of binocular function;

(c) any manifest squint, or large errors of eye muscle balance (phoria). The acceptable limits for ocular muscle balance are 12 prism dioptres for exophoria, 6 dioptres for esophoria; and 12 dioptre for hyperphoria measured at distance. If corrective lenses are required, phoria must be measured while using the appropriate corrective lenses;

(d) any anatomical or functional monocularity or substandard vision in one eye at initial issue of a Class 1 medical certificate. However, medical conclusion may permit experienced licence holders who develop monocularity or substandard vision to be granted a medical certificate with appropriate restrictions following a period sufficient to permit adjustment to this condition.

(2) Monocularity means that either an eye is absent, or its vision cannot be corrected to better than 6/24.

(3) Substandard vision in one eye means central vision better than 6/24 but worse than 6/9, with normal visual fields.

(4) For monocularity, the appropriate minimum restrictions initially are as follows:

(a) AIf flying open cockpit aircraft, protective goggles not restricting visual field must be worn≃. (This must remain as a permanent restriction);

(b) Any accompanying pilot must be made aware of the holder's monocular vision≃. (This must remain as a permanent restriction);

(c) ANot valid for flight as pilot-in-command by day or night until a satisfactory flight test has been completed with a flight examiner in each case≃. (This restriction may be removed at subsequent assessment, according to the results of the flight test, or amended to the endorsement in (d) below);

(d) ANot valid for flight as pilot-in-command by night until a satisfactory flight test has been completed with a flight examiner ≃. (This restriction may be removed at subsequent assessment, according to the result of the flight test).

(5) For substandard vision in one eye (vision between 6/6 and 6/24), the appropriate minimum restrictions are as follows:

(a) Any accompanying pilot must be made aware of the holder's substandard vision in one eye. ~(This must remain as a permanent restriction);

(b) A Not valid for flight as pilot-in-command by night until a satisfactory flight test has been completed with a flight examiner~. (This restriction may be removed at subsequent assessment, according to the results of the flight test).

(6) The relevant protocols are contained in Schedules 21 and 22.

3.2 **Near vision**

(1) Applicants must be able to read 6/9 (N5) at a distance of 33 centimetres and N14 at a distance of 100 centimetres or have equivalent visual acuity for these distances (6/12, 20/40 at 33 cm; 6/24, 20/80 at 100 cm). An applicant who meets this standard only by use of spectacles may be granted a medical certificate provided this is endorsed with the following limitation:

ASuitable corrective lenses must be readily available~ .

(2) This means that these must be available for immediate use when exercising the privileges of the licence. This limitation may be satisfied by the availability of appropriate bifocal or trifocal spectacles which permit the reading of instruments and a chart or manual held in one hand, without impeding the use of distance vision through the windscreen when wearing the spectacles. Single-vision near correction (full lenses of one power only, appropriate to reading) is not acceptable, since wearing these significantly reduces distance visual acuity.

3.3 **Distance vision**

(1) Applicants must have a distance visual acuity of not worse than 6/6 or its equivalent (20/30, 0.66) in each eye separately, with or without corrective lenses. When this standard can be met only by the use of corrective lenses, an applicant may be granted a medical certificate provided this is endorsed with the following limitation:

ASuitable corrective lenses must be worn for distance vision~ .

(2) An applicant with uncorrected distance visual acuity of 6/24 or its equivalent (20/80, 0.25) or worse in either eye is also subject to the following limitation endorsed on the medical certificate:

A Suitable spare corrective spectacles must be readily available~ .

(3) The visual acuity, with and without correction, must be recorded at each examination.

3.4 **Combined distance and near vision correction**

Applicants requiring distance vision correction must have a near point of accommodation not greater than 33 centimetres, as measured while wearing the required distance vision corrective lenses. Suitable correction for near vision may be necessary in addition to distance vision correction.

3.5 **Dioptre limits**

A need for corrective lenses for either eye within the range of plus or minus 3 dioptres (spherical equivalent) may be accepted, provided that the distance visual acuity without correction is not worse than 6/60 in each eye separately. Spectacle

lenses outside this range are not routinely acceptable, but medical conclusion may permit an applicant to be assessed as fit on production of satisfactory specialist reports. The medical certificate will, where appropriate, be endorsed with the following:

(1) A Contact lenses must be worn $\tilde{=}$; and

(2) A Spare spectacles must be readily available $\tilde{=}$.

3.6 **Colour perception standards**

(1) Applicants must demonstrate ability to perceive readily those colours the perception of which is necessary for the safe performance of duties. The use of tinted lenses to obtain adequate colour perception is not permitted.

(2) Applicants must be tested for the ability to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same colour temperature such as that provided by Illuminant AC $\tilde{=}$ or AD $\tilde{=}$ as specified by the International Commission on Illumination (ICI).

(3) Applicants who fail to obtain a satisfactory score in such a test may nevertheless be assessed as fit if the applicants are able to readily and correctly identify aviation coloured lights displayed by means of a recognised colour perception lantern i.e. Farnsworth, Beyenne, Holmes-wright type A or Spectrolux.

(4) Stereopsis and NPC testing will be required.

(5) Full visual fields will be required.

4. Ear, nose and throat and hearing standards

(1) Applicants must have no established medical history or clinical diagnosis of the following:

(a) Any pathological process, acute or chronic, of the internal ear or middle ear cavities;

(b) any unhealed (unclosed) perforation of the tympanic membranes, except that an applicant with a single dry perforation may be eligible for a certificate if the defect does not prevent compliance with the hearing standards;

(c) any chronic or serious recurrent obstruction of the Eustachian tubes;

(d) any serious or recurrent disturbance of the vestibular system;

(e) any obstruction to free nasal air entry to both sides;

(f) any serious malformation, or serious acute or chronic condition of the buccal cavity or upper respiratory tract; or

(g) any speech defect likely to interfere with the safe performance or duties in exercising the privileges of the licence.

(2) Applicants must be free from any hearing defect which would interfere with the safe exercise of the privileges of the licence. Routine audiometry is required at each medical examination. Applicants must not have a hearing loss in excess of 35 dB at each frequency between 500 and 2000 Hz, or 50 dB at 3000 Hz in either ear. Applicants failing to comply with this standard in either ear may be assessed fit if the hearing loss for both ears, when

averaged at each frequency does not exceed the stated limit, and the applicant achieves 90 percent or better discrimination when speech audiometry is tested.

5. Electro-cardiography

Electro-cardiography must form part of the cardiovascular examination for the initial issue of a Class 1 medical certificate, and at recertification at the following intervals:

Less than 40 years of age – every four years;
40 to 59 years of age – every two years;
60 years of age and older – annually.

6. Flow Volume Lung Function

Flow volume lung function testing must form part of the respiratory examination for the initial issue of a Class I medical certificate, and at recertification at the following intervals:

Less than 40 years of age - every four years;
40 to 59 years of age - every two years;
60 years of age and older -annually.

Certification must be done according to Schedule 6.

Class 2 medical certificate

2. Physical and mental standards

Applicants must have no established medical history or clinical diagnosis of -

2.1 **Psychiatric**

(1) Any of the following conditions that are of a severity which renders the applicant incapable of safely exercising the privileges of the licence, or makes it likely that within two years of the assessment the applicant will be unable to safely exercise the privileges of the licence, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation:

(a) A psychotic disorder, unless the psychosis was of toxic origin and there has been complete recovery;

(b) alcohol or other psychoactive substance abuse or dependence;

(c) character or behaviour disorder, severe enough to have resulted in an overt act;

(d) any other psychiatric disorder.

(2) An applicant who has a history of psychoactive substance abuse or dependence may apply for an exemption to the designated body or institution if the following circumstances exist:

(a) The applicant has been under medical treatment for psychoactive substance abuse and the medical practitioner concerned, approved by the designated body or institution, certifies that the applicant is free from the effects of psychoactive substance abuse;

(b) the applicant provides the name of a sponsor who is prepared to certify that the applicant no longer takes a psychoactive substance in any form. Such a sponsor must be a person acceptable to the designated body or institution for this purpose;

(c) the applicant signs an undertaking not to take any psychoactive substance while holding a valid licence.

2.2 **Neurological**

(1) Any disease, injury or abnormality of the nervous system, the effects of which, according to medical conclusion, are likely to interfere with the safe exercise of the privileges of the licence or cause sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. In particular, the following are not acceptable:

(a) Epilepsy;

(b) any seizure disorder;

(c) any disturbance of conscious-ness without satisfactory medical explanation of the cause;

(d) migraine;

(e) incapacitated headaches.

(2) The relevant protocols are contained in Schedules 1, 2, 3 and 4.

2.3 **Musculoskeletal**

Any active disease of the bones, joints, muscles, or tendons, or any significant functional limitation arising from previous congenital or acquired disease or injury will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Functional abnormalities affecting bones, joints, muscles, or tendons, compatible with the safe exercise of the privileges of the licence, may be assessed as fit. An appropriate demonstration of ability via a skill test may be required.

2.4 **Gastrointestinal**

(1) Any disease or abnormality or result of disease of surgical operation, affecting the digestive tract and its attachments, including the biliary system and hernial orifices, of a severity likely to cause obstruction, significant functional disorder or infection, or sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 5.

2.5 **Respiratory**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the lungs, mediastinum, pleura, chest wall or respiratory passages of a severity likely to cause infection, functional disorder or sudden or subtle incapacitation at altitude, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocols are contained in Schedules 6, 7, 8 and 9.

2.6 **Cardiovascular**

(1) Any disease or abnormality, or result of disease or surgical operation, which affects the heart or circulatory system and is of a severity likely to cause functional disorder or sudden or subtle incapacitation. Evidence of myocardial infarction, or significant hypertension, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) Disorders of cardiac rhythm requiring a pacemaker will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Applicants with evidence strongly suggestive of coronary artery disease, including the presence of cardiovascular risk factors, will be assessed as unfit unless adequate myocardial perfusion can be demonstrated and reversible risk factors controlled.

(3) The relevant protocols are contained in Schedules 10 and 11.

2.7 **Metabolic, nutritional and endocrine**

(1) Any metabolic, nutritional or endocrine disorders likely to interfere with the safe exercise of the privileges of the licence, or to cause sudden or subtle incapacitation will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Any applicant with a diagnosis of a metabolic, nutritional or endocrine disorder will generally be assessed as unfit, but may be considered for special certification by the designated body or institution.

(2) The relevant protocols are contained in Schedules 12, 13, 14, 15 and 16.

2.8 **Haematologic and immunologic**

(1) Any active disease of the lymphatic system or of the blood will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Those with chronic diseases of these systems in a state of remission may be assessed as fit, provided appropriate specialist reports permit medical conclusion that the condition is not likely to affect the safe exercise of the privileges of the licence. Applicants with any infectious diseases, the effects of which are likely to cause functional impairment or sudden or subtle incapacitation, must be assessed as unfit until such time as effective and acceptable treatment has removed such effects.

(2) The relevant protocols are contained in Schedules 15, 16, 17 and 18.

2.9 **Genitourinary**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the kidneys, urine, urinary tract, menstrual function or genital organs, to a degree likely to cause functional impairment or sudden or subtle incapacitation, such that the applicant will be unable to safely exercise the privileges of the licence will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 19.

2.10 **Oncology**

The relevant protocols are contained in Schedules 3, 5, 18, 19 and 20.

3. Visual standards

3.1 **General**

(1) An applicant may not have -

(a) any condition or congenital abnormality of either eye or its attachments likely to impede the safe exercise of the privileges of the licence;

(b) any abnormality of visual fields or binocular function;

(c) any manifest squint, or large errors of eye muscle balance (phoria). The acceptable limits for ocular muscle balance are 12 prism dioptres for exophoria, 6 dioptres for esophoria, and 12 dioptre for hyperphoria measured at distance. If corrective lenses are required, phoria must be measured while using the appropriate corrective lenses;

(d) any anatomical or functional monocularity or substandard vision in one eye at the initial issue of a Class 2 medical certificate. However, medical conclusion may permit experienced licence holders who develop monocularity or substandard vision to be granted a medical certificate with appropriate restrictions following a period sufficient to permit adjustment to this condition.

(2) Monocularity means that either an eye is absent, or its vision cannot be corrected to better than 6/24.

(3) Substandard vision in one eye means central vision better than 6/24 but worse than 6/9, with normal visual fields.

