EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION

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Requirements for European Class 3 Medical Certification of Air Traffic Controllers

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Abstract

This document, in its second edition, is a set of medical requirements in the medical certification of Air Traffic Controllers (ATCOs), for application in ECAC[1] States. The document has been revised by the ATCO Medical Requirements Task Force (AMRTF) as a result of developments in aviation medicine and in the operational environment. The document now also includes guidance on the training of Authorised Medical Examiners (AME), a sample European Class 3 Medical Certificate, advice for the holders of air traffic controller licences in the event of a decrease in medical fitness and a summary of Minimum Periodic Requirements.

[1] European Civil Aviation Conference

Keywords

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Aeromedical Section	Aeromedical Centre	Aviation Medicine	Safety Regulatory Requirements

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CONTENTS

FOREWORD

The Requirements for European Class 3 Medical Certification of Air Traffic Controllers were compiled by the Air Traffic Controller Medical Requirements Study Group (AMRSG) in compliance with its Terms of Reference. The AMRSG was established by the Human Resources Team (HRT) of the European Air Traffic Control Harmonisation and Integration Programme (EATCHIP) at the end of 1998. Its membership comprised professionals drawn from the medical and air traffic controller (ATCO) disciplines. The need for such a group was identified during the project to harmonise ATCO licensing.

The Requirements for European Class 3 Medical Certification of ATCOs were developed from a rigorous review of both the International Civil Aviation Organization (ICAO) Class 3 (1988) and Joint Aviation Requirements - Flight Crew Licensing 3 (JAR-FCL 3) medical requirements (JAA, 1997) and were first published in January 2003. It was agreed that these requirements would be regularly audited to ensure that they remain pertinent and necessary and would be revised and updated as appropriate, in line with developments in aviation medicine and the Air Traffic Services (ATS) environment. A revision of EUROCONTROL guideline documents is normally carried out every two years

Guidance material to assist Designated Authorities (National Supervisory Authorities), Aeromedical Authorities and Authorised Examiners (AMEs) is published separately in the ICAO (1985) Manual of Civil Aviation Medicine. Additionally, as part of JAR-FCL 3, the Joint Aviation Authorities (JAA) Manual of Civil Aviation Medicine provides an overview of pertinent medical conditions. AMEs should meet the requirements set by the Aeromedical Section (AMS) to perform the required functions. In this respect some guidance is given concerning the training of AMEs. Guidance may also be found in the JAR-FCL 3 Manual.

The EUROCONTROL Safety Regulatory Requirement for ATM Services' Personnel (ESARR 5) (SRC, 2002) requires air traffic controllers and student air traffic controllers, who are providing an air traffic control service, to hold a valid medical certificate of the appropriate class. This document was originally developed to satisfy the requirements of ESARR 5. However, the Directive of the European Parliament and of the Council on a Community Air Traffic Controller Licence in Article 12 requires that "the issuing of medical certificates shall be consistent with the provisions of Annex 1 to the Chicago Convention on International Civil Aviation and the Requirements for European Class 3 Medical Certification of Air Traffic Controllers laid down by EUROCONTROL. This Directive is expected to become EC law in spring 2006.

The review of The Requirements for European Class 3 Medical Certification of Air Traffic Controllers was conducted by the ATCO Medical Requirements Task Force (AMRTF). During the review the task force considered

- safety regulatory requirements
- experience gained from the application of medical requirements
- developments in the field of aviation medicine

In the main corpus of the document revisions were agreed in all sections to allow more flexibility for the AMS in the application of the requirements in light of developments in aviation medicine and operational technology while maintaining the high medical standards required in air traffic control.

The task force initially examined the terminology used in edition 1.0 and amended the text to ensure consistent terminology throughout. The revised edition also includes a clearer description of the following:

- Decrease in medical fitness and individual responsibility
- Aeromedical Section
- Aeromedical Centre
- Authorised Medical Examiner (AME)
- Outline syllabus for the training of an AME
- The issue and content of a medical certificate

From the time a State implements the Requirements for European Class 3 Medical Certification of Air Traffic Controllers, they shall apply to all holders of, and applicants for, student ATCO and ATCO licences or certificates of competence. However, it is recognised that there may be individual controllers who have a particular medical condition which was deemed acceptable under the previous State medical requirements, but is not acceptable under the new scheme. In these circumstances, provided the State's Designated Authority is satisfied that the controller is able to safely exercise the privileges of his licence or certificate of competence, the previous State medical requirements may continue to apply in respect of the specific medical condition only and his medical certificate must be annotated accordingly. In all other respects and for any new medical condition the controller may develop after the implementation date, the new medical requirements will apply.

In the interests of harmonisation, a continuous effort is needed among the ECAC Member States to minimise the number of differences from the basic requirements.

I. INTRODUCTION

1. General Guidance

The requirements and guidance in this document cannot, on their own, be sufficiently detailed to cover all possible individual situations. Of necessity many decisions relating to the evaluation of medical fitness must be left to the judgement and discretion of the AME with the support of the AMS. The evaluation must, therefore, be based on a medical examination conducted throughout in accordance with the highest standards of medical practice. Due regard must be given to the privileges granted by the licence applied for or held by the applicant for the medical certificate and the conditions under which the licence holder is going to exercise those privileges in carrying out assigned duties. If clinically indicated, testing additional to that described in this document should be carried out under the direction of the appropriate specialist.

2. Organisation of Aviation Medical Services

2.1 Aeromedical Section (AMS)

The National Supervisory Authority (NSA) shall approve the appointment of one or more physicians experienced in the practice of aviation medicine to the Aeromedical Section (AMS). The AMS shall be empowered to act on behalf of the NSA. The AMS shall have sole responsibility in relation to technical medical matters.

Medical confidentiality shall be respected at all times. The AME shall ensure that all oral or written reports and electronically stored information on medical matters of licence holders/applicants are made available to the AMS, in order to be used by the AMS for completion of a medical assessment.

2.2 Aeromedical Centre (AMC)

An Aeromedical Centre (AMC) shall be designated and authorised, or reauthorized, at the discretion of the AMS.

An AMC shall be;

(a) attached to or in liaison with a designated hospital or a medical institute;
(b) engaged in clinical aviation medicine and related activities;
(c) headed by an Authorised Medical Examiner (AME), responsible for coordinating assessment results and signing reports and certificates, and shall have on staff physicians with appropriate training and experience in aviation medicine;
(d) equipped with medico-technical facilities for aeromedical examinations.

2.3 Authorised Medical Examiner (AME)

The AMS shall designate and authorise medical examiners qualified and licensed in the practice of medicine and having received the appropriate training in aviation medicine to conduct Class 3 medical examinations. An AME responsible for coordinating assessment results and signing reports shall be allowed access to any prior aeromedical documentation held by the AMS and related to such examinations as that AME shall carry out.

2.4 Authorised Medical Examiner (AME) Training

The AME shall fully understand the importance of the authority and responsibility vested in him. Misjudgement in the medical fitness evaluation of an applicant which might permit a medically or psychologically unfit person to exercise the privileges of a licence could have serious implications for safety in ATM. The AME shall be qualified and licensed in the practice of medicine and shall have received the appropriate training in aviation medicine. AMEs should acquire practical knowledge and experience of the air traffic control working environment. Authorisation to issue, on the basis of medical examinations, the medical certificates required for the performance of air traffic control duties shall be given to physicians for a specific period of time. Renewal of authorisation shall be granted to physicians who;

- have taken the medical examinations in accordance with the applicable regulations.
- meet the initial authorisation conditions (e.g. possession of the advanced certificate in aviation medicine (JAR FCL3) or equivalent) and have been performing their duties for a specific period of time before their renewal application
- have kept their knowledge of aviation medicine up to date by means of e.g. courses, seminars, aeronautical experience etc.

2.4.1 Class 3 Assessment Qualification Training

Class 3 Assessment Qualification Training, including practical work, for physicians responsible for medical examinations of ATCOs and student ATCOs should include the following topics – aviation rules and regulations, medical subjects, psychology, ATC related topics including; organisation and structure of ATC and international organisations, familiarisation with ATC working positions and tasks, aviation psychology relevant to ATC, human factors in ATC including TRM, current & future systems in ATC. Training should include the possibility to gain some experience in ATC simulation.

The training shall be followed by an examination.

2.4.2 Refresher Training

Refresher training in aviation medicine should be given to all AMEs on a regular basis. Refresher training should include lectures on advances/changes in aviation medicine as well as in the working environment of ATC. Attendance at scientific meetings or aviation medicine conferences should be taken account of. The conduct of practical exercises should form an integral part of refresher training.

An assessment or examination may follow at the discretion of the NSA.

3. Medical Certificates

Initial Class 3 medical certificates shall be issued by the AMS. Revalidation or renewal Class 3 medical certificates may be issued by an AMS or may be delegated to an AMC or an AME

The medical certificate shall contain the following information;

(1) State of issue
(2) Reference number
(3) Class of certificate
(4) Full name
(5) Date of birth
(6) Nationality
(7) Date and place of initial medical examination
(8) Date of last electrocardiography
(9) Date of last audiometry
(10) Limitation, conditions and/or variations
(11) AME name, number and signature
(12) Date of general examination
(13) Date of expiry
(14) Signature of applicant

An example of the layout of a medical certificate Class 3 is presented at Annex 2.

4. Decrease in Medical Fitness

The holders of air traffic controller licences and student air traffic controller licences are required to have a minimum standard of medical fitness to ensure they are fit to provide an ATC service and to minimise, as far as possible, the risk that they will become suddenly incapacitated to an extent that the safety of aircraft could be compromised. The AMS shall put in place procedures to allow applicants who have failed a medical examination to appeal the decision.

Requirements and procedures to be followed by individuals are described in the “European Manual of Personnel Licensing – Air Traffic Controllers”. These requirements and procedures are reproduced at Annex 3.

5. Mechanical Aids

Where mechanical and electro-mechanical aids are used by an individual to meet the required standard for medical certification, these shall be functionally tested in the operational environment by an appropriate specialist, in conjunction with an ATC expert, in the equipment under test, to ensure that there is no interference. It may also be necessary for an appropriate medical specialist to assess the individual using the aid in the operational environment.

6. Oncology

The assessment of malignant conditions is also explained in the Oncology Chapter of the JAR-FCL 3 Manual (JAA, 1997), which provides information regarding certification and should be consulted together with the Section in this document specific to the affected body system.

7. Format of this Document

The layout of this document contains requirements which must be met in the left-hand column, and variations to the requirements and associated guidance in the right-hand column.

Compliance is required where the terms ‘shall’ or ‘must’ are employed. The terms ‘may’ and ‘should’ are used to denote variations to requirements and guidance, and where a proposed course of action is recommended or suggested, rather than mandatory.

Individual States must ensure that translation into languages other than English maintains the distinction between those areas requiring compliance (i.e. ‘mandatory’) and those areas which are merely guidance. For instance, it is permissible to use the phrase ‘is to’ in place of ‘shall’, if more appropriate in translation.

II. EUROPEAN MEDICAL CERTIFICATION REQUIREMENTS (EMCR)

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 1: General - European Class 3 Medical Certification: Examination	**EMCR(ATC) 1: General - European Class 3 Medical Certification: Examination**
1.1(a) An applicant for an air traffic controller licence/certificate of competence shall undergo an initial medical examination for the issue of a European Class 3 Medical Certificate. The minimum age for issue of a European Class 3 Medical Certificate shall be seventeen years. Initial examination shall be conducted by an AMC, and initial certification will be issued by the AMS. Renewal and revalidation examination may be carried out by the AME or AMC at the discretion of AMS. The issuing of medial certificates may be delegated to the AMC or AME at the discretion of the AMS.	1.1.1 The medical certificate validity will be from the date of issue to the equivalent date in the month of expiry (date to date).
1.1(b) Except where otherwise stated in this section, holders of air traffic controller licences/certificates of competence shall have their European Class 3 Medical Certificates renewed or revalidated every two years. (see para 1.1.2)	1.1.2 It is recommended that when holders of air traffic controller licences / certificates of competence have passed their fortieth birthday, the two-year interval specified in para 1.1(b) should be reduced to one year.
1.1(c) The applicant for a European Class 3 Medical Certificate shall provide the AME with a personally certified statement of medical facts concerning personal, familial and hereditary history. The applicant shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant's knowledge permits.	
1.1(d) The AME shall report to the designated AMS any individual case where there is doubt about the applicant's ability to meet any requirement. In these circumstances the AMS may decide whether the medical certificate should be issued or withheld (see para 1.1.3).	1.1.3 A medical certificate may be issued provided the applicant's ability to exercise the privileges of the licence / certificate of competence to the required level of safety is unlikely to be jeopardised.
1.1(e) When the AMS is satisfied that the requirements of this section have been met, a European Class 3 Medical Certificate shall be issued to the applicant.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 1: General - European Class 3 Medical Certification: Examination (cont.)	**EMCR(ATC) 1: General - European Class 3 Medical Certification: Examination (cont.)**
1.1(f) The requirements to be met for the renewal of a European Class 3 Medical Certificate are the same as those for an initial certificate, except where otherwise specifically stated.	
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.1: Examination	**2.1: Examination**
2.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall not possess any abnormality of the cardiovascular system, congenital or acquired, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s)/ certificate(s) of competence.	
2.1(b) A standard twelve-lead resting electrocardiogram (ECG) and report are required at the examination for first issue of a medical certificate, at four-yearly intervals until age thirty, at two-yearly intervals thereafter and on clinical indication (see para 2.1.1).	2.1.1. Para 1.1.2 recommends that holders of ATCO licences/certificates of competence who have passed their fortieth birthday should have their medical certificates renewed/revalidated annually. An ECG should be carried out as part of the annual examination.
2.1(c) Exercise electrocardiography is required only when clinically indicated in accordance with para 2.1.2.	2.1.2 Exercise electrocardiography, or other appropriate cardiological testing, shall be required: 2.1.2(a) when indicated by signs or symptoms suggestive of cardiovascular disease; 2.1.2(b) for clarification of a resting electrocardiogram; 2.1.2(c) at the discretion of an aeromedical specialist acceptable to the AMS; 2.1.2(d) at age 65 and then at four-yearly intervals for European Class 3 recertification.
2.1(d) Reporting of resting and exercise electrocardiograms shall be carried out by specialists acceptable to the AMS.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.1: Examination (cont.)	**2.1: Examination (cont.)**
	2.1.3(a) Where blood testing is carried out by the State Authority, as required in para 6.1(b), estimation of serum/plasma lipids, including cholesterol, to facilitate risk assessment is at the discretion of the AMS (see para 6.1.1). 2.1.3(b) Serum/Plasma lipid estimation is case finding and significant abnormalities will require investigation and management under the supervision of a specialist acceptable to the AMS. 2.1.3(c) An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) will require cardiovascular evaluation by, and management under the supervision of, a specialist acceptable to the AMS, and where appropriate in conjunction with the AMC or AME.
2.1(e) At age 65 years, a European Class 3 Medical Certificate holder shall be reviewed at an AMC by a cardiologist acceptable to the AMS. This review shall include exercise electrocardiography, or other tests that will provide equivalent information, and shall be repeated on clinical indication.	
2.2: Blood pressure	**2.2: Blood pressure**
2.2(a) The blood pressure shall be recorded with the technique given in para 2.2.1.	2.2.1 The systolic pressure shall be recorded at the appearance of the Korotkoff sounds (phase I) and the diastolic pressure