(4) For monocularity, the appropriate minimum restrictions initially are as follows:

(a) If flying open cockpit aircraft, protective goggles not restricting visual field must be worn≃. (This must remain as a permanent restriction);

(b) Any accompanying pilot must be made aware of the holder's monocular vision≃ . (This must remain as a permanent restriction);

(c) ANot valid for flight as pilot-in-command by day or night until a satisfactory flight test has been completed with a flight examiner in each case≃. (This restriction may be removed at subsequent assessment, according to the results of the flight test, or amended to the endorsement in (d) below);

(d) ANot valid for flight as pilot-in-command by night until a satisfactory flight test has been completed with a flight examiner≃. (This restriction may be removed at subsequent assessment, according to the results of the flight test).

(5) For substandard vision in one eye (vision between 6/6 and 6/24), the appropriate minimum restrictions initially are as follows:

(a) Any accompanying pilot must be made aware of the holder=s substandard vision in one eye~=. (This must remain as a permanent restriction);

(b) ANot valid for flight as pilot-in-command by night until a satisfactory flight test has been completed with a flight examiner~=. (This restriction may be removed at subsequent assessment, according to the results of the flight test.)

(6) The relevant protocols are contained in Schedules 21 and 22.

3.2 **Near vision**

(1) Applicants must be able to read 6/9 (N5) at a distance of 33 centimetres and N14 at a distance of 100 centimetres or have equivalent visual acuity for these distances (6/12, 20/40 at 33 cm; 6/24, 20/80 at 100 cm). An applicant who meets this standard only by use of spectacles may be granted a medical certificate provided this is endorsed with the following limitation:

ASuitable corrective lenses must be readily available~=.

(2) This means that these must be available for immediate use when exercising the privileges of the licence. This limitation may be satisfied by the availability of appropriate bifocal or trifocal spectacles which permit the reading of instruments and a chart or manual held in one hand, without impeding the use of distance vision through the windscreen when wearing the spectacles. Single-vision near correction (full lenses of one power only, appropriate to reading) is not acceptable, since wearing these significantly reduces distance visual acuity.

3.3 **Distance vision**

(1) Applicants must have distance visual acuity of not worse than 6/9 or its equivalent (20/40, 0.5) in each eye separately, with or without corrective lenses. When this standard can be met only by the use of corrective lenses, an applicant may be assessed as fit but the medical certificate must bear the following endorsement:

ASuitable corrective lenses (distance vision) must be worn~= .

(2) An applicant with uncorrected distance visual acuity of 6/36 or its equivalent (20/120, 0.12) or worse in either eye must also be subject to the following limitation endorsed on the medical certificate:

ASuitable spare corrective spectacles must be readily available~=.

(3) The visual acuity, with and without correction, must be recorded at each examination.

3.4 **Combined distance and near vision correction**

Applicants requiring distance vision correction must have a near point of accommodation not greater than 33 centimetres, as measured while wearing the required distance vision corrective lenses. Suitable correction for near vision may be necessary in addition to distance vision correction.

3.5 **Dioptre limits**

A need for lenses for either eye within the range of plus or minus 5 dioptres (spherical equivalent) may be accepted, provided that the visual acuity without correction is not worse than 6/60 in each eye separately. Spectacle lenses outside this range are not routinely acceptable, but medical conclusion may permit an applicant to be assessed as fit on production of satisfactory specialist reports. The medical certificate will, where appropriate, be endorsed with the following:

(3) AContact lenses must be worn≅ ; and

(4) ASpare spectacles must be readily available≅.

3.6 **Colour perception standards**

(1) Applicants must demonstrate ability to perceive readily those colours the perception of which is necessary for the safe performance of duties. The use of tinted lenses to obtain adequate colour perception is not permitted.

(2) A medical certificate may be issued if medical conclusion indicates that the applicant has a minor colour perception defect which is compatible with the safe exercise of the privileges of the licence provided the certificate is endorsed with the following limitations:

(a) AFor private pilot licence privileges only≅ ;

(b) ANot valid for flight in the vicinity of a controlled aerodrome (unless the aircraft is in radio contact with aerodrome control)≅ ;

(c) ANot valid for night flying, IFR flying or flying of EFIS equipped aircraft≅ .

(3) Applicants must be tested for the ability to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same colour temperature such as that provided by Illuminant AC≅ or AD≅ as specified by the International Commission on Illumination (ICI).

(4) Applicants who fail to obtain a satisfactory score in such a test may nevertheless be assessed as fit if the applicants are able to readily and correctly identify aviation coloured lights displayed by means of a recognised colour perception lantern, i.e. Farnsworth, Beyenne, Holmes-wright type A or Spectrolux.

(5) Stereopsis and NPC testing will be required.

(6) Full visual fields will be required.

4. Ear, nose and throat and hearing standards

(1) Applicants must have no established medical history or clinical diagnosis of the following:

(a) Any pathological process, acute or chronic, of the internal ear or middle ear cavities;

(b) any uphealed (unclosed) perforation of the tympanic membranes, except that an applicant with a single dry perforation may be eligible for a certificate if the defect does not prevent compliance with the hearing standards;

(c) any chronic or serious recurrent obstruction of the Eustachian tubes;

(d) any serious or recurrent disturbance of the vestibular system;

(e) any obstruction to free nasal air entry on both sides;

(f) any serious malformation, or serious acute or chronic condition of the buccal cavity or upper respiratory tract; or

(g) any speech defect likely to interfere with the safe performance of duties in exercising the privileges of the licence.

(2) Applicants must be free from any hearing defect which would interfere with the safe exercise of the privileges of the licence.

(3) Pilots with a private pilot licence instrument rating must have routine audiometry. Applicants must not have a hearing loss in excess of 35 dB at each frequency between 500 and 2000 Hz, or 50 dB at 3000 Hz, in either ear. Applicants failing to comply with this standard in either ear may be assessed fit if the hearing loss for both ears, when averaged at each frequency, does not exceed the stated limit, and the applicant achieves 90 percent or better discrimination when speech audiometry is tested.

5. Electro-cardiography

Electro-cardiography must form part of the cardiovascular examination for the initial issue of a Class 2 medical certificate and at recertification at the following intervals:

Less than 40 years of age – every four years;
40 to 59 years of age – every two years;
60 years of age and older – annually.

6. Flow Volume Lung Function

Flow volume lung function testing must form part of the respiratory examination for the initial issue of a Class 2 medical certificate, and at recertification at the following intervals:

Less than 40 years of age – every four years;
40 to 59 years of age – every two years;
60 years of age and older – annually.

Certification must be done according to Schedule 6.

Class 3 medical certificate

2. Physical and mental standards

Applicants must have no established medical history or clinical diagnosis of -

2.1 **Psychiatric**

(1) Any of the following conditions that are of a severity which renders the applicant incapable of safely exercising the privileges of the licence, or makes it likely that within two years of the assessment the applicant will be unable to safely exercise the privileges of the licence, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation:

(a) A psychotic disorder, unless the psychosis was of toxic origin and there has been complete recovery;

(b) alcohol or other psychoactive substance abuse or dependence;

(c) character or behaviour disorder, severe enough to have resulted in an overt act;

(d) any other psychiatric disorder.

(2) An applicant who has a history of psychoactive substance abuse or dependence may apply for an exemption to the designated body or institution if the following circumstances exist:

(a) The applicant has been under medical treatment for psychoactive substance abuse and the medical practitioner concerned, approved by the designated body or institution, certifies that the applicant is free from the effects of psychoactive substance abuse;

(b) the applicant provides the name of a sponsor who is prepared to certify that the applicant no longer takes a psychoactive substance in any form. Such a sponsor must be a person acceptable to the designated body or institution for this purpose;

(c) the applicant signs an undertaking not to take any psychoactive substance while holding an air traffic service licence.

2.2 **Neurological**

(1) Any disease, injury or abnormality of the nervous system, the effects of which, according to medical conclusion, are likely to interfere with the safe exercise of the privileges of the licence or cause sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. In particular, the following are not acceptable:

(a) Epilepsy;

(b) any seizure disorder;

(c) any disturbance of conscious-ness without satisfactory medical explanation of the cause;

(d) migraine;

(e) incapacitated headaches.

(2) The relevant protocols are contained in Schedules 1, 2, 3 and 4.

2.3 **Musculoskeletal**

Any active disease of the bones, joints, muscles, or tendons, or any significant functional limitation arising from previous congenital or acquired disease or injury will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Functional abnormalities affecting the bones, joints, muscles, or tendons, compatible with the safe exercise of the privileges of the licence, may be assessed as fit. An appropriate demonstration of ability may be required.

2.4 **Gastrointestinal**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the digestive tract and its attachments including the biliary system and hernial orifices, of a severity likely to cause obstruction, significant functional disorder or infection, or sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 5.

2.5 **Respiratory**

(1) Any disease or abnormality, or result of disease or surgical operation, affecting the lungs, mediastinum, pleura, chest wall or respiratory passages of a severity likely to cause infection, functional disorder or sudden or subtle incapacitation, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Radiographic examinations will be required for the initial issue of a Class 3 medical certificate.

(2) The relevant protocols are contained in Schedules 6, 7, 8 and 9.

2.6 **Cardiovascular**

(1) Any disease or abnormality, or result of disease or surgical operation, which affects the heart or circulatory system and is of a severity likely to cause functional disorder or sudden or subtle incapacitation. Evidence of myocardial infarction, or significant hypertension, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) Disorders of cardiac rhythm requiring a pacemaker will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Applicants with evidence strongly suggestive of coronary artery disease, including the presence of cardiovascular risk factors, will be assessed as unfit unless adequate myocardial perfusion can be demonstrated and reversible risk factors controlled.

(3) The relevant protocols are contained in Schedules 10 and 11.

2.7 **Metabolic, nutritional and endocrine**

(1) Any metabolic, nutritional or endocrine disorders likely to interfere with the safe exercise of the privileges of the licence, or to cause sudden or subtle incapacitation will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Any applicant with a diagnosis of a metabolic, nutritional or endocrine disorder will generally be assessed as unfit, but may be considered for special certification by the designated body or institution.

(2) The relevant protocols are contained in Schedules 12, 13, 14, 15 and 16.

2.8 **Haematologic and immunologic**

(1) Any active disease of the lymphatic system or of the blood will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation. Those with chronic diseases of these systems in a state of remission may be assessed as fit, provided appropriate specialist reports permit medical

conclusion that the condition is not likely to affect the safe exercise of the privileges of the licence. Applicants with any infectious diseases, the effects of which are likely to cause sudden or subtle incapacitation, must be assessed as unfit until such time as effective and acceptable treatment has removed such effects.

(2) The relevant protocols are contained in Schedules 15, 16, 17 and 18.

2.9 **Genitourinary**

(1) Any disease or abnormality or result of disease or surgical operation affecting the kidneys, urine, urinary tract, menstrual function or genital organs, to a degree likely to cause sudden or subtle incapacitation such that the applicant will be unable to safely exercise the privileges of the licence, will be disqualifying unless acceptable and effective treatment has controlled any additional risk of functional disorder or sudden or subtle incapacitation.

(2) The relevant protocol is contained in Schedule 19.

2.10 **Oncology**

The relevant protocols are contained in Schedules 3, 5, 18, 19 and 20.

3. Visual standards

3.1 **General**

(1) An applicant may not have -

(a) any condition or congenital abnormality of either eye or its attachments likely to impede the safe exercise of the privileges of the licence;

(b) any abnormality of visual fields or binocular function;

(c) any manifest squint, or large errors of eye muscle balance (phoria). The acceptable limits for ocular muscle balance are 12 prism dioptres for exophoria, 6 dioptres for esophoria; and 12 dioptre for hyperphoria measured at distance. If corrective lenses are required, phoria must be measured while using the appropriate corrective lenses;

(d) any anatomical or functional monocularity at the initial issue of a Class 3 medical certificate. However, medical conclusion may permit experienced licence holders who become anatomically or functionally monocular to be granted a medical certificate with appropriate restrictions, following a period sufficient to permit adjustment to the monocular state.

(2) Monocularity means that either an eye is absent, or its vision cannot be corrected to better than 6/24.

(3) Substandard vision in one eye means central vision better than 6/24 but worse than 6/9, with normal visual fields.

(4) The relevant protocols are contained in Schedules 21 and 22.

3.2 **Near vision**

(1) Applicants must be able to read 6/9 (N5) at a distance of 33 centimetres and N14 at a distance of 100 centimetres or have equivalent visual acuity for these distances (6/12, 20/40 at 33 cm; 6/24, 20/80 at 100

cm). An applicant who meets this standard only by use of spectacles may be granted a medical certificate provided this is endorsed with the following limitation:

ASuitable corrective lenses must be readily available≅.