2.2(b) When the blood pressure exceeds 160 mmHg systolic and/or 95 mmHg diastolic consistently, with or without treatment, the applicant shall be assessed as unfit.	at their disappearance (phase V), or the electronic measurement equivalent. If the blood pressure is raised and/or the resting heart rate is increased, further observations should be made. Blood pressure readings, taken on separate occasions, should be made in the same fashion to ensure uniform results.
2.2(c) Treatment for the control of blood pressure shall be compatible with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence (see para 2.2.2). The initiation of medication requires a period of temporary suspension of the medical certificate to establish the absence of significant side-effects.	2.2.2 Anti-hypertensive treatment shall be agreed by the AMS. Medication acceptable to the AMS may include: 2.2.2(a) non-loop diuretic agents; 2.2.2(b) certain (generally hydrophilic) beta-blocking agents; 2.2.2(c) Angiotensin Converting Enzyme (ACE) Inhibitors; 2.2.2(d) long-acting slow-channel calcium blocking agents; 2.2.2(e) angiotensin two receptor blocking agents; 2.2.2(f) At commencement of anti-hypertensive treatment, the individual will be assessed as temporarily unfit because of potential side-effects, until the blood pressure is satisfactorily controlled without side-effects.
2.2(d) Applicants with symptomatic hypotension shall be assessed as unfit.	
2.3: Coronary artery disease	**2.3: Coronary artery disease**
2.3(a) An applicant with suspected coronary artery disease shall be investigated. An applicant with asymptomatic, minor, coronary artery disease may be considered fit by the AMS subject to compliance with para 2.3.1.	2.3.1 In suspected asymptomatic coronary artery disease, exercise electrocardiography shall be required followed, if necessary, by further tests (myocardial perfusion scanning, stress echocardiography, coronary angiography or equivalent investigations acceptable to the AMS) which shall show no evidence of myocardial ischaemia or significant coronary artery stenosis.
2.3(b) Applicants with symptomatic coronary artery disease, or with cardiac symptoms controlled by medication, shall be assessed as unfit.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.3: Coronary artery disease (cont.)	**2.3: Coronary artery disease (cont.)**
2.3(c) Applicants shall be assessed as unfit following myocardial infarction. A fit assessment may be considered by the AMS subject to compliance with para 2.3.2.	2.3.2 An asymptomatic applicant who has satisfactorily controlled risk factors if any, and requiring no medication for ischaemic heart pain six months after the index event (myocardial infarction) shall have completed investigations, demonstrating: 2.3.2(a) satisfactory symptom limited exercise ECG; 2.3.2(b) left ventricular ejection fraction of greater than 50% without significant abnormality of wall motion and normal right ventricular function; 2.3.2(c) satisfactory 24-hour ambulatory ECG recording; and 2.3.2(d) coronary angiography showing less than 30% stenosis or other imaging testing showing no significant reversible ischaemia in any vessel remote from the myocardial infarction and no functional impairment of myocardium subtended by any such vessel. Follow-up investigation requires annual cardiovascular system review, including exercise ECG or exercise scintigraphy. Coronary angiography or other imaging testing is required no later than five years after the index event, unless non-invasive tests, e.g. exercise ECG/stress echo, are impeccable.
2.3(d) Applicants demonstrating satisfactory recovery six months following coronary by-pass surgery or angioplasty and or stenting may be assessed as fit by the AMS subject to compliance with para 2.3.3.	2.3.3 An asymptomatic applicant having satisfactorily controlled risk factors and using, if necessary, Beta blockers, ACE inhibitors, Statins and Aspirin, who does not need to suppress ischaemic heart pain, may be reviewed. This review, shall include the following investigations demonstrating: 2.3.3(a) satisfactory symptom limited exercise ECG into Bruce Stage 4 or equivalent; 2.3.3(b) left ventricular ejection fraction of

greater than 50% without significant abnormality of wall motion and normal right ventricular ejection function;
2.3.3(c) satisfactory 24-hour ambulatory ECG recording if indicated; and
2.3.3(d) post-treatment coronary angiography carried out at the time of interventional procedure showing good run off. There shall be no stenosis more than 50% in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel leading to an infarct. More than two stenoses between 30% and 50% within the vascular tree should not be acceptable.

The whole coronary vascular tree shall be assessed as satisfactory by a cardiologist acceptable to the AMS, and particular attention should be paid to multiple stenoses and/or multiple revascularisations.

An untreated stenosis greater than 30% in the left main or proximal left anterior descending coronary artery should not be acceptable.

Follow-up investigation requires annual cardiovascular system review, including exercise ECG or exercise scintigraphy. Coronary angiography or other imaging testing is required no later than five years after the index event, unless non-invasive tests, e.g. exercise ECG/stress echo, are impeccable.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.4: Rhythm/conduction disturbances	**2.4: Rhythm/conduction disturbances**
2.4(a) Applicants with clinically significant disturbance of supraventricular rhythm, whether intermittent or established, shall be assessed as unfit. A fit assessment may be considered by the AMS subject to a satisfactory outcome of the cardiological evaluation in accordance with para 2.4.1.	2.4.1 Any significant rhythm or conduction disturbance requires evaluation by a cardiologist acceptable to the AMS and appropriate follow-up in the case of a fit assessment. (a) Such evaluation shall include: (1) Exercise ECG to the Bruce protocol or equivalent. The test should be to maximum effort or symptom limited. Bruce stage 4 shall be achieved and no significant abnormality of rhythm or conduction, nor evidence of myocardial ischaemia shall be demonstrated. Withdrawal of cardioactive medication prior to the test should be considered. (2) 24-hour ambulatory ECG which shall demonstrate no significant rhythm or conduction disturbance, (3) 2D Doppler echocardiogram which shall show no significant selective chamber enlargement, or significant structural, or functional abnormality, and a left ventricular ejection fraction of at least 50%. (b) Further evaluation may include: (1) Repeat 24-hour ECG recording; (2) electrophysiological study; (3) myocardial perfusion scanning, or equivalent test; (4) cardiac MRI or equivalent test; (5) coronary angiogram or equivalent test
2.4(b) Applicants with asymptomatic sinus bradycardia or sinus tachycardia may be assessed as fit in the absence of significant underlying abnormality.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.4: Rhythm/conduction disturbances (cont.)	**2.4: Rhythm/conduction disturbances (cont.)**
2.4(c) Applicants with evidence of sinoatrial disease require cardiological assessment in accordance with para 2.4.1.	
2.4(d) Applicants with asymptomatic isolated uniform ventricular ectopic complexes need not be assessed as unfit but frequent or complex forms require full cardiological evaluation in accordance with para 2.4.1. (see para 2.4.2)	2.4.2 Supraventricular or ventricular ectopy complexes on a resting electrocardiogram may require no further evaluation, provided the frequency can be shown to be not greater than one per minute (for example, on an extended rhythm strip).
2.4(e) In the absence of other abnormality, applicants with incomplete bundle branch block or stable left axis deviation may be assessed as fit. Applicants with complete right or left bundle branch block require cardiological evaluation on first presentation in accordance with para 2.4.1. (see para 2.4.3)	2.4.3(a) Applicants who develop complete right bundle branch block over the age of 40 years should demonstrate a period of stability, normally 12 months, before a fit assessment may be carried out. 2.4.3(b) Left bundle branch block is more commonly associated with coronary artery disease and thus requires more in-depth investigation, which may need to be invasive. The applicant for initial examination who has been thoroughly investigated and no pathology found may be assessed as fit. In case of a de-novo left bundle branch block at revalidation or renewal examinations a fit assessment may be considered after close follow-up and a period of stability not less than 12 months.
2.4(f) Applicants with first degree and Mobitz type 1 A-V block may be assessed as fit in the absence of underlying abnormality. Applicants with Mobitz type 2 or complete A-V block shall be assessed as unfit. A fit assessment may be considered by the AMS in accordance with para. 2.4.1.	
2.4(g) Applicants with broad and/or narrow complex tachycardias shall be assessed as unfit. A fit assessment may be considered by the AMS in accordance with para. 2.4.1.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.4: Rhythm/conduction disturbances (cont.)	**2.4: Rhythm/conduction disturbances (cont.)**
2.4(h) Applicants who have received ablation therapy shall be assessed as unfit. A fit assessment may be considered by the AMS in accordance with para. 2.4.1. (see para 2.4.4)	2.4.4 A fit assessment for applicants having undergone successful catheter ablation after at least one year, unless an electrophysiological study, undertaken at a minimum of two months after the ablation, demonstrates satisfactory results.
2.4(i) Applicants with ventricular pre-excitation, e.g. Wolf-Parkinson-White syndrome, shall be assessed as unfit unless cardiological evaluation confirms that the applicant fulfils the requirement of para 2.4.5.	2.4.5(a) A fit assessment may be considered by the AMS subject to satisfactory outcome of appropriate cardiological investigation as in 2.4.1. 2.4.5(b) Asymptomatic applicants with pre-exitation may be considered fit by the AMS if an electrophysiological study, including adequate drug-induced autonomic stimulation reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded. 2.4.5(c) A Holter recording shall demonstrate no tendency to symptomatic or asymptomatic tachy-arrhythmia.
2.4(j) Applicants with an endocardial pacemaker shall be assessed as unfit unless cardiological evaluation confirms that the requirements of para 2.4.6 can be met.	2.4.6 Applicants with an endocardial pacemaker may be considered for recertification three months after an insertion provided: (1) there is no other disqualifying disorder; (2) bipolar lead systems have been used; (3) the applicant is not pacemaker dependent, i.e. incapacitating cessation of cardiac activity would be unlikely; (4) symptom limited exercise electro-cardiography into Bruce Stage 4 or equivalent shows no abnormality or evidence of myocardial ischaemia. Scintigraphy may be helpful in the presence of conduction disturbance/paced complexes in the resting electrocardiogram;

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.4: Rhythm/conduction disturbances (cont.)	**2.4: Rhythm/conduction disturbances (cont.)**
	(5) regular follow-up by a cardiologist acceptable to the AMS with a pace-maker check and Holter monitoring; if indicated (6) experience has shown that any failures of pacemakers are most likely to occur in the first three months after being fitted. Therefore, a fit assessment should not be considered before this period has elapsed. It is known that certain operational equipment may interfere with the performance of the pacemaker. The type of pacemaker used, therefore, shall have been tested to ensure it does not suffer from interference in the operational environment. Supporting data and a performance statement to this effect must be available from the supplier.
2.5: General	**2.5: General**
2.5(a) Applicants with peripheral vascular disease shall be assessed as unfit, before or after surgery. Provided there is no significant impairment, a fit assessment may be considered by the AMS subject to compliance with 2.5.1(a).	2.5.1(a) Fit assessment may be considered by the AMS if there is no sign of significant coronary disease, or evidence of significant atheroma elsewhere, and no functional impairment of the end organ supplied. Evaluation will include an exercise ECG and a duplex ultrasound investigation.
2.5(b) Applicants with aneurysm of the thoracic or abdominal aorta, before or after surgery, shall be assessed as unfit. Applicants with aneurysm of the infra-renal abdominal aorta may be considered fit by the AMS at renewal or revalidation examinations, subject to compliance 2.5.1(b)	2.5.1(b) After surgery for infra renal abdominal aortic aneurysm without complications and subject to the individual being free of disease of the carotid and coronary circulation a fit assessment may be considered by the AMS.
2.5(c) Applicants with clinically significant abnormality of any of the heart valves shall be assessed as unfit.	2.5.1(c) Unidentified cardiac murmurs shall require assessment by the AMS following evaluation by a cardiologist acceptable to the AMS. If considered significant, further investigation shall include 2D Doppler echocardiography.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.5: General (cont.)	**2.5: General (cont.)**
2.5(d) Applicants with minor cardiac valvular abnormalities may be assessed as fit by the AMS following cardiological evaluation in accordance with para 2.5.1(c) and (d).	2.5.1(d) Valve Conditions (1) Bicuspid aortic valve is acceptable without restriction if no other cardiac or aortic abnormality is demonstrated, but requires review on a two-yearly basis with echocardiography. (2) Mild aortic stenosis (less than 25 mmHg differential pressure or a Doppler flow rate of less than 2 m per second) may be acceptable. Annual review shall be required, with 2D Doppler echo-cardiography, by a cardiologist acceptable to the AMS. (3) Aortic regurgitation is acceptable for unrestricted certification only if minor, with no evidence of volume overload. There shall be no demonstrable abnormality of the ascending aorta on 2D Doppler echo-cardiography. Annual review shall be carried out by a cardiologist acceptable to the AMS. (4) Mitral valve disease (rheumatic mitral stenosis) is normally disqualifying. Mitral leaflet prolapse and mild mitral regurgitation may be acceptable. Applicants with isolated mid-systolic click may need no restriction. Applicants with uncomplicated minor regurgitation may be acceptable with regular cardiological follow-up. (5) Applicants with evidence of volume overloading of the left ventricle by increased left ventricular end-diastolic diameter shall be assessed as unfit.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.5: General (cont.)	**2.5: General (cont.)**
2.5(e) Applicants with cardiac valve replacement/repair shall be assessed as unfit. Favourable cases may be assessed as fit by the AMS following cardiological evaluation in accordance with para 2.5.1 (e)	2.5.1(e) Valvular surgery (1) Asymptomatic applicants may be assessed as fit by the AMS six months after valvular surgery subject to: (i) normal valvular and ventricular function as judged by 2D Doppler echocardiography; (ii) satisfactory symptom limited exercise electrocardiography, or equivalent; (iii) the demonstrated absence of coronary artery disease unless this has been satisfactorily treated by re-vascularisation; (iv) no cardioactive medication is required; (v) annual cardiological review to include an exercise ECG and 2 Doppler echocardiography carried out by a cardiologist acceptable to the AMS shall be required. (2) Applicants with implanted mechanical valves may be assessed as fit subject to documented exemplary control of their anti-coagulant therapy. Age factors should form part of the risk assessment.
2.5(f) Systemic anticoagulant therapy for pulmonary embolism or DVT is disqualifying. Anticoagulant for possible arterial thromboembolism is disqualifying. Pulmonary embolism requires full evaluation. Applicants may be considered fit by the AMS in accordance with para 2.5.2.	2.5.2 After full evaluation and in cases of anticoagulant therapy for pulmonary embolism or DVT, once anticoagulant therapy is stable and subject to exemplary control the applicant may be found fit subject to a report from an appropriate specialist acceptable to the AMS. Subcutaneous heparin treatment may be acceptable subject to a satisfactory report from an appropriate specialist acceptable to the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 2: Cardiovascular System	**EMCR(ATC) 2: Cardiovascular System**
2.5: General (cont.)	**2.5: General (cont.)**
2.5(g) Applicants with any abnormality of the pericardium, myocardium or endocardium shall be assessed as unfit until complete resolution has occurred or following cardiological evaluation in accordance with para 2.5.3.	2.5.3 Abnormalities of the pericardium, myocardium and endocardium, primary or secondary, shall generally be assessed as unfit until clinical resolution has taken place. Cardiovascular assessment at the discretion of a cardiologist acceptable to the AMS may need to include 2D Doppler echocardiography, exercise electro-cardiography, 24-hour ambulatory electro-cardiographic monitoring, myocardial scintigraphy and coronary angiography.
2.5(h) Applicants with congenital heart conditions, before or after corrective surgery, shall generally be assessed as unfit. Applicants with minor abnormalities may be assessed as fit by the AMS following cardiological investigation in accordance with para 2.5.4.	2.5.4 Congenital heart conditions including those surgically corrected, shall normally be assessed as unfit unless functionally unimportant and no medication is required. Cardiological assessment by the AMS shall be required. Investigations may include Doppler echocardiography, exercise electro-cardiography and 24-hour ambulatory electrocardiographic monitoring. Regular cardiological review shall be required. Periodicity of review should be at the discretion of a cardiologist acceptable to the AMS.
2.5(i) An applicant having undergone cardiac or heart/lung transplantation shall be assessed as unfit.	
2.5(j) Applicants with a history of recurrent vasovagal syncope shall be assessed as unfit. A fit assessment may be considered by the AMS in applicants with a suggestive history subject to compliance with paragraph 2.5.5.	2.5.5 Applicants who have suffered recurrent episodes of syncope shall undergo the following: (a) a symptom limited 12 lead exercise ECG to Bruce Stage IV, or equivalent, which a specialist acceptable to AMS interprets as showing no abnormality. If the resting ECG is abnormal, myocardial scintigraphy/stress echocardiography shall be required. (b) a 2D Doppler echocardiogram showing no significant selective chamber enlargement