(2) This means that these must be available for immediate use when exercising the privileges of the licence. This limitation may be satisfied by the availability of appropriate bifocal or trifocal spectacles which permit the reading of displays and a chart or manual held in one hand, without impeding the use of distance vision when wearing the spectacles. The wearing of single vision near correction (full lenses of one power only, appropriate to reading), significantly reduces distance visual acuity, and is not acceptable in an air traffic control tower. Nevertheless, full lenses may be acceptable in a radar room in which case the medical certificate must be endorsed with the following:

ASuitable corrective lenses must be readily available (full lenses permitted in radar room)≅,

to indicate this option has been permitted. Whenever there is a requirement to obtain or renew corrective lenses, an applicant must advise the refractionist of reading distances for the air traffic service unit in which the applicant is likely to function.

3.3 **Distance vision**

(1) Applicants must have distance visual acuity of not worse than 6/6 or its equivalent (20/30, 0.66) in each eye separately with or without corrective lenses. When this standard can be obtained only by the use of corrective lenses, an applicant may be assessed as fit subject to the following endorsement on the medical certificate:

ASuitable corrective lenses (distance vision) must be worn≅ .

(2) This endorsement means that these lenses must be worn when the applicant exercises the privileges of the licence.

(3) An applicant with uncorrected distance visual acuity of 6/24 or its equivalent (20/80, 0.25) or worse in either eye is also subject to the following limitation endorsed on the medical certificate:

ASuitable spare corrective spectacles must be readily available≅ .

(4) The visual acuity, with and without correction, must be recorded at each examination.

3.4 **Combined distance and near vision correction**

Applicants requiring distance vision correction must have a near point of accommodation not greater than 33 centimetres, as measured while wearing the required distance vision corrective lenses. Suitable correction for near vision may be necessary in addition to distance vision correction.

3.5 **Dioptre limits**

A need for corrective lenses for either eye within the range of plus or minus 3 dioptres (spherical equivalent) may be accepted, provided that the visual acuity without correction is not worse than 6/60 in each eye separately. Spectacle lenses outside this range are not routinely acceptable, but medical conclusion may permit

an applicant to be assessed as fit on production of satisfactory specialist reports. The medical certificate will be, where appropriate, endorsed with the following:

(4) AContact lenses only must be worn≅ ; and

(5) ASpare spectacles must be readily available≅.

3.6 **Colour perception standards**

(1) Applicants must demonstrate ability to perceive readily those colours the perception of which is necessary for the safe performance of duties. The use of tinted lenses to obtain adequate colour perception is not permitted.

(2) Applicants must be tested for the ability to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same colour temperature such as that provided by Illuminant AC≅ or AD≅ as specified by the International Commission on Illumination (ICI).

(3) Applicants who fail to obtain a satisfactory score in such a test may nevertheless be assessed as fit if the applicants are able to readily and correctly identify aviation coloured lights displayed by means of a recognised colour perception lantern, i.e. Farnsworth, Beyenne, Holmes-wright type A or Spectrolux.

(4) Stereopsis and NPC testing will be required.

(5) Full visual fields will be required.

4. Ear, nose and throat and hearing standards

(1) Applicants must have no established medical history or clinical diagnosis of the following:

(a) Any pathological process, acute or chronic, of the internal ear or middle ear cavities;

(b) any uphealed (unclosed) perforation of the tympanic membranes, except that an applicant with a single dry perforation may be eligible for a certificate if the defect does not prevent compliance with the hearing standards;

(c) any serious or recurrent disturbance of the vestibular system;

(d) any serious malformation, or serious acute or chronic condition of the buccal cavity or upper respiratory tract; or

(e) any speech defect likely to interfere with the safe performance of duties in exercising the privileges of the licence.

(2) Applicants must be free from any hearing defect which would interfere with the safe exercise of the privileges of the licence. Routine audiometry is required at each medical examination. Applicants must not have a hearing loss in excess of 35 dB at each frequency between 500 and 2000 Hz, or 50 dB at 3000 Hz, in either ear. Applicants failing to comply with this standard in either ear may be assessed fit if the hearing loss for both ears, when averaged at each frequency does not exceed the stated limit, and the applicant achieves 90 percent or better discrimination when speech audiometry is tested.

5. Electro-cardiography

Electro-cardiography must form part of the cardiovascular examination for the initial issue of a Class 3 medical certificate, and at recertification at the following intervals:

Less than 40 years of age – every four years;
40 to 59 years of age – every two years;
60 years of age and older – annually.

6. Flow Volume Lung Function

Flow volume lung function testing must form part of the respiratory examination for the initial issue of a Class 3 medical certificate, and at recertification at the following intervals:

Less than 40 years of age – every four years;
40 to 59 years of age – every two years;
60 years of age and older – annually.

Certification must be done according to Schedule 6.

67.00.3 DESIGNATION OF BODY OR INSTITUTION

1. Conditions, rules, requirements, procedures or standards for a designation.

(Reserved)

67.00.4 DESIGNATION OF AVIATION MEDICAL EXAMINERS

1. Conditions, rules, requirements, procedures or standards for a designation

(Reserved.)

1. Definitions

Any word or expression to which a meaning has been assigned in the Aviation Act, 1962, and the Namibian Civil Aviation Regulations, 1999, bears, when used in this technical standard, the same meaning unless the context indicates otherwise, and -

ADAME$\tilde{=}$means designated aviation medical examiner;
Adesignated aviation medical examiner$\tilde{=}$means a aeromedically qualified doctor designated by the Director, after consultation with the designated body or institution, and granted the authority to perform medical examinations or tests required for the issuing of Class 2 medical certificates;
Adesignated senior aviation medical examiner $\tilde{=}$ means a designated aviation medical examiner given the additional authority to perform medical examinations or tests required for the issuing of Class 1 and Class 3 medical certificates;
Adesignation$\tilde{=}$ means the authority to exercise the powers and perform the duties of a designated aviation medical examiner, which commences on the date on which the document of designation is issued by the Director to the designated aviation medical examiner and remains in force for a period of 12 months following this date;
ADSAME$\tilde{=}$ means a designated senior aviation medical examiner;
Atermination of designation$\tilde{=}$ means the revoking of a designation before the expiry of the 12 month period.

2. General

(1) DAMEs assume certain responsibilities directly related to the safety programme of the designated body or institution. They serve in their communities, as the aviation safety experts in respect of medical matters. They have the responsibility to ensure that only those applicants who are physically and mentally capable of performing safely, may exercise the privileges of their certificates.

(2) To properly perform the duties associated with these responsibilities, DAMEs must keep abreast of the general medical knowledge applicable to aviation. They must also have detailed knowledge and understanding of all rules, regulations, policies and procedures relating to the medical certification of applicants. They must also possess acceptable equipment and have adequate facilities necessary to carry out the prescribed examinations.

3. Selection and retention of DAMEs

In the selection and retention of DAMEs, the designated body or institution will recommend only professionally qualified, practising physicians who have an expressed interest in promoting aviation safety. Only those physicians who enjoy the fullest respect of their associates and members of the public whom they serve, will be designated and retained as DAMEs.

3.1 Criteria for designation

3.1.1 Authority to perform Class 2 examinations

(1) Qualifications

The applicant for designation as a DAME with authority to perform examinations for Class 2 medical certificates must be a professionally qualified physician in good standing. In addition, the applicant must possess an unrestricted licence(s) to practice medicine, including an unrestricted licence to practice in Namibia, the foreign country, or area in which the designation is sought. The applicant=s past professional performance and personal conduct must be suitable for a position of responsibility and trust. Special consideration will be given to those applicants who are pilots, who have special training or expertise in aviation medicine, or who were previously designated but have relocated to a new geographical area.

(2) Distribution

There must be a determined need for a DAME in the area, based on adequacy of coverage related to pilot population.

(3) Credentials

Initial application. At the time of initial application for designation, the physician must submit the following documents or copies thereof:

(a) Medical degree;

(b) certificate, diploma or degrees of any postgraduate professional training;

(c) Namibian Medical and Dental Council registration certificate;

(d) Namibian Medical and Dental Council certificate of good standing;

(e) references from three physicians in applicant=s geographical location regarding professional standing, or a statement from the office of the medical society in the locality of practice, that the applicant is a medical doctor in good standing;

(f) a statement affirming that -

(i) there are no current restrictions of medical practice, and there are no adverse actions proposed or pending by the Namibian Medical and Dental Council that would limit medical practice; and

(ii) there are no known investigations, charged indictments, or pending actions in any court of law; and

(g) proof of the ability to read, write, speak, and understand the English language.

(4) Conditions of designation

To become a DAME, the applicant must agree to comply with the requirements.

(5) Change of status

The DAME must promptly notify the designated body or institution, should there be a change in the DAME' status of authority to practice medicine.

(6) Professionalism

To be informed regarding the progress in aviation medicine, to be thoroughly familiar with the relevant techniques of examination, medical assessment, as well as certification of applicants, and to abide by the policies, rules and regulations of the designated body or institution as approved by the Director.

(7) Examinations

To personally conduct all medical examinations. Other physicians or para-professional personnel may perform specialized parts of the examinations under the general supervision of the DAME, who must sign the documents, and list his/her designation identification number, both on the application form and on the medical certificate. In all cases the DAME must review, certify, and assume responsibility for accuracy and completeness of the total report of examination.

(8) Continuing education

Each physician must attend at least one aviation medical conference and/or CME course within each 4-year interval. Travel costs and other expenses for the DAME and staff to attend the conferences are the responsibility of the attendees.

(9) Office address and telephone numbers

Each DAME is required to promptly advise, in writing, the designated body or institution of any change in office location or telephone numbers. Continuation of designation at the new location is contingent on need.

(10) Facilities and equipment

The DAME must have adequate facilities for performing the required examinations and possess, or agree to obtain, such equipment, or access to the necessary facilities, prior to conducting any aviation medical examination.

(11) Conduct

The DAME must comply with the policies, orders and regulations of the designated body or institution as approved by the Director.

3.1.2 Authority to perform Class 1 and Class 3 examinations

In addition to the criteria for designation as a DAME, the physician must demonstrate, by compliance with the requirements for continued service as a DAME, acceptable prior performance as a DAME authorised to perform Class 2 examinations for a period of at least 3 years.

3.2 **Prohibited examinations**

A DAME may not perform a self examination for the issuing of a medical certificate nor issue a medical certificate to himself or herself.

3.3 **Duration of designation**

Designations of physicians as DAMEs are effective for 1 year following the date of issue, unless terminated earlier by the Director or the designee. For continued service as a DAME, the designee must reregister annually. In the event of office relocation or change in practice, a designation will terminate and may be reissued, on request, by the Director. In respect of the relocation, a determination of adequacy or coverage will be made.

3.4 **Authority of a DAME**

A DAME has the authority to -

(1) personally conduct physical exami-nations in accordance with the guidance and practices as laid down by the designated body or institution;

(2) issue, defer or deny medical certificates in accordance with the provisions of Part 67 of the CARs subject to recon-sideration by the designated body or institution.

3.5 **Procedures for designation**

(1) Designation

(a) Authority to perform Class 2 examinations

Physicians who request authority to perform Class 2 examinations must submit a written request to the Director.

(b) Authority to perform Class 1 and Class 3 examinations

Physicians who request DSAME status must submit a written request to the Director.

(c) Notification

For designations in their geographical areas of responsibility, the Director will inform the applicant in writing of his or her designation and will issue a Certificate of Designation and an Aviation Medical Examiner Identification Card. Identification cards expire one year after the date of issue.

(d) Examination documents

The designee must obtain the required forms from the Director. These forms must be afforded an appropriate degree of security, and any loss must immediately be reported to the Director.

(2) Designation or termination of designation

(a) Evaluation

The designated body or institution continuously evaluates the performance of each DAME. Only physicians who have demonstrated satisfactory performance in the past and who continue to show a definite interest in the DAME programme, will be redesignated. In addition, the designated body or institution must identify those DAMEs committing examination and certification errors and notify the Director, in writing, for appropriate action to be taken. Information collected by the designated body or institution, includes the following:

(i) Data on the adequacy of information on reports of medical examination;

(ii) errors made on reports of aviation medical examinations;

(iii) DAME interest and participation in aeromedical programmes and conferences; and

(iv) reports from the aviation and/or medical community concerning the DAME's professional performance and personal conduct as it may reflect on the designated body or institution as well as the Director.