nor structural nor functional abnormality of the heart, valves nor myocardium.

(c) a 24-hour ambulatory ECG recording showing no conduction disturbance, nor complex, nor sustained rhythm disturbance nor evidence of myocardial ischaemia.

(d) and may include a tilt test, carried out to a standard protocol, which in the opinion of a cardiologist acceptable to the AMS shows no evidence of vasomotor instability.

Neurological review will normally be indicated.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 3: Respiratory System	**EMCR(ATC) 3: Respiratory System**
3.1: General	**3.1: General**
3.1(a) An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any abnormality of the respiratory system, congenital or acquired, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	
3.1(b) Posterior/anterior chest radiography shall be carried out on clinical indication.	
3.1(c) Pulmonary function tests (see para 3.1.1) are required at the initial examination. Applicants with significant impairment of pulmonary function shall be assessed as unfit.	3.1.1 Spirometric examination is required for initial European Class 3 examination. An FEV1/FVC ratio less than 70% shall require evaluation by a specialist in respiratory disease.
3.1(d) Any significant abnormality shall require further evaluation by a specialist in respiratory diseases.	
3.2: Disorders	**3.2: Disorders**
3.2(a) Applicants with significant chronic obstructive airway disease shall be assessed as unfit. Where appropriate, applicants shall be referred to a specialist in respiratory diseases for assessment.	
3.2(b) Applicants with reactive airway disease (bronchial asthma) requiring medication shall be assessed in accordance with the criteria in para 3.2.1.	3.2.1 Applicants experiencing recurrent attacks of asthma shall be assessed as unfit. European Class 3 certification may be considered by the AMS if the applicant has mild asthma, with acceptable pulmonary function tests and medication compatible with the safe execution of the privileges of the applicable licence / certificate of competence.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 3: Respiratory System	**EMCR(ATC) 3: Respiratory System**
3.2: Disorders (cont.)	**3.2: Disorders (cont.)**
3.2(c) Applicants with active inflammatory diseases of the respiratory system shall be assessed as temporarily unfit.	
3.2(d) Applicants with active sarcoidosis shall be assessed as unfit (see para 3.2.2).	3.2.2 A fit assessment may be considered by the AMS if the disease is: (a) fully investigated with respect to the possibility of systemic involvement; and (b) limited to hilar lymphadenopathy and the applicant is taking no medication.
3.2(e) Applicants with spontaneous pneumothorax shall be assessed as unfit pending full evaluation (see para 3.2.3).	3.2.3 Spontaneous pneumothorax 3.2.3(a) A fit assessment following a fully recovered single spontaneous pneumothorax may be acceptable following a period of assessment after the event with full respiratory evaluation including Magnetic Resonance Imaging (MRI) or equivalent. 3.2.3(b) A fit assessment at revalidation or renewal may be considered by the AMS if the applicant fully recovers from a single spontaneous pneumothorax after six weeks. 3.2.3(c) A recurrent spontaneous pneumothorax is disqualifying. A fit assessment may be considered by the AMS following surgical intervention with a satisfactory recovery.
3.2(f) Applicants requiring major chest surgery shall be assessed as unfit following operation and until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licences / certificates of competence (see para 3.2.4). The underlying pathology which necessitated the surgery will need to be considered in the assessment process at revalidation or renewal.	3.2.4 A fit assessment at revalidation or renewal following pneumonectomy or lesser chest surgery may be considered by the AMS after satisfactory recovery and full respiratory evaluation including MRI or equivalent.
3.2(g) Applicants with Pulmonary emphysema shall be assessed as unfit (see para 3.2.5).	3.2.5 A fit assessment may be considered by the AMS if the condition is not causing significant symptoms.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 3: Respiratory System	**EMCR(ATC) 3: Respiratory System**
3.2: Disorders (cont.)	**3.2: Disorders (cont.)**
3.2(h) Applicants with active tuberculosis shall be assessed as unfit (see para 3.2.6)	3.2.6 Applicants with quiescent or healed lesions may be assessed as fit.
3.2(i) Applicants suffering from excessive daytime sleepiness including sleep apnoea syndrome shall be assessed as unfit (see para 3.2.7)	3.2.7 Applicants suffering from sleep apnoea may be assessed as fit subject to the extent of the symptoms, satisfactory treatment and functional evaluation in the working environment, in accordance with the guidance at Item 1 of Annex 1 to this document.
EMCR(ATC) 4: Digestive System	**EMCR(ATC) 4: Digestive System**
4.1: General	**4.1: General**
4.1 An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any functional or structural disease of the gastro-intestinal tract or its adnexae which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	
4.2: Disorders	**4.2: Disorders**
4.2(a) Applicants with recurrent dyspeptic disorders requiring medication shall be assessed as unfit (however, see para 4.2.1 (a) and (c)).	4.2.1(a) Recurrent dyspepsia requiring medication shall be investigated by internal examination (radiologic or endoscopic). Laboratory testing should include haemoglobin assessment and faecal examination. Any demonstrated ulceration or significant inflammation requires evidence of recovery before revalidation or renewal by the AMS.
4.2(b) Pancreatitis is disqualifying (however see para 4.2.1(b) and (c))	4.2.1(b) A fit assessment may be considered by the AMS if the cause or obstruction (e.g., drug, gallstone) is removed.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 4: Digestive System	**EMCR(ATC) 4: Digestive System**
4.2: Disorders (cont.)	**4.2: Disorders (cont.)**
	4.2.1(c) Alcohol may be a cause of dyspepsia and pancreatitis. If considered appropriate a full evaluation of its use/abuse is required.
4.2(c) Applicants exhibiting symptomatic multiple gallstones or a single large gallstone shall be assessed as unfit until effective treatment has been applied (see para 4.2.2).	4.2.2 A single large gallstone may be compatible with a fit assessment after consideration by the AMS. An individual with asymptomatic multiple gallstones while awaiting assessment or treatment may be considered as fit pending investigation.
4.2(d) An applicant who has an established medical history or clinical diagnosis of acute or chronic inflammatory bowel disease (regional ileitis, ulcerative colitis, diverticulitis) shall be assessed as unfit (see para 4.2.3).	4.2.3 A fit assessment may be considered by the AMS provided that the disease is in an established remission and stabilised and that minimal, if any, medication is being taken. Regular follow-up is required.
4.2(e) An applicant with herniae that may give rise to complications leading to incapacitation shall be assessed as unfit.	
4.2(f) Any sequela of disease or surgical intervention in any part of the digestive tract or its adnexae likely to cause incapacitation, in particular any obstruction due to stricture or compression, shall be assessed as unfit.	
4.2(g) An applicant who has undergone a surgical operation on the digestive tract or its adnexae, involving a total or partial excision or a diversion of any of these organs, shall be assessed as unfit (see para 4.2.4).	4.2.4 Following major abdominal surgery, it is unlikely that an individual will be fit to return to work before a minimum of three months has elapsed. The AMS may consider earlier fit assessment at revalidation or renewal if recovery is complete, the applicant is asymptomatic**,** there is a minimal risk of secondary complication or recurrence and the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licences / certificates of competence.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 5: Metabolic, Nutritional and Endocrine Diseases	**EMCR(ATC) 5: Metabolic, Nutritional and Endocrine Diseases**
5.1(a) An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any functional or structural metabolic, nutritional or endocrine disorder which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	
5.1(b) An applicant with metabolic, nutritional or endocrine dysfunction shall be assessed as unfit (see para 5.1.1).	5.1.1. A fit assessment may be considered by the AMS if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.
5.1(c) Endocrine surgery entails unfitness. Fit assessment will be considered by the AMS after full recovery as outlined in 5.1.1.	
5.1(d) Applicants with diabetes mellitus shall be assessed as unfit (see para 5.1.2 and 5.1.3).	5.1.2 Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered by the AMS if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.
5.1(e) Applicants with diabetes requiring insulin shall be assessed as unfit.	
5.1(f) The use of antidiabetic medications is disqualifying (see para 5.1.3).	5.1.3 The use of biguanides, alpha-glucosidase inhibitors and glitazones may be acceptable for type 2 diabetes, as they do not cause hypoglycaemia.
EMCR(ATC) 6: Haematology	**EMCR(ATC) 6: Haematology**
6.1(a) An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any haematological disease which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 6: Haematology (cont.)	**EMCR(ATC) 6: Haematology (cont.)**
6.1(b) Blood testing shall form part of the examination for the initial issue of a medical certificate, on revalidation or renewal at four-yearly intervals until age forty, two-yearly thereafter and on clinical indication. (see para 6.1.1)	6.1.1 The specific analyses to be carried out may be determined by the AMS of each Member State.
	6.1.2 Anaemias demonstrated by reduced haemoglobin level require investigation. Anaemia which is unamenable to treatment is disqualifying. A fit assessment may be considered by the AMS in cases where the primary cause has been satisfactorily treated (e.g. iron deficiency or B12 deficiency) and haemoglobin has stabilised (recommended range 11 g/dl - 17 g/dl), or where minor thalassaemia or haemoglobinopathies are diagnosed without a history of crises and where full functional capability is demonstrated.
6.1(c) An applicant with significant localised and generalised enlargement of the lymphatic glands and of diseases of the blood shall be assessed as unfit (see para 6.1.3).	6.1.3 Lymphatic enlargement requires investigation. A fit assessment may be considered by the AMS in cases of acute infectious process which is fully recovered or Hodgkin's lymphoma which has been treated and is in full remission. Due to potential long-term side-effects of specific chemotherapeutic agents, the precise regime utilised should be taken into account.
6.1(d) An applicant with acute leukaemia shall be assessed as unfit. Initial applicants with chronic leukaemias shall be assessed as unfit (for assessment at revalidation or renewal see para 6.1.4).	6.1.4 In cases of chronic leukaemia a fit assessment at revalidation or renewal may be considered by the AMS if diagnosed as lymphatic at stages 0, I (and possibly II) without anaemia and minimal treatment, or 'hairy cell' leukaemia and are stable with normal haemoglobin and platelets. Regular follow-up is required.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 6: Haematology (cont.)	**EMCR(ATC) 6: Haematology (cont.)**
6.1(e) An applicant with significant enlargement of the spleen shall be assessed as unfit (see para 6.1.5).	6.1.5 Splenomegaly requires investigation. The AMS may consider a fit assessment where the enlargement is minimal, stable and no associated pathology is demonstrable (e.g. treated chronic malaria), or if the enlargement is minimal and associated with another acceptable condition (e.g. Hodgkin's lymphoma in remission). Splenectomy may not preclude a fit assessment, but should be assessed on an individual basis.
6.1(f) An applicant with significant polycythaemia shall be assessed as unfit (see para 6.1.6). A fit assessment may be considered by the AMS if the condition is fully controlled and good follow-up reports have been received.	6.1.6 Polycythaemia requires investigation. The AMS may consider a fit assessment if the condition is stable and no associated pathology has been demonstrated.
6.1(g) An applicant with a coagulation defect shall be assessed as unfit (see para 6.1.7 and 6.1.8)	6.1.7 Significant coagulation defects require investigation. The AMS may consider a fit assessment if there is no history of significant bleeding or clotting episodes and the haematological data indicate that it is safe to do so. 6.1.8 If anticoagulant therapy, or medication is prescribed the guidelines in 2.5.2 should be followed.
EMCR(ATC) 7: Urinary System	**EMCR(ATC) 7: Urinary System**
7.1(a) An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any functional or structural disease of the urinary system or its adnexae which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 7: Urinary System (cont.)	**EMCR(ATC) 7: Urinary System (cont.)**
7.1(b) An applicant presenting any signs of organic disease of the kidney shall be assessed as unfit. Urinalysis shall form part of every medical examination. The urine shall contain no abnormal element considered to be of pathological significance. Particular attention shall be paid to disease affecting the urinary passages and the genital organs (see para 7.1.1).	7.1.1 Any abnormal finding upon urinalysis requires investigation. Investigation and analysis shall include proteinuria, haematuria and glycosuria.
7.1(c) An applicant presenting with urinary calculi shall be assessed as unfit (see para 7.1.2).	7.1.2 An asymptomatic calculus or a history of renal colic requires investigation. After treatment a fit assessment may be considered with appropriate follow-up, which is to be decided by a specialist acceptable to the AMS. Residual calculi shall be disqualifying unless they are in a location where they are unlikely to move and give rise to symptoms.
7.1(d) An applicant with any sequela of disease or surgical procedures on the kidneys and the urinary tract likely to cause incapacitation shall be assessed as unfit. An applicant with compensated nephrectomy without hypertension or uraemia may be considered fit (see 7.1.3).	7.1.3 Major urological surgery is normally disqualifying. However, the AMS may consider a fit assessment if the appicant is completely asymptomatic and there is a minimal risk of secondary complication or recurrence.
7.1(e) An applicant who has undergone a major surgical operation in the urinary tract or the urinary apparatus involving a total or partial excision or a diversion of any of its organs shall be assessed as unfit until such time as the effects of the operation are no longer likely to cause incapacity (see para 7.1.3 and 7.1.4).	7.1.4 Renal transplantation or total cystectomy is disqualifying for initial certification. At renewal or revalidation a fit assessment may be considered by the AMS in the case of: 7.1.4(a) renal transplant which is fully compensated and tolerated with minimal immuno-suppressive therapy after at least twelve months; and 7.1.4(b) total cystectomy which is functioning satisfactorily with no recurrence of primary pathology.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 8: Sexually Transmitted Diseases and Other Infections	**EMCR(ATC) 8: Sexually Transmitted Diseases and Other Infections**
8.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall have no established medical history or clinical diagnosis of any sexually transmitted disease or other infection which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence. (see para 8.1.1)	8.1.1 Particular attention shall be paid to a history of or clinical signs indicating: (1) HIV positivity, (2) immune system impairment, (3) infectious hepatitis or (4) syphilis.
8.1(b) An applicant having HIV infection involving symptoms of active disease such as AIDS, AIDS Related Complex, or Central Nervous System involvement shall be assessed as unfit. However, a fit assessment at renewal and revalidation of asymptomatic HIV positive individuals may be considered in accordance with para 8.1.1 to 8.1.3.	8.1.2 There is no requirement for routine testing of HIV status, but testing may be carried out on clinical indication. Once positivity has been confirmed, a process of rigorous assessment and follow-up should be introduced to enable individuals to continue working provided their ability to exercise their licensed privileges to the required level of safety is not impaired. Treatment must be assessed by a specialist acceptable to the AMS on an individual basis for its appropriateness and any side-effects. Guidance relating to testing regimes is given at Item 2 of Annex 1 to this document. 8.1.3 Since sudden incapacitation by seizure, or subtle incapacitation due to cognitive dysfunction are known manifestations of HIV disease, thorough neurological examination shall form part of the regular assessment of HIV positive individuals.
8.1(c) A diagnosis of syphilis is not disqualifying. However, symptoms and complications of the disease which impair the safe exercise of the privileges of the licence / certificate of competence are disqualifying (see para 8.1.4).	8.1.4 A fit assessment may be considered by the AMS in the case of those fully treated and recovered from the primary and secondary stages.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 9: Gynaecology and Obstetrics	**EMCR(ATC) 9: Gynaecology and Obstetrics**
9.1(a) An applicant for or the holder of a European Class 3 Medical Certificate shall not possess any functional or structural obstetric or gynaecological condition which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	
9.1(b) If obstetric evaluation indicates a normal pregnancy, the applicant may be assessed as fit until not later than the end of the 34th week of gestation.	9.1.1 The AMS, or the AME under the direction of the AMS where appropriate, should notify the candidate and the attending physician in writing of any potentially significant complications of pregnancy. 9.1.2 Licence privileges may be resumed upon satisfactory confirmation of full recovery following confinement or termination of pregnancy.
9.1(c) An applicant who has undergone a major gynaecological operation shall be assessed as unfit (see para 9.1.3).	9.1.3 Major gynaecological surgery is normally disqualifying. The AMS may consider a fit assessment at revalidation or renewal if the holder is completely asymptomatic, there is only a minimal risk of secondary complication or recurrence and the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the licence / certificate of competence.
EMCR(ATC) 10: Musculoskeletal Requirements	**EMCR(ATC) 10: Musculoskeletal Requirements**
10.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall not possess any abnormality of the bones, joints, muscles and tendons, congenital or acquired which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence. (see paras 10.1.1 and 10.1.2)	10.1.1 Abnormal physique, including obesity, or muscular weakness may require medical assessment (including that in the working environment) as approved by the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 10: Musculoskeletal Requirements (cont.)	**EMCR(ATC) 10: Musculoskeletal Requirements (cont.)**
	10.1.2 Locomotor dysfunction, amputations, malformations, loss of function and progressive osteoarthritic disorders will be assessed on an individual basis. This will be carried out by the AME in conjunction with the appropriate operational expert with a knowledge of the complexity of the tasks involved.
10.1(b) An applicant suffering from severe obesity shall be assessed as unfit (see para 10.1.3).	10.1.3 The applicant's age and body mass index should be taken into account when making the assessment.
10.1(c) Applicants with osteoarthritic or muscular tendon progressive conditions resulting in functional upset shall be assessed as unfit. (see para.10.1.4)	10.1.4 Osteoarthritic or muscular tendon progressive conditions may be of congenital or acquired origin. Any functional upset should be evaluated against its impact on the individual's ability to operate satisfactorily in the working environment. They shall not be taking any disqualifying medication (see 10.1.2).
	10.1.5 A fit assessment at revalidation or renewal in cases of limb deficiency, with or without limb prosthesis, may be considered by the AMS following satisfactory assessment in the working environment (see 10.1.2)