(b) Basis for termination or non-renewal of designation

Termination or non-renewal of designation may be based, in whole or in part, on the following criteria:

(i) Failure to re-register punctually each year;

(ii) no examinations performed during the 12 months of initial designation;

(iii) performing less than 15 examinations per year after 24 months. This figure shall be 30 examinations per year for DSAMEs;

(iv) disregard of, or failure to demonstrate knowledge of, the rules, regulations, policies and procedures of the designated body or institution;

(v) repeated errors after receiving warnings from the designated body or institution;

(vi) failure to attend required conferences and/or continued aviation medical education;

(vii) movement of the location of practice from where presently designated;

(viii) failure to participate in any aviation medical programme when requested to do so by the designated body or institution or the Director;

(ix) unprofessional conduct in performing examinations;

(x) failure to comply with the provisions of the CARs Part 67;

(xi) personal conduct or public notoriety that may reflect adversely on the designated body or institution or the Director;

(xii) loss, restriction or limitation of a licence to practice medicine;

(xiii) any action that compro-mises public trust or interferes with the DAME's ability to fulfil the responsibilities of his or her designation;

(xiv) any illness or medical condition that may affect the physician=s sound professional judgment or ability to perform examinations;

(xv) arrest, indictment or conviction for violation of law;

(xvi) request by the physician for termination of designation; or

(xvii) any other reason if it is determined to be in the best interest of aviation safety as determined by the Director.

(c) Procedures for renewing designations

Before expiration of designation, the DAME concerned must apply for redesignation, in writing, to the Director. Physicians whose re-applications are not received will not be re-designated.

(d) Procedures for terminating or not renewing designations

The designated body or institution will advise the Director when to terminate or not renew a designation. When it is determined that a designation should be terminated or not renewed, the following procedures are applicable:

(i) The DAME will be notified in writing, by certified mail, of the reason(s) for the proposed action;

(ii) the written notification will give the DAME the option to respond in writing or in person within 30 days of the date of the letter;

(iii) in cases where a DAME is suspected of fraud or any other activity for which emergency action is necessary to assure aviation safety, the designated body or institution will advise the Director to immediately direct the DAME in writing, by certified mail, to cease all further examinations pending further investigation. The investigation must be conducted expeditiously. However, if the Director believes that the DAME=s cessation of further examinations should con-tinue pending final disposition of the matter by the Director, he or she may so direct the DAME in writing, by certified mail. The ter-mination procedures must be accomplished expeditiously.

(e) Return of materials

Whether by determination to not redesignate or termination of designation during the designation year, the DAME must return all CAD materials (including forms, identification card and certificate of designation) to the Director.

4. Requirements relating to waiver

(1) If an applicant has an established medical history or clinical diagnosis of any of the following, the DAME **may not** issue a medical certificate unless the applicant produces a valid waiver certificate:

(a) Diabetes Mellitus requiring insulin or other hypoglycaemic medication.

(b) Angina Pectoris or clinically significant coronary artery disease.

(c) Myocardial infarction, Coronary Angioplasty or Coronary Artery Bypass.

(d) Cardiac valve surgery or anticoagulation therapy.

(e) Psychosis.

(f) Depression, anxiety disorder or personality disorder.

(g) Alcoholism or drug dependence.

(h) Epilepsy or convulsion(s) without satisfactory medical explanation of cause.

(i) Head injury with Loss of Consciousness / Post Traumatic Amnesia > 30 minutes.

(j) Intracranial surgery, intracranial haemorrhage.

(k) Disturbance of consciousness without satisfactory medical explanation of cause.

(l) Obstructive airways disease on treatment with β_2 stimulants, theophylline preparations or oral steroids.

(m) FEV1% (measured / actual) <70%.

(n) Pulmonary embolism or coagulation disorder.

(o) Menière disease.

(p) Malignant neoplasm.

(q) Colour vision defect.

(r) Monocular vision.

(s) Organ transplant.

(t) Loss of limb(s) or vital organ(s).

(2) A waiver certificate may only be issued by the designated body or institution.

(3) The waiver serial number is assigned by the designated body or institution according to a set procedure which includes the class of medical, diagnosis and date of issue.

(4) A waiver certificate is issued on the form contained in Schedule 23.

67.00.6 APPLICATION FOR MEDICAL CERTIFICATE

1. Form of application

The form referred to in CAR 67.00.6(1), on which application must be made for the issuing of a medical certificate, is contained in Annexure A.

67.00.7 ISSUING OF MEDICAL CERTIFICTE

1. Form of certificate

The form referred to in CAR 67.00.7(1), on which a medical certificate is issued, is contained in Annexure B.

67.00.8 DUTIES OF HOLDER OF MEDICAL CERTIFICATE

1. Medication and flying

1.1 General

Due to the hostile, unnatural, and particularly unforgiving environment within which crew have to operate, it is particularly important that these people are able to function at an exceptional level if a high degree of aviation safety is to be maintained. Apart from the stressors of hypoxia, hypothermia, noise, vibration, fatigue, disturbed sleep cycles, and boredom (often interspersed with periods of intense concentration / sensory overload), crew sometimes have to contend with disorientating low-visibility conditions, combined with complex multi-axis movements. Any impairment of ability, even to the extent that would be considered totally insignificant in day-to-day activities, could have disastrous effects in the crew member, claiming perhaps not only his or her own life, but possibly that of many passengers, and even innocent people on the ground.

It is for this reason that many medications which other personnel use without any problems at all, are totally unacceptable for flight crew. Many conditions mentioned above are also true for other personnel such as air traffic controllers, and therefore the medication is equally unacceptable even though they do not fly.

The following guidelines have been compiled to assist practitioners who treat crew and other personnel, and also the DAMEs who do their regular medical examinations. Please note that these are only guidelines, and not blanket authorizations. Commonly, the medication itself is relatively innocuous, but the **underlying disease / indication is disqualifying**.

Some of these medications, while being acceptable, have certain conditions that must be complied with - eg. a pilot whose hypertension is well controlled on an ACE inhibitor must still comply with the hypertension protocol contained in Schedule 10. Despite using acceptable medication, the crew member should not fly until it has been demonstrated that **that individual** does not experience unwanted side-effects from the medication.

Medications that do not appear on this list are either unacceptable, or are acceptable only in very specific circumstances. The decision whether to allow a crew member to continue flying while using them will be made by the designated body or institution on an individualised basis on receipt of a written motivation to do so.

1.2 **Medications generally acceptable for crew**

(1) Simple antacids, Sucralfate and Colloidal bismuth (short term only).

(2) The systemic antihistamine currently accepted is Clarityne. (Not Clarityne D or any other).

(3) Zantac as nocte dose only, and no flying within 12 hours of the dose. Proton pump inhibitors like Lanzor may be approved on an individual basis. Also note that the underlying disease is generally disqualifying if active, and pilots may only fly if they are on maintenance therapy.

(4) Kaolin preparations.

(5) Cholesterol lowering substances: Fibrates (eg Lopid), HMG Co-A inhibitors (eg Zocor). Cholestiramine is acceptable but not a drug of first choice. Lurselle (Probucol) is **not** acceptable.

(6) Vitamins, minerals, fatty acids - not in combination preparations containing stimulants.

(7) Allopurinol.

(8) Aspirin - as prophylactic / anticoagulant in low doses - ie 75 mg/d

(9) Paracetamol - (short term). Not during flying.

(10) Malaria prophylaxis (**excluding** Lariam and Halfam). Prophylaxis currently recommended: - Chloroquine alone

- Chloroquine and Proguanil
- Chloroquine and Doxycycline
- Maloprim

(11) Low dose oral contraceptives after a 3 month stabilization period.

(12) Hormone replacement therapy (eg thyroid replacement, oestrogen replacement) also requires a three month stabilization period. Prerequisite: Serum hormone levels must be normal on treatment. Other hormones and anti-hormones are generally not acceptable, and will be decided on an individual basis.

(13) Sodium chromoglycate nasal spray, respiratory inhalers, and eye drops.

(14) Inhaled Steroids (eg Inflammide).

(15) Steroid or decongestant nasal sprays (short term).

(16) Cardioselective ß-blockers: Atenolol, Acebutalol, etc. Not recommended for aerobatic pilots.

(17) Hydrochlorothiazide with triamterene / amiloride. Acceptable for hypertension control in pilots, though not drugs of first choice. Not acceptable for other indications except on an individual basis.

(18) ACE inhibitors.

(19) Calcium channel blockers (**excluding** Verapamil).

(20) Topical preparations (antifungal, antiseptic, antibiotic, steroid, sunscreen, etc).

(21) Immunisation & Desensitisation (may fly 12 hours after Rx if no side effects or complications have occurred).

(22) Simple bulk laxatives.

(23) Carbocysteine

(24) Antibiotics: Doxycycline (**not** Minocycline) for acne. For the other antibiotics, the underlying condition and/or the antibiotic is generally disqualifying. Roaccutane is unacceptable.

(25) Non Steroid Anti Inflammatories: Some of the newer drugs such as Mobic can be acceptable in certain conditions.

SCHEDULE 1: PROTOCOL ON NEUROLOGICAL OR NEUROSURGICAL PROBLEMS

1. Head injuries

1.1 Mild head injury:

- LOC / PTA < 30 min
- No neurological deficit
- No compounding factors (skull #, vertigo, headache)

It is recommended that all applicants who sustain a head injury and have impaired consciousness (no LOC) be grounded for at least 7 days, as even they may develop post-traumatic epilepsy. Those who have even a fleeting LOC and amnesia should be grounded for a period of 6 weeks. These applicants tend to recover fully, and may then fly without restrictions.

1.2 Moderate head injury:

- LOC / PTA >30 min but <24h
- Focal neurological deficits
- Skull base #
- Surgical penetration of the dura

Following a moderate head injury (particularly if the duration of post-traumatic amnesia is >12h) the applicant should be made temporarily unfit for a period of 2 years (this decision is usually made/confirmed by the designated body or institution.) After 2 years, the applicant may apply for re-certification. The examination should preferably be coordinated by the designated body or institution and a series of special investigations are required (Eg. sleep deprivation / photostimulation EEG, CT / MRI scans of the brain, neuropsychological evaluation etc.) in addition to these special investigations, a practical flight test is usually required. Pilots may then be made fit, fit with restrictions, or unfit by the designated body or institution.

1.3 Severe head injury:

- LOC / PTA 1 to 7 days
- Neurological/intellectual impairment
- Traumatic penetration of the dura
- Depressed skull #
- Traumatic intracranial haemorrhage
- EEG abnormalities persisting for >2 years

These applicants will most likely be unfit for flying duties. Exceptional cases with a full clinical recovery may be considered for recertification after 5 years following rigorous assessment (with several specialist reports and special investigations) co-ordinated from the designated body or institution.

1.4 **Very severe head injury:**

- LOC / PTA >7 days
- Missile penetration of the brain
- Brain abscess
- Debilitating neurological deficit

These applicants will be unfit for flying duties.

2. Post-traumatic epilepsy (PTE)

Post-traumatic epilepsy is the chief cause of concern in a flight crew member following a head injury. It is subdivided, on clinical-pathophysiological grounds, into early (within 7 days), and late (after 7 days) types. Convulsions that occur during or immediately after impact are a distinct, more benign entity, which will probably not influence the applicant's flying career. Where LOC and PTA are indicative of the extent of diffuse brain injury, post-traumatic epilepsy is indicative of the extent and localisation of localised brain injury.

Time distribution of PTE :

15% develops within the first week.
30% develops within the first 3 months.
52% develops within the first 6 months.
75% develops within the first year.
95% develops within the first 2 years.
100% develops within the first 5 years (but cases still occur many years later !)

The diagnosis of epilepsy is usually made after the second convulsion, but the applicant is unfit to fly after the first convulsion! If there are 3 or more convulsions in the first year, the incidence of persistent epilepsy is as high as 85%.

After a head injury, the applicant is seen after 7 days, one month, and then 3 monthly for 2 years to observe for post-traumatic epilepsy and the post-traumatic syndrome. If an applicant does develop convulsions, he / she is seen weekly until they are controlled (he / she remains unfit to fly, of course!)

3. The post-traumatic syndrome

Following a head injury, some symptoms occur quite often eg. headache, dizziness, impaired concentration, memory impairment, and impaired thought processing. This often leads to irritability, depression or even irrational behaviour. The incidence of headache and dizziness after a head injury is approximately 50%. Interestingly enough, it is often those with mild head injuries who exhibit the post traumatic syndrome. These symptoms tend to resolve with time, with virtually all resolving within 2 years. The importance of this syndrome is that, if present, the applicant should be observed (and grounded) for a longer period then he / she would otherwise have been.

4. Epilepsy

4.1 Important concepts

Diagnosis of even a single epileptic attack means that the applicant is **permanently unfit to fly**.

No applicant who has had a convulsion after the age of 5 years should be considered for pilot training.

Any inexplicable LOC should be regarded as epilepsy until proven otherwise.

An applicant with a history of a single, uncomplicated **febrile convulsion** between the age of 1 and 5 years will still be eligible for pilot training. If, however, the convulsion was complicated, the applicant will no longer qualify, ie.

- A convulsion before the age of 1 year. This holds the risk for mental retardation and epilepsy later in life.
- Multiple febrile convulsions.
- Duration of convulsions longer than 5 minutes.
- Lateralising signs during febrile convulsions.

4.2 **Provocation testing**

There are certain techniques which can be used to determine whether an applicant has a high risk of developing convulsions. These include :

- Vagal stimulation.
- Hypoxia.
- Hyperthermia.
- Alcohol.
- Photic stimulation.
- Certain drugs.
- Sleep deprivation.
- Hyperventilation.

An applicant who develops EEG abnormalities in response to such provocation tests will be evaluated very thoroughly before he/she is allowed to fly. An applicant who develops convulsions in response to such provocation tests will be unfit to fly.

4.3 **Electroencephalography**

Certain EEG patterns are associated with an increased risk of developing convulsions. Applicants who exhibit these patterns must be fully assessed - an applicant should not be made unfit only on the grounds of an isolated EEG abnormality.

5. Syncope

Syncope is a loss of consciousness (usually fleeting) due to decreased cerebral perfusion.

Applicants who give a history of syncope must be fully assessed, as there are many organic (cardiovascular, neurological) diseases that may cause syncope.

The current recommendations are:

Any unexplained LOC	Unfit for initial pilot training until a five year period (without any further incidents) has elapsed.
	Unfit for re-certification until a 2 year period (without any further incidents) has elapsed.

The cause of the syncope may also be disqualifying. (Eg. cardiomyopathy)

6. Narcolepsy / sleep apnoea syndrome

These applicants are unfit to fly.

7. Transient memory loss

Loss of memory concerning a period of time (minutes to hours) is not uncommon. Causes include:

- Alcohol.
- Epilepsy (epilepsy accounts for ∀20% of these phenomena).
- Migraine.
- TIA's.
- Certain drugs (eg. benzodiazepines).
- Psychiatric disturbances (eg. psychogenic fugue).

These applicants must be evaluated according to the underlying cause. The vast majority will be unfit to fly.

8. Headache

The importance of individualising the approach to headaches cannot be overemphasised. The following must be considered :

- Frequency of headaches.
- Degree of incapacitation caused by the headache.
- Drugs used to treat the headache.

8.1 **Migraine**

An applicant who gets migraine headaches will be unfit to fly in the following situations:

(1) Migraine with aura (classical migraine) : If an aura, visual disturbances, aphasia, hemiparesis or hemisensory loss occurs as part of the migraine. Applicants who get classical migraine should not be allowed to pilot an aircraft. High altitude / hypoxia elicits migraine.

(2) Vertebrobacillar migraine : These applicants may have cortical blindness, vertigo, LOC or convulsions.

(3) Migraine equivalents : As in classical migraine.

(4) Migraine prophylaxis.

One can thus say that an applicant who gets migraine headaches will be unfit to fly unless he/she has very mild headaches, with no neurological deficit (one might then begin to doubt the diagnosis of migraine.) **Important :** Many applicants who give a history of "migraine" do not in fact get migraine headaches at all!

8.1.1 Migraine protocol : This protocol was accepted as follows:

(1) An applicant who gives a history of migraine should be made temporarily unfit and has to submit the following at initial application:

(a) Full neurological examination including an EEG.

(b) For approval by the Aviation Medical Panel.

(2) The only pilot who can be declared fit to fly will be the pilot who fulfills the criteria for migraine without aura. There are however a few conditions:

(a) The headaches should not be of such severity as to incapacitate the pilot from safely operating the aircraft.

(b) He/she may not have nausea and/or vomiting.

(c) He/she may not have photo- and/or phonophobia.

(d) If there is any change in the pilot's medical status with the migraine, he/she would automatically be unfit.

(e) If the pilot needs disallowable medication to abort, treat or prevent the migriane attack he/she is unfit.

(3) Factors to be taken into consideration:

(a) Individual/personality factors.

(b) Family history.

(c) Predisposing factors.

(d) Frequency of the headaches.

(e) Severity and duration of the headaches.

(f) Associated symptoms.

(g) Any complications.

(h) Medication.

8.1.2 Recommendation:

He/she should be advised not to fly at altitudes above 8000 ft.

8.2 Cluster headache

Cluster headache typically occurs in middle-aged males and is characterised as follows :

- Deep, "boring" retro-orbital pain.
- Patient usually remains ambulatory.
- Duration between 15 minutes an 2 hours.
- Occur a few times daily.
- This pattern lasts for 4 to 8 weeks, after which there is an attack free period of 6 months to several years.

Applicants who get cluster headaches are assessed according to frequency and severity of headaches, and need for medication. Frequent/ chronic cluster headaches are disqualifying, as is the medication. If an applicant has been attack free, without medication, for 2 years, he/she will be considered for re-certification.

8.3 **Tension headache**

Once again, the severity of the headaches and the need for medication are the deciding factors. The chronic use of medication is against fitness to fly. Associated depression or anxiety should also be considered.

8.4 **Other headaches**

- Temporal arteritis:

  ESR normal, no steroid treatment, asymptomatic for 1 year - fit.

- "Sexual headache":

  X Usually benign, and responds to β - blockers.

  X Fit (abstinence before flying is recommended.)

- Trigeminal neuralgia:

  X On medication - unfit.

  X After surgical treatment, asymptomatic for 2 months - fit.

- Conversion headaches:

  X Usually on disqualifying medications.

  X Mental condition of applicant *per se* probably disqualifying.

- Atypical facial pain:

  On medication - unfit.

- Post-traumatic headache:

  X Assess according to original head injury.

  X On medication - unfit.

SCHEDULE 2: PROTOCOL ON STROKE

The diagnosis of a TIA can be difficult to make with certainty. An applicant who presents with symptoms suggestive of a TIA should be thoroughly assessed.

The presence of an asymptomatic bruit is associated with an increased risk for a stroke, and 6 monthly examinations should be done thereafter.

The following conditions are disqualifying :

- Cerebral infarct, embolism, or haemorrhage.

- Cerebral aneurysm or A-V malformation. These applicants may be made fit again after surgical repair (**not** proximal ligation or "packing") if angiogram done after 1 year shows successful repair.

The incidental discovery of an asymptomatic occlusion of a cerebral vessel will not necessarily make an applicant unfit - he/she must be fully assessed.

SCHEDULE 3: PROTOCOL ON BRAIN TUMOURS

It is important to consider 2 aspects :

- Is there neurological deficit that is incompatible with flying?

- Is the tumour likely to recur?

1. Supratentorial meningioma : These applicants should be made temporarily unfit upon diagnosis. Following successful surgery, they must be asymptomatic, and have no neurological deficit for a period of 2 years before being considered for re-certification by the designated body or institution. They will require a MR scan of the brain that shows no tumour, and an oncologist's report which states that : a) the applicant is in remission, and b) that he/she never had convulsions. The designated body or institution may find the applicant fit, with the restriction of an annual medical examination (including specialist's report).

2. Infratentorial meningioma, acoustic neuroma, pituitary adenoma, and benign extra-axial tumours require the same conditions as a supratentorial meningioma, except that the stipulated minimum period before re-certification is considered, is 1 year.

3. Pseudotumour Cerebri : These applicants are temporarily unfit until they have been a headache free, and have had normal visual fields, for a period of 6 months.

4. Other CNS tumours : Unfit to fly.

SCHEDULE 4: PROTOCOL ON PARKINSON'S DISEASE

Parkinson's disease *per se* is not a disqualifying condition. The applicant is assessed on the following grounds :

- Bradykinesia.

- Rigidity.

- Tremor.

- Balance disturbances.

- Fast eye tracking.

- Voice quality.

If an applicant has been stable on therapy for 6 months, exhibits no drug side effects (orolingual dyskinesia, orthostatic hypotension or on-off phenomenon, the designated body or institution will consider him/her for flying fitness.

SCHEDULE 5: PROTOCOL ON PREVIOUSLY DIAGNOSED CARCINOMA OF THE COLON AND RECTUM

1. The following examination/procedure reports are required before a decision can be taken regarding an applicant's fitness for certification as a pilot:

   (1) Specialist report, which must include clinical staging, colonoscopy findings and an indication whether adjuvant therapy is indicated or not.

   (2) Histology report

(3) Blood test results:

(a) Full blood count, and erythrocyte sedimentation rate (ESR)

(b) Liver function tests (LFTs), including:

(i) Lactate dehydrogenase (LDH)

(ii) Alkaline Phosphatase (Alk Phos)

(c) Tumour markers e.g. Colon embryonic antigen (CEA)

(4) Presence of occult blood in the faeces - Haemoccult

(5) Radiological reports:

(a) Chest x-ray

(b) If clinically indicated according to the colonoscopy and CEA findings, a CT scan of the abdomen will be required.

1. A minimum period of three months is required following colectomy before an applicant will be reconsidered for certification.

3. The decision regarding re-certification of the applicant, and future requirements is based on the staging of the disease as follows:

(1) Dukes A, requiring no adjuvant therapy:

(a) A yearly aviation medical examination is required.

(b) The applicant must be examined annually by a specialist, and the report must be submitted to the designated body or institution.

(c) The following radiological examinations must be performed annually, and the specialist's report must be submitted to the designated body or institution:

(i) Chest x-ray

(ii) CT scan of the abdomen (only required if the specialist feels it is indicated by colonoscopic findings and the CEA).

(d) The following laboratory examinations must be performed annually, and the results must be submitted to the designated body or institution:

(i) Full blood count and ESR

(ii) Liver function tests, including:

- Lactate dehydrogenase (LDH)
- Alkaline phosphatase

(iii) Tumour markers, ie CEA

(e) Results of test for the presence of occult blood in the faeces (Haemoccult).

(2) Dukes C, requiring no adjuvant therapy:

(a) A 6 monthly aviation medical examination is required.

(b) The applicant must be examined 3 monthly by a specialist, (clinical examination) and the report must be submitted to the designated body or institution, for 5 years following resection of the tumour.

(c) A 6 monthly colonoscopy must be performed, and the specialist's report must be submitted to the designated body or institution.

(d) The following radiological examinations must be performed 6 monthly, and the specialist's report must be submitted to the designated body or institution:

(i) Chest x-ray

(ii) Liver function tests, including:

- Lactate dehydrogenase (LDH)
- Alkaline phosphatase

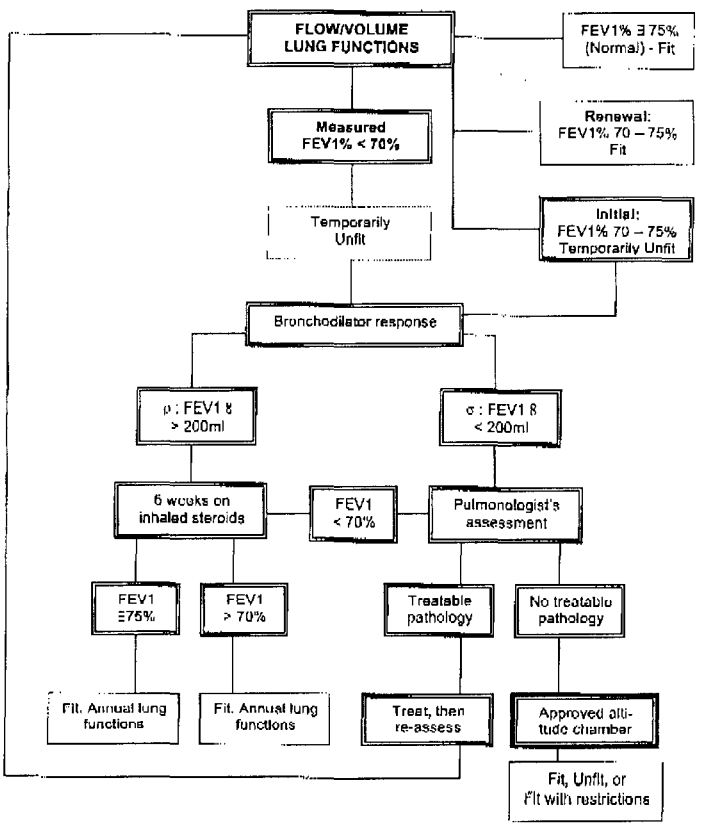
(iii) Tumour markers, ie CEA

SCHEDULE 5: PROTOCOL ON PREVIOUSLY DIAGNOSED CARCINOMA OF THE COLON AND RECTUM

(e) Results of test for the presence of occult blood in the faeces (Haemoccult) must be submitted at 3 monthly intervals.