EMCR(ATC) 11: Psychiatric and Psychological Requirements	EMCR(ATC) 11: Psychiatric and Psychological Requirements
11.1: Psychiatric requirements	**11.1: Psychiatric requirements**
11.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall have no established medical history or clinical diagnosis of any psychiatric disease or disability, condition or disorder, acute or chronic, congenital or acquired, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	11.1.1 The issues raised in this section are complex. Some guidance may be found in the chapter on Aviation Psychiatry of the JAR FCL 3 Manual.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 11: Psychiatric and Psychological Requirements	**EMCR(ATC) 11: Psychiatric and Psychological Requirements**
11.1: Psychiatric requirements (cont.)	**11.1: Psychiatric requirements (cont.)**
11.1(b) Particular attention shall be paid to the following (see para 11.1.1 to 11.1.6): (1) psychotic symptoms; (2) mood disorders; (3) personality disorders, especially if severe enough to have resulted in overt acts; (4) mental abnormality and neurosis; (5) use of psychoactive drugs or other substances, or abuse of alcohol, with or without dependency.	
11.1(c) An established condition including psychotic symptoms is disqualifying. (see para. 11.1.2)	11.1.2 A fit assessment may only be considered if the AMS can be satisfied that the original diagnosis was inappropriate or inaccurate, or as a result of a single toxic episode.
11.1(d) An established neurosis is disqualifying. (see para. 11.1.3)	11.1.3 The AMS may consider a fit assessment after review by a psychiatric specialist acceptable to the AMS and after psychotropic treatment has been stopped for an appropriate period.
11.1(e) A single self-destructive action or repeated overt acts are disqualifying. (see para. 11.1.4)	11.1.4 A fit assessment may be considered by the AMS after full consideration of an individual case and will require psychological and psychiatric review.
11.1(f) Abuse of alcohol and use of psychoactive drugs or substances with or without dependency is disqualifying (see para 11.1.5).	11.1.5 A fit assessment may be considered by the AMS after a period of two years documented sobriety or freedom from drug use. A fit assessment at revalidation or renewal at an earlier point may be considered at the discretion of the AMS following treatment and review which may include: (a) inpatient treatment; (b) review by a psychiatric specialist acceptable to the AMS; and (c) ongoing review including blood testing and peer reports for a minimum of three years.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 11: Psychiatric and Psychological Requirements	**EMCR(ATC) 11: Psychiatric and Psychological Requirements**
11.2: Psychological requirements	**11.2: Psychological requirements**
11.2(a) An applicant who exhibits inability to cope with stress or stress-related problems to an extent where the symptoms are likely to interfere with an individual's ability to exercise safely the privileges of the licence / certificate of competence shall be assessed as unfit (however, see para 11.2.2 and 11.2.3).	11.2.1 Within psychiatric management, psychological assessment may have a pivotal role in enabling the psychiatrist to make a holistic assessment. 11.2.2 If stress-related problems, which are likely to interfere with safe exercise of the privileges of the individual's licence / certificate of competence, are reported or indicated, a psychological evaluation by an appropriately qualified specialist acceptable to the AMS may be required (see para 11.2(c))
11.2(b) An applicant for or holder of a European Class 3 Medical Certificate shall have no established psychological deficiencies which are likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence (see para 11.2.2 to 11.2.4).	11.2.3 Coping with stress includes the following: (a) coping with high workload, (b) coping with boredom, (c) 'unwinding' after work, (d) controlling anxiety and anger, (e) managing critical incidents. If there are indications of a lack of skills or of incidents relating to any of the above, the applicant should be referred to an appropriately qualified specialist acceptable to the AMS (see para 11.2(c))
11.2(c) When a psychological evaluation is indicated, it shall be carried out by an aviation psychologist or a psychologist with extensive knowledge of the ATC environment acceptable to the AMS. The evaluation shall be directed by a neurologist or psychiatrist, as appropriate. (see para 11.2.2)	11.2.4 A psychological evaluation may be required by the AMS as part of, or complementary to, a specialist psychiatric or neurological examination when the AME or the Authority receives verifiable information from an identifiable source which evokes doubts concerning the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or proficiency checks, delinquency or knowledge relevant to the safe exercise of the privileges of the applicable licences.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 11: Psychiatric and Psychological Requirements	**EMCR(ATC) 11: Psychiatric and Psychological Requirements**
11.2: Psychological requirements (cont.)	**11.2: Psychological requirements (cont.)**
	11.2.5 The psychological evaluation should be broad-based and may include medical history, life-event history and aptitude testing, in addition to personality tests and psychological interview.
EMCR(ATC) 12: Neurological Requirements	**EMCR(ATC) 12: Neurological Requirements**
12.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall have no established medical history or clinical diagnosis of any neurological condition which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	12.1.1 Any progressive disease of the nervous system is disqualifying, but minor functional loss associated with stable (non-progressive) disease may be acceptable after full evaluation by a specialist acceptable to the AMS.
12.1(b) The following conditions are disqualifying: (1) progressive disease of the nervous system; (2) epilepsy; (3) conditions with a high propensity for cerebral dysfunction. (see para. 12.1.1 to 12.1.5)	12.1.2 A diagnosis of epilepsy is disqualifying. One or more convulsive episodes after the age of five are disqualifying. However, if an applicant is seizure free and off medication for a period of 10 years a fit assessment may be possible. An episode shown after full neurological evaluation to have specific non-recurrent cause, such as trauma or toxin, may be acceptable. 12.1.3 An episode of benign Rolandic seizure may be acceptable, provided it has been clearly diagnosed, with a properly documented history and typical EEG result. The applicant must have been free of symptoms and off treatment for more than ten years. 12.1.4 Investigation by electro-encephalography is required when indicated by the applicant's history or on clinical grounds. 12.1.5 Paroxysmal EEG abnormalities are disqualifying.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 12: Neurological Requirements (cont.)	**EMCR(ATC) 12: Neurological Requirements (cont.)**