(3) Dukes D: Permanently unfit for certification.

SCHEDULE 6: LUNG FUNCTION ASSESSMENT - FLOW DIAGRAM



SCHEDULE 7: PROTOCOL ON CHRONIC OBSTRUCTIVE AIRWAYS DISEASE

Applicants with COAD are assessed according to the minimum lung function standards. If they have irreversible airways obstruction outside the minimum standard, they should be referred to a pulmonologist for assessment of vital capacity reduction, increased residual volume, presence of bullae, diffusion capacity, oxygen saturation and carbon dioxide retention. Bi-annual CXRs are recommended.

SCHEDULE 8: PROTOCOL ON ASTHMA

ICAO Annex 1 - Personnel Licensing 6.3.2.8. states: "*There shall be no acute disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura.*" In the ICAO guidelines on Medical Assessment of the Respiratory System - Chapter 2, the following is stated: "*Applicants with bronchial asthma should in general be assessed as unfit unless the clinical course is extremely mild and drug treatment is not required.*" In Namibia there is a slightly more lenient approach. Although applicants who comply with the following protocols are able to fly, all cases that fall outside the minimum standards **must be referred to the designated body or institution for certification**.

1. Special examinations:

(1) Lung function tests:

Interval: Same as ECG or more frequently on indication

(2) Chest X-ray: PA and Lateral on initial examination. Subsequent CXRs on indication only.

2. Minimum lung function standards:

(1) FEV_1 and FVC ∃ **70% of predicted values** (to exclude restrictive lung disease) NB. If one or both of these values are < 70% refer for X-ray and pulmonologists report.

(2) FEV_1/FVC ∃ **70%** to exclude obstructive airways disease. NB. Do not use % predicted values here.

3. Initial pilots:

(1) If FEV_1/FVC # 75%

Determine cause:

(a) Infection (e.g. bronchitis):

Temporarily unfit. Repeat after 7 to 14 days when cured and off medication.

(b) Reactive airways:

(i) Any form of asthma in the last 5 years or previous hospitalisation due to asthma: Temporarily unfit. Pulmonologists report.

(ii) Exercise induced asthma only: Temporarily unfit. Inhaled steriods for 4 weeks. Re-examine with provocation test (e.g. stress ECG).

(2) Acceptable lung function with:

(a) History of asthma in past 5 years. Temporarily unfit. Pulmonologists report.

(b) Use of bronchodilators. Unfit to fly with bronchodilators. Pulmonologists report.

4. Experienced pilots:

(1) If FEV_1/FVC # 70%

Manage according to the cause:

(a) Infection (e.g. bronchitis):

(i) Temporarily unfit. Repeat after 7 to 14 days when cured and off medication

(ii) Reactive airways:

- Treated for asthma in the last 5 years or previous hospitalisation due to asthma. Temporarily unfit. Pulmonologists report.

- Exercise induced asthma:

  Unless severe (e.g. FEV_1/FVC # 70 %) provisionally fit. Inhaled steroids for 4 weeks. Re-examine after provocation test.

(2) Acceptable lung function with:

(a) History of wheezing in the absence of infection. Not taking medication and never admitted to hospital due to asthma.

Provisionally fit (if medication is taken - temporarily unfit) pending the pulmonologist's report.

(b) Use of bronchodilators.

Unfit to fly with bronchodilators. Pulmonologists report.

5. Any applicant who has had an FEV_1/FVC # 70 % for reasons other than infections, should have an initial pulmonologists report followed by an annual lung function test.

6. The only medication that may be used in the management of asthma is:

(1) Inhalation steroids (eg. Becotide℮, Becloforte℮, Becodisks℮, Pulmicort℮, Clenil , Inflammide℮, Flixotide℮, Viarox℮, Ventzone℮, etc.)

(2) Sodium cromoglycate (i.e. Lomudal ℮) and Nedocromil (Tilade℮) - are also acceptable.

7. All medication producing bronchodilation (i.e. Theophylline, B_2-stimulants, etc.) are incompatible with flying due to the side-effects. Asthma requiring use of these medications would therefore disqualify an applicant from flying.

SCHEDULE 9: PROTOCOL ON PNEUMOTHORAX

1. Traumatic Pneumothorax:

(1) Uncomplicated cases. Fit to fly 6 weeks after discharge from hospital. Confirmatory chest x-ray and lung function test required.

(2) Complicated cases (eg. empyema, chronic pneumothorax, other serious injuries, etc.) - refer to pulmonologist. Decision by designated body or institution.

2. Spontaneous Pneumothorax:

(1) Initial pilots:

History of previous spontaneous pneumothorax. Temporarily unfit. Refer to pulmonologist.

(2) Experienced pilots:

(a) First episode:

May be considered for recertification 6 weeks after discharge from hospital. Confirmatory chest x-ray, lung function and pulmonologists report (stipulating state of recovery, chance of recurrence and underlying pathology) required.

(b) More than one episode:

Temporarily unfit. May be recertified 6 to 12 weeks following successful pleurodesis.

SCHEDULE 10: PROTOCOL ON HYPERTENSION

1. Cut off level : 150/95

2. If systolic BP > 140 and diastolic BP > 90

(1) Regular 2-3 monthly BP checks

(2) Institute conservative measures:

(a) Weight reduction
(b) Aerobic exercise
(c) Decrease alcohol consumption
(d) Decrease dietary sodium
(e) Tobacco avoidance
(f) Behaviour modification

(3) Adjust or alter medication if already on therapy

(4) Pilots may continue to fly.

3. If systolic BP > 150 and diastolic BP > 95

(1) Exclude reactive hypertension with reactive hypertension protocol using ambulatory Baumanometer.

If reactive hypertension established monitor BP for 24 hours with ambulatory Baumanometer.

(2) If hypertension established:

(a) Clinical examination

(b) Blood tests:

(i) U+E
(ii) LFTs
(iii) Uric acid
(iv) Fasting Blood Sugar

(c) Begin therapy with an acceptable agent

(d) Ground pilot for one month. Pilot must return weekly or 2 weekly for BP control assessment and dose adjustment of therapy.

(e) After one month:

(i) Normotensive

Fit to fly, with 6 Monthly follow-up for one year, consisting of:

- Clinical examination
- Stress ECG
- Blood tests

Yearly follow-up thereafter

(ii) Hypertensive

- Proceed to maximum dose of agent
- Consider alternative therapy

(f) Pilot grounded until hypertension controlled.

GENERAL: The doctor may use his or her discretion in determining starting doses and combinations of therapies. If geographically feasible pilots should be examined by the designated body or institution six monthly for first year. Thereafter personal physicians may take over monitoring. It is the responsibility of the pilots and CAD to ensure that flying restrictions are adhered to.

SCHEDULE 11: PROTOCOL ON PREVIOUSLY DIAGNOSED MYOCARDIAL INFARCTION (M1)/PTCA/CABG

This protocol only applies to applicants who have previous flying experience. An initial application for certification will be refused if an applicant has a positive history of a previous MI, CABG or PTCA. Before a pilot can be recertified as medically fit to fly, his case must first be reviewed and confirmed by the designated body or institution. Commercial and Airline Transport Pilots, if recertified, will carry the restriction "with safety pilot".

1. Initial recertification application:

(1) The applicant for re-certification must have been asymptomatic for at least six months after the date of the infarction / procedure.

(2) The following test results / history / findings are required:

(a) Normal physical examination. This should include the full history of the incident and subsequent special investigations and treatment given.

(b) Cardiologist report. In the case of CABG/PTCA a report of the thoracic surgeon/ treating specialist is also required.

(c) There must be no reversible cardiac risk factors present:

(i) Smoking

(ii) Abnormal lipid profile

(iii) Obesity

(iv) Uncontrolled hypertension

(d) Blood test results must be within normal limits:

(i) Fasting lipid profile (Total cholesterol, HDL, LDL, Triglycerides)

(ii) U + E and urate

(iii) Fasting blood glucose

(e) The applicant may not be using any unacceptable medication.

(f) Resting and maximal stress ECG (100% of required heart rate). The stress ECG must be normal, with no evidence of ischaemia.

(g) A 24 hour Hölter ECG tracing must be within acceptable limits. (< 30 VEBs/ hour)

(h) A normal stress cardiolite/MIBI scan/stress MRI/stress Echo/electron beam scan performed at least six months after the incident. If this shows any abnormality, a repeat coronary angiogram is required which is within acceptable limits and demonstrates that the grafts / coronary vessels are still patent.

2. Follow-up

(1) Annual medical examination. (Airline Transport Pilots above the age of 40 need six monthly examinations.)

(2) Annual cardiologist report which should include the following:

(a) Resting and maximal stress ECG (100% of required heart rate). The stress ECG must be normal, with no evidence of ischaemia.

(b) A 24 hour Hölter ECG tracing must be within acceptable limits. (< 30 VEBs/ hour)

(3) Annual blood tests:

(a) Fasting lipid profile (Total cholesterol, HDL, LDL, Triglycerides)

(b) U + E and urate

(c) Fasting blood glucose

(4) Every four years:

A normal stress cardiolite/MIBI scan/stress MRI/stress Echo/electron beam scan. If this shows any abnormality, a repeat coronary angiogram is required which is within acceptable limits and demonstrates that the grafts / coronary vessels are still patent.

SCHEDULE 12: PROTOCOL ON RHEUMATOID ARTHRITIS

1. All pilots suffering from rheumatoid arthritis, need a rheumatologists report stating whether or not the disease is in remission or controllable on acceptable medication.

2. The only acceptable medication at present is Methotrexate∂ in dosages not exceeding 5 mg per day.

3. Gold salts, NSAID's, anti-malarials (in anti-rheumatic dosages), etc. are not compatible with flying.

4. The DAME must determine whether the arthritic damage already incurred would compromise the pilot's flying safety.

SCHEDULE 13: PROTOCOL ON DIABETES MELLITUS

1. Applicants with Diabetes Mellitus can be considered for certification, provided they are controlled on diet alone, or with an oral hypoglycaemic agent.

(1) Applicants who can control their blood glucose by diet alone may be assessed as fit for all categories of licence, provided they have no cardiovascular, neurological, ophthalmological or renal complications of Diabetes, or any condition which could result in sudden or subtle incapacitation while excercising the privileges of their licence.

(a) The applicant will require an annual report from his treating physician stating that the diabetes is controlled on diet alone (Definition 3), and that none of the above-mentioned complications are present.

(2) Applicants requiring oral hypogycaemic agents to control their blood glucose may be assessed as fit for all categories of licence, provided they have no cardiovascular, neurological, ophthalmological or renal complications of Diabetes, or any condition which could result in sudden or subtle incapacitation while excercising the privileges of their licence, and the following criteria are complied with:

(a) The applicant must not have had any episode of hypoglycaemia requiring intervention by others in the past 12 months.

(b) The applicant must have proven hypoglycaemic awareness. (Definition 2)

(c) The applicant must have taken the oral hypoglycaemic agent for a minimum of 6 months, and the dosage should have been stable for at least 3 months.

(d) There must be evidence of stable blood glucose control for at least 3 months. (Definition 3)

(e) The applicant must not experience any adverse symptoms or effects from the oral hypoglycaemic agent.

(f) The applicant may not use any medication interacting with the oral hypoglycaemic agent.

(g) Aviation medical examinations will be conducted at the normal intervals, except in cases where the normal interval exceeds 1 year, in which case they will be conducted annually.

(h) The applicant will require a report from an endocrinologist / diabetologist (which will include a renal assessment), and an ophthalmological assessment on initial application, and annually thereafter.

(i) Blood glucose monitoring will be carried out using a reputable memory glucose meter, which is correctly calibrated. The glucose meter, together with a readily absorbable source of glucose, will be carried by the applicant while excercising the privileges of the licence.

(j) Class 1 applicants will carry the restriction AWith a safety pilot.≅(Definition 4)

2. **Definitions**

(1) **Hypoglyceamia**:

(a) A blood glucose of < 2.8 mmol/l

(b) When symptoms of hypoglycaemia occur.

(2) **Hypoglycaemic awareness**:

Symptoms of hypoglycaemia are discerned by the applicant before the blood glucose falls below 2,8 mmol/l.

(3) **Blood glucose control**:

(a) Applicant's HBA_1C is within the range derived by adding 2% to the lower and the upper limits of normal for the assaying laboratory.

(b) Blood glucose metering shows 90% of values Between 5.5 and 12 mmol/l.

(4) **Safety pilot:**

(a) A pilot that is rated and current on the type of aircraft being flown.

(b) Is without the restriction Awith a safety pilot.≅

(c) Is in the position to take over control immediately.

(d) Has been briefed on the other pilot's condition.

SCHEDULE 14: PROTOCOL ON DIAGNOSED ADDISON'S DISEASE

1. Before an applicant for a pilot licence may be considered, he/she must comply with the following standards:

(1) Normal physical examination.

(2) The following blood test results must be normal before exercise:

(a) Urea and electrolyte screen.

(b) Blood glucose (random)

(c) Serum cortisol.

(d) Liver Function Test screen (this is necessary in order to ensure that the applicant is not abusing alcohol, which would predispose him to developing hypoglycaemia).

(3) Exercise must then be undertaken, and a series of blood samples must be taken, both during and after the exercise. The exercise must be on a treadmill, with the applicant running until he/she is exhausted, or until a heart rate equivalent to a 100% stress ECG is achieved.

(a) The blood test results required during exercise are the following:

(i) Urea and electrolyte screen (X 1).

(ii) Blood glucose (X 3).

(iii) Serum cortisol (X 1).

(b) The blood test results required after exercise are the following:

(i) Urea and electrolyte screen.

(ii) Blood glucose.

(iii) Serum cortisol.

All the results must be normal.

(4) The blood pressure and pulse rate must be monitored throughout the exercise, and any changes must be appropriate for the intensity of the exercise.

2. If all the above standards are achieved, the applicant may be certified, but with the following restrictions:

(1) May only fly with or as a co-pilot.

(2) May not fly when suffering from any infection, or when pyrexial (including "flu" or a common cold). Must be re-examined by the designated body or institution following resolution of the infection before he/she can resume flying.

(3) All surgical procedures, operations or use of medication, whatever the reason, will result in the applicant becoming unfit, until cleared by the designated body or institution. Will remain unfit for at least 6 weeks following surgery.

(4) Must always wear a Medic Alert disk specifying that he/she has Addison's Disease.

(5) Must always carry an emergency supply of Cortisone when flying.

(6) The following blood tests must be performed at least 3 times during the year (i.e. approximately every 4 months) in order to determine whether the applicant is complying with treatment:

(a) Urea and electrolyte screen.

(b) Blood glucose (random).

(c) Serum cortisol.

(d) Liver Function Test screen.

(e) Serum Renin determination.

(7) The applicant must be fully informed as to the disease, its treatment and possible complications.

(8) The applicant is required to submit an annual specialist Physician's report to the designated body or institution.

SCHEDULE 15: PROTOCOL ON SARCOIDOSIS

1. For the first application after the disease process started, the following must be submitted, in addition to a flying medical examination, after which a decision will be taken:

   (1) Bloodtests:

      (a) ESR

      (b) Angiotensin Converting Enzyme

      (c) Ca^{2+}

      (d) Uric Acid

   (2) Stress ECG

   (3) CXR

   (4) Lung Function Test

2. Every six months after the first application was granted, the following must be submitted:

   (1) Bloodtests:

      (a) ESR

      (b) Angiotensin Reversal Enzyme

      (c) Ca^{2+}

      (d) Uric Acid

   (2) Lung Function Test

   (3) Flying medical examination

3. Annually after the first application was granted, the following must be submitted:

   (1) CXR

   (2) Specialist Physician/Pulmonologist Report

4. Stress ECG can be submitted at the normal intervals for the specific age group.

Note: The following is not required any more by this protocol:

1. ***Thallium scan of the heart***
2. ***24 hour Hölter ECG***
3. ***Six monthly stress ECG***

SCHEDULE 16: PROTOCOL ON MULTIPLE SCLEROSIS

It is unsafe for an applicant with multiple sclerosis to pilot an aircraft for the following reasons :

- There is a risk of sudden loss of vision, vertigo, or convulsions.
- High temperatures and stress situations tend to precipitate an attack.
- It is a progressive disease.
- It tends to repeat.

Diagnosis is made on the history and physical examination. Special examinations which can confirm the diagnosis include :

- Evoked potentials:
    - Visual.
    - Somatosensory.
    - Auditory.
    - Brain stem.
- Cerebrospinal fluid:
    - IgG index.
    - Oligoclonal bands.
- MRI:
    - Demonstration of periventricular plaques.

As a rule, the pattern that the disease takes in the first 3 years is the pattern that the disease will follow. It remains, however, an unpredictable disease!

When the diagnosis of multiple sclerosis is made, the applicant should be made temporarily unfit and referred to the designated body or institution for a decision.

If an applicant is asymptomatic, the designated body or institution may make him/her fit to fly with the restriction that he/she must have a 6 monthly examination, including a neurologist's assessment. If, at any of the follow-up examinations, any of the following are found, the applicant may be declared unfit :

- Sudden visual loss.
- Sensory disturbances in the hands.
- Mood changes.
- Vertigo or convulsion.
- Exacerbations during stress situations or exposure to high temperatures.

SCHEDULE 17: PROTOCOL ON COAGULATION AND THROMBOTIC DISORDERS

1. General:

Inherited disorders of coagulation should be disqualified if there is any history of factor replacement or serious bleeding episodes.

(1) **Haemophilia:** Factor VIII deficiency should be denied certification. Von Willebrand's disease as well as other specific factor deficiencies should be denied certification if there is a history of factor replacement or serious bleeding episodes.

(2) **Iatrogenic Thrombosis:** After anticoagulant therapy has been discontinued, the applicant need not be disqualified.

(3) **Deep vein Thrombosis:** Certification should be denied for a period up to one year from the episode, and for six months after all anticoagulant therapy has been discontinued. Underlying contributing factors, such as malignancies, must be evaluated according to the guidelines set for those conditions.

(4) **Pulmonary Embolism:** A single episode of pulmonary embolization, not associated with chronic deep venous thrombosis, should be considered disqualifying from the date of the embolization and for at least 6 months after all anticoagulant therapy has been discontinued. More than one episode of pulmonary embolization documented by radio-isotopic or angiographic methods should be denied certification permanently.

(5) **Recurrent arterial emboli** is disqualifying under any circumstances.

(6) **Anticoagulant Medication:** Anticoagulant drugs of the heparin class or coumarin/warfarin class are disqualifying while they are in use and for six months after they are discontinued.

(7) **Haemorrhagic Platelet Abnormalities:** Decreased circulating platelet count due to any cause may result in debilitating haemorrhagic episodes. Haemorrhage can also occur when platelet counts are normal but platelet function is abnormal.

(8) **Congenital / Genetic Disorders:** Eg. Protein S or Protein C Deficiency, Sneddon Syndrome. All unfit.

2. Lymphomas

(1) **Hodgkin's Disease:** Applicants with active Hodgkin's disease or applicants undergoing therapy for Hodgkin's disease should not be certified because of the risk of sudden incapacitation. Applicants with stages I and II-A who have had no evidence of disease for two years after completion of treatment are certifiable.

Stages II-B through IV-B should be free of disease after completion of therapy for at least five years before consideration of certification, and should be re-evaluated every 6 months for 10 years. Numerous long-term complications of treatment for Hodgkin's disease includes the development of acute leukaemia and second malignancies of other types, radiation-related heart disease, pulmonary fibrosis, and hypothyroidism. Frequent re-evaluation. After 10 years there should be annual appraisals.

(2) **Non-Hodgkin's Lymphoma:** Well-differentiated and poorly-differentiated lymphocytic lymphoma, mixed lymphocytic lymphoma and histiocytic lymphoma of either nodular or diffuse type, are usually not curable, and these applicants

should be disqualified permanently. B-cell, diffuse histiocytic lymphoma, particularly in the early stages, may be cured by radiation therapy and/or chemotherapy and, if they are free from disease without therapy for at least three years, they may be certified with re-evaluation to occur every three months for three years and then every 6 months. T-cell, diffuse histiocytic lymphoma, including immunoblastic lymphoma and T-cell lymphoblastic sarcoma, should not be certified because of their unpredictability. Burkitt's lymphoma should not be certified.

(3) **Plasma-cell Dyscrasia:** Applicants with multiple myeloma, Waldenstrom's macroglobulinemia or multiple plasmacytomas should not be certified. These disorders are not curable, require frequent therapy that is toxic, and are associated with sick effects such as neurological impairment that may lead to sudden incapacitation. Applicants with a single plasmacytoma may be cured and, if they are free of disease more than three years after therapy has been discontinued, they may be considered for certification with frequent follow-up.

(4) Applicants with **benign monoclonal gammopathy** with a monoclonal spike comprising less than 2 g/dl of protein, with fewer than 55 plasma cells in the bone marrow, and with a haematopoietic compromise or osteolytic lesions may be certified if they have no evidence of progression of the disease for three years; they should be recertified every six months. The major risks of monoclonal gammopathy are progression to multiple myeloma and an increase in serum viscosity leading to neurological impairment.

(5) Applicants with **amyloidosis associated with plasma cell dyscrasia** should not be certified because of the high incidence of organ infiltration and the risk of sudden impairment. Applicants with gammopathy of alpha chain disease should not be certified. The median survival is approximately 12 months for gamma heavy chain disease, and the alpha chain disease is often associated with abdominal lymphoma, which is a progressive and fatal disorder.

(6) Applicants with **cold agglutinin disease** should not be certified because of the risk of sudden haemolysis. Applicants with cryoglobulinemia syndrome should not be certified because of the risk by sudden vascular incidents and neurological dysfunction.

3. Immunodeficiency Syndromes

(1) Applicants with the **AIDS** should not be certified because of the high risk of opportunistic infections which can appear suddenly and cause acute incapacitation.

(2) Applicants with **ARC (AIDS related complex)** without evidence of previous opportunistic infection may be certified with follow-up every 6 months.

(3) Applicants with **common variable immunodeficiency** who do not have bronchiectasis and who are controlled with regular gamma globulin therapy may be certified, but they should be re-evaluated every six months.

SCHEDULE 18: PROTOCOL ON PREVIOUSLY DIAGNOSED ACUTE LEUKAEMIA

Any applicant who has a previous history of having had any type of acute leukaemia in the past will be required to comply with the following requirements before recertification may be considered :

1. Must comply with the criteria for complete remission i.e.

(1) Clinical : the disappearance of any abnormal clinical findings due to the leukaemia, and return to good physical health.

(2) Haematological :

(a) The peripheral blood must have returned to normal, with reference to:

(i) Haemoglobin (Hb)

(ii) Total, and differential, white cell count.

(iii) Platelet count

(b) Recognisable leukaemia cells may not be present in a bone marrow preparation, and there may have been not more than 5% normal blast cells present in a marrow preparation of normal cellularity.

2. The applicant must have completed his/her last treatment at least two years before submitting his/her application to the designated body or institution. (This includes all modalities of treatment for leukaemia).

3. The applicant must have undergone at least six-monthly medical follow-up in an appropriate specialised unit. A report detailing the follow-up programme and the applicant's medical record must be submitted with the application to the designated body or institution.

4. During the initial post-remission period of two years his/her blood picture should have been closely monitored. Although the specific results are unlikely to be required by the designated body or institution, it is necessary that he/she has been monitored as follows :

(1) During the first year after treatment has been stopped:

(a) 6 weekly blood profile

(b) 12 weekly bone marrow evaluation

(c) 12 weekly lumbar puncture

(2) During the second year after treatment has been stopped:

(a) 8 weekly blood profile

(b) 16 weekly bone marrow evaluation

5. After two years of documented remission the applicant may submit an application for certification. If the results of the above tests are within acceptable limits the applicant may be granted certification, with the following restrictions:

(1) Must continue with follow-up at a suitable specialist unit, and submit six monthly reports to the designated body or institution.

(2) Must continue to have blood profile monitored at 8 - 12 weekly intervals (for a year, then 6 monthly).

(3) Must undergo an Aviation Medical Examination at least annually (or more frequently if indicated).

(4) Must do an ECG and stress ECG with each aviation medical examination.

SCHEDULE 19: PROTOCOL ON PREVIOUSLY DIAGNOSED SEMINOMA

1. An orchidectomy must have been performed successfully, without complications.

2. A specialist report from an oncologist or Hospital Department of Oncology must state that no metastases have been found, and that the applicant is undergoing monthly follow-up.

3. For the period of 2 years following diagnosis and surgery the applicant is required to submit the following reports to the designated body or institution:

   (1) Three monthly chest x-ray examination reports.

   (2) CT scan reports (if considered necessary by Oncologist. Copies of CT scan reports must be submitted to the designated body or institution).

   (3) Tumour marker results:

      (a) a fetoprotein

      (b) Lactate dehydrogenase (LDH)

      (c) Human chorionic gonadotropin (HCG)

4. After the initial two year period, the applicant will be required to submit these reports each six months to the designated body or institution.

5. The applicant is temporarily unfit to fly while on chemotherapy (and for at least one week after cessation of medication).

6. A yearly aviation medical examination is required.

7. This protocol is only valid for private pilots.

SCHEDULE 20: PROTOCOL ON PREVIOUSLY DIAGNOSED MALIGNANT MELANOMA

1. Initial investigations : (Required in all cases, before the applicant's case can be discussed with regard to medical certification)

   (1) Specialist report including clinical staging.

   (2) Pathology report (to include) :

      (a) Maximum thickness

      (b) Clark's level

      (c) Excision margins

   (3) Radiology reports

      (a) Chest X-ray

      (b) CT scan abdomen

      (c) CT brain scan

   (4) Haematology

      (a) FBC, ESR

(b) LFTs including :

(i) LDH

(ii) Alkaline Phosphatase

(iii) SGOT & SGPT

2. Waiver requirements are dependent on the above reports, and may be applied once all above reports have been received. The requirements are as detailed below:

(1) CLARK 1 : Yearly waiver with:

(a) Yearly clinical examination

(2) CLARK 2 & CLARK 3 < 1,5 MM : Yearly waiver with:

(a) Yearly clinical examination

(b) Yearly chest x-ray

(c) Yearly LFTs

(d) Yearly FBC & ESR

(3) CLARK 3 1,5 - 2,25 MM, CLARK 4 UPPER < 1,5 MM : Yearly waiver with:

(a) 6 Monthly examination and yearly specialist report.

(b) Yearly chest x-ray

(c) Yearly LFTs

(d) Yearly FBC & ESR

(4) CLARK 3 > 2,25 MM, CLARK 4 LOWER & STAGE 2 DISEASE WITH FEWER THAN 4 REGIONAL LYMPH NODES INVOLVED: Yearly waiver with :

(a) 6 Monthly specialist report for the first year

(b) 6 Monthly examination with yearly specialist report

(c) 6 Monthly chest x-ray in first year, then yearly chest x-ray

(d) 6 Monthly LFTs

(e) Yearly CT brain scan

(f) 6 Monthly FBC & ESR

(5) CLARK 5, LESIONS > 4 MM & STAGE 2 DISEASE WITH 4 OR MORE REGIONAL LYMPH NODES INVOLVED : Permanently unfit.

SCHEDULE 21: MONOCULAR/AMBLY OPIC PROTOCOL

To be applicable if (optimally corrected) vision in the weak eye is 6/12 or worse.

Pre - conditions : There must be no active ocular pathology.

Vision (uncorrected **or** corrected) in the better eye must be 6/6 or better (distance vision) and 6/9 or better (near vision).These are absolute requirements, not open to waiver.

Initial applicants : In addition to the required standards, initial applicants must pass a practical flight test by a CAD approved instructor before being declared fit according to the protocol.

SCHEDULE 22: RADIAL KERATOTOMY/PRK/LASIK PROTOCOL

1. Initial requirements:

(1) Waiting period of six months (three months after PRK/LASIK) after surgery.

(2) Reports from the treating ophthalmologist immediate post-surgery and after the six month waiting period:

(a) Visual acuity and other visual parameters should be within the standards required for the licencc type applied for.

(b) There should not be any fluctuation of vision.

(c) There should not be any glare problems.

(d) There should not be any post-operative complications that can jeopardize flight safety.

(e) Should not be on any unacceptable medication.

2. Procedure:

(1) After the six month waiting period the applicant should submit the initial report and also the six monthly follow-up report from the treating ophthalmologist to the designated body or institution.

(2) If the reports are favourable, he/she will be declared fit to fly on this protocol.

3. Requirements once on this protocol:

(1) Follow-up reports six monthly from the treating ophthalmologist for the first year after being declared fit to fly.

(2) Ycarly reports from the treating ophthalmologist thereafter.

(3) Any change in the status of the visual status will automatically render the applicant unfit, and will require a full investigation before further consideration.

Note: This protocol will be applicable to all licences.

SCHEDULE 23: WAIVER CERTIFICATE

WAIVER CERTIFICATE

This is not a medical certificate, and cannot be used in place of one, but should be displayed along with the medical certificate.

This certifies that:

Of

Date of birth	ID number	Licence number	Sex

Has been medically waivered for

WAIVER SERIAL NUMBER :

Restrictions :

Class of Medical Certificate Authorised :

FOR THE DESIGNATED BODY OR INSTITUTION: **Date**

Signature

Annexure A

REPUBLIC OF NAMIBIA

CIVIL AVIATION

APPLICATION FOR MEDICAL CERTIFICATE

Mark the applicable block
- Application for Class 1 medical certificate
- Application for Class 2 medical certificate
- Application for Class 3 medical certificate

1. PARTICULARS REGARDING THE APPLICANT	
1.1 Full name :	
1.2 Postal address :	
1.3 Telephone number (home) ..... (work)..... (cell)	1.4 Telefax number : ..... 1.5 E-mail address : .....
1.6 Date of birth (DD-MM-YY):	1.7 Identity / Passport number: .....
1.8 Age (years):	1.9 Sex: .....
1.10 Occupation:	1.11 Type and number of licence (if applicable) .....
1.12 Total flight hours (if applicable):	1.13 Flight hours since last medical examination (if applicable): .....

1.14 Details of last aviation medical examination (if applicable) (Where, when, by whom, Class and number of medical certificate, limitations): ....

1.15. Have you used any medicine (prescription, non-prescription) including eyedrops in the last three months?

YES	
NO	

If YES, please provide details

2. MEDICAL HISTORY : If YES please provide complete details below (if the space is insufficient, add supplementary notes on separate sheet) (N=No, Y=Yes).
2.1 Family history of
(1) Heart disease of high blood pressure
(2) Epilepsy or convulsions
(3) Glaucoma or blindness
(4) Diabetes Mellitus (sugar sickness)
2.2 Have you ever been:
(5) Refused life assurance
(6) Refused an aviation-related licence for medical reasons
(7) Medically rejected for military service or military flying
(8) A smoker
2.3 Have you ever had, or do you now have:
(9) Frequent or severe headaches
(10) Dizziness or unsteadiness
(11) Unconsciousness (for any reason)
(12) Head injury or concussion
(13) Epilepsy or fits of any kind
(14) Any other neurological disorder
(15) Any mental/psychological disorder
(16) Misuse of drugs or other substances
(17) Alcohol abuse

(18) Suicide attempt
(19) Motion sickness (requiring treatment)
(20) Eye or vision trouble (except glasses)
(21) Hearing or speech disorders
(22) Hayfever or allergy
(23) Asthma or lung disease
(24) Collapsed lung (pneumo/haemothorax)
(25) Tuberculosis or pneumonia
(26) Heart disease or high blood pressure
(27) Chest discomfort, pain or palpitations
(28) Heart murmur, or valve problem
(29) Heartburn, frequent indigestion
(30) Stomach, liver or intestinal trouble
(31) Bleeding from the rectum
(32) Kidney stone or blood in the urine
(33) Sugar or protein in the urine
(34) Diabetes Mellitus (sugar sickness)
(35) Prostate/Gynaecological problems
(36) Any blood or thyroid disorder
(37) Malignant tumours or cancer
(38) Weight loss (without dieting)
(39) Syphilis or sexually transmitted disease
(40) A positive HIV test
(41) Any arthritis, joint problems or gout
(42) Admission to hospital (for any reason)
(43) Any other illness or injury
(44) Do you have a waiver certificate? If so, state serial number

REMARKS (To be completed by DAME. Comment in full on all items marked YES.)

3. MEDICAL TREATMENT WITHIN THE LAST TWO (2) YEARS		
Date	**Name of medical practitioner and medical speciality**	**Diagnoses / Reason for treatment**

4. PHYSICAL EXAMINATION												
4.1 Mass kg	4.2 Height cm	4.3 Pulse rate /min	4.4 Blood pressure /mm Hg	Lying	Sitting	4.5 URINE ANALYSIS						
						NORMAL		Appear-ance	pH	Protein	Sugar	Blood
						ABNORMAL						

Mark each item in the appropriate column		NAD	ABN	Mark each item in the appropriate column		NAD	ABN
4.6	Head, face, scalp and neck			4.15	Neurological system		
4.7	Nose, sinuses, oral cavity			4.16	Upper limbs (strength, range of motion)		
4.8	Ears and eardrums			4.17	Lower limbs (strength, range of motion)		
4.9	Valsalva (patent bilaterally)			4.18	Spine and musculoskeletal		
4.10	Romberg			4.19	Skin		
4.11	Lungs, chest and breast			4.20	Identifying body marks, scars, tattoos, etc.		
4.12	Heart			4.21	Psychological impression		
4.13	Vascular system and lymphatics			4.22	Any other problems and general impression		
4.14	Abdomen			4.23	Rectal/gynaecologic, if indicated		

5. VISUAL EXAMINATION (if indicated, use separate visual examination form)					
5.1	Examination performed by DAME?			YES	NO
5.2	Orbit and adnexae			NAD	ABN
5.3	Ophthalmic examination			NAD	ABN
5.4	Pupils (reaction and size)			NAD	ABN
5.5	Eye movements			NAD	ABN
5.6	Corrective lenses used regularly?			NO	YES
5.7	VISUAL ACUITY (use Snellen notation)			5.11 Colour vision: Specify test used and number of errors	
EYE		a. DISTANCE VISION (6 m)	b. NEAR VISION (30 – 50 mm)		
Right		6/corrected to 6/	6/corrected to 6/	5.12 Phorias (Exo, Exo, Hyper)	
Left		6/corrected to 6/	6/corrected to 6/	Horizontal	Vertical
5.8 Visual field		5.9 Stereopsis	5.10 Near point of convergence	Distance	.....
L	R			Near	

6. AUDIOLOGICAL EXAMINATION (dB hearing loss)								
Ear	250	500	1000	2000	3000	4000	6000	NAD
Right								
Left								ABN

7. SPECIAL EXAMINATIONS (if required)					
7.1	Stress and resting ECG	Performed	Not required	Date next due	
7.2	Chest X-Ray report	Performed	Not required		
7.3	Lung function test	Performed	Not required		
7.4	Gynaecological examination	Performed	Not required		
7.5	Are any other test indicated? (fasting cholesterol, etc)	YES	NO	If YES, please specify	

8. SUMMARY OF FINDINGS

Describe every abnormality in detail. Attach additional pages if necessary.

☐ Significant medical history / findings

☐ No abnormal medical findings

9. DECLARATION BY APPLICANT

I ..... hereby declare that all statements made by me in this
(full name of applicant)
application are complete and true, to the best of my knowledge, and I hereby agree:

(a) that they are to be considered part of the basis for the issuing of any medical certificate to me; and

(b) that all medical records must be released to the designated body or institution.

SIGNATURE OF APPLICANT

SIGNATURE OF DAME

DATE (DD-MM-YY) :

10. DECLARATION BY DAME

I hereby certify that I personally identified and examined the applicant named in this application, and this application and attachments embody my findings completely and correctly.

DAME RECOMMENDATION

10.1 I find the applicant to be	Fit	Unfit	Temporary unfit	10.2 Name, address and qualifications of Designated Aviation Medical Examiner	10.4 Date of medical examination
as					10.5 DAME Code/ Stamp
LIMITATIONS / REMARKS					10.6 Telephone number ( )
☐ Medical certificate has been issued				10.3 Signature	

FOR USE OF DESIGNATED BODY OR INSTITUTION

This is to certify that the applicant identified on this form is from ☐☐/☐☐/1 9☐☐ to ☐☐/☐☐/1 9☐☐

Fit as

Temporary unfit Specify licence type

Unfit

LIMITATIONS / REMARKS

☐ No limitations

☐ Applicant must wear suitable corrective lenses

☐ Limitations as listed

Signature Name and qualifications Date

Annexure B

REPUBLIC OF NAMIBIA
CIVIL AVIATION

MEDICAL CERTIFICATE

Class :		Reference number :	
This certifies that : (Full name of holder)			
of (address)			
Date of birth	ID Number	Licence number	-Sex
Is medically as From To Limitations/Remarks			
Examiner's name:		Code	Examination date
Examiner's signature		Holder's signature	