12.1(c) The following may be acceptable subject to full investigation by a specialist acceptable to the AMS: (1) disturbance or loss of consciousness; (2) brain injury. (see para. 12.1.6 to 12.1.7)	12.1.6 A history of one or more episodes of disturbed consciousness is disqualifying. Such episodes may be accepted by the AMS when satisfactorily explained by a non-recurrent cause and after full neurological evaluation. 12.1.7 Any brain injury must be assessed by the AMS and be seen by a consultant neurologist acceptable to the AMS. There must be a full recovery and a low risk (in the limits acceptable to the AMS) of epilepsy before a fit assessment is possible.
EMCR(ATC) 13: Ophthalmological Requirements	**EMCR(ATC) 13: Ophthalmological Requirements**
13.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall not possess any abnormality of the function of the eyes or their adnexae or any active pathological condition, congenital or acquired, acute or chronic, or any sequela of eye surgery (see para 13.1.2) or trauma, which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	13.1.1 Opthalmological specialists used by the AMS should have a basic understanding of the functionality required by air traffic controllers in the exercise of the privileges of their licences / certificates of competence.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 13: Ophthalmological Requirements (cont.)	**EMCR(ATC) 13: Ophthalmological Requirements (cont.)**
13.1(b) A comprehensive ophthalmological examination is required at the initial examination (see para 13.1.2).	13.1.2 At the initial examination for a European Class 3 Medical Certificate a comprehensive ophthalmological examination shall be carried out by, or under the responsibility of, a specialist in aviation ophthalmology acceptable to the AMS and shall include: (1) History (2) Visual acuity, near, intermediate, and distant vision: uncorrected and with best optical correction if needed; (3) Objective refraction. Hyperopic applicants under age 25 in cycloplegia; (4) Ocular motility and binocular vision;' (5) Colour vision; (6) Visual fields; (7) Tonometry on clinical indication and over age 40; (8) Examination of the external eye, anatomy, media (slit lamp) and fundoscopy. (9) Assessment of contrast and glare sensitivity.
13.1(c) A routine eye examination shall form part of all revalidation or renewal examinations (see para 13.1.3).	13.1.3 At each aeromedical revalidation or renewal examination an assessment of the visual fitness of the applicant shall be performed and the eyes shall be examined with regard to possible pathology and shall include: (1) History; (2) Visual acuity, near, intermediate and distant vision: uncorrected and with best optical correction if needed; (3) Morphology by ophthalmoscopy; (4) Further examination on clinical indication. All abnormal and doubtful cases shall be referred to a specialist in aviation ophthalmology acceptable to the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 13: Ophthalmological Requirements (cont.)	**EMCR(ATC) 13: Ophthalmological Requirements (cont.)**
13.1(d) Where at revalidation or renewal examinations the functional performance show significant changes or the standards (6/9 (0,7) 6/9 (0,7), 6/6 (1,0), N14, N5) can only be reached with corrective lenses, the applicant shall supply to the AME an examination report from an ophthalmologist or vision care specialist acceptable to the AMS. If the refractive error is within the range +5 to -6 dioptres, then this examination must have been carried out within 60 months prior to the general medical examination. If the refractive error is outside the range, then this examination must have been carried out within 24 months prior to the examination (see para 13.1.4).	13.1.4 The examination shall include: (1) History (2) Visual acuity, near, intermediate and distant vision: uncorrected with best optical correction if needed; and (3) Refraction; (4) Ocular motility and binocular vision; (5) Visual fields; (6) Tonometry over age 40; (7) Examination of the external eye, anatomy, media (slit lamp) and fundosopy. The report shall be forwarded to the AMS. If any abnormality is detected, such that the applidant's ocular heath is in doubt, futher ophthalmological examination will be required.
13.1(e) Class 3 applicant's over age 40 shall undergo tonometry 2-yearly or submit a report of a tonometry which must have been carried out within 24 months prior to the examination.	
13.1(f) An applicant who has undergone refractive surgery shall be assessed as unfit (however,see para 13.1.5)	13.1.5 After refractive surgery, applicants may be considered fit by the AMS provided that: (a) pre-operative refraction was less than +5 or -6 dioptres. (b) satisfactory stability of refraction has been achieved; (less than 0,75 dioptres variation diurnally); (c) examination of the eye shows no postoperative complications; (d) glare sensitivity is within normal standards; (e) mesopic contrast sensitivity is not impaired; (f) Review is undertaken by an ophthalmologist acceptable to the AMS at the discretion of the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 13: Ophthalmological Requirements (cont.)	**EMCR(ATC) 13: Ophthalmological Requirements (cont.)**
13.1(g) Other Ophthalmological Surgery is disqualifying. (however, see para 13.1.6)	13.1.6 (a) Cataract surgery. A fit assessment may be considered by the AMS after 2 months, provided that the visual requirements are met either with contact lenses or with intraocular lenses (monofocal, non-tinted) (b) Retinal surgery. A fit assessment at revalidation or renewal may be considered by the AMS normally 6 months after successful surgery. A fit assessment may be acceptable to the AMS after Retinal Laser Therapy. The applicant should be re-examined by an ophthalomologist annually. (c) Glaucoma Surgery. Fit assessment may be considered by the AMS normally 6 months after successful surgery. The applicant should be re-examined by an ophthalomologist semi-annually. (d) Extra Ocular Muscle Surgery. A fit assessment may be considered by the AMS not less than 6 months after surgery. The applicant shall be examined by an ophthalomologist acceptable to the AMS.
13.1(h) Keratoconus is disqualifying. The AMS may consider a fit assessment for revalidation or renewal if the applicant meets the visual acuity requirements. (see para 13.1.7)	13.1.7 The AMS may consider a fit assessment at revalidation or renewal after diagnosis of a keratoconus provided that: (a) The visual requirements are met with the use of corrective lenses; (b) Review is undertaken by an ophthalmologist acceptable by the AMS, the frequency is at the discretion of the AMS.
EMCR(ATC) 14: Visual Requirements	**EMCR(ATC) 14: Visual Requirements**
14.1(a) Distant visual acuity, after correction if necessary, shall be 7/10 (6/9) or better in each eye separately using Snellen charts (or equivalent) under appropriate illumination and binocular visual acuity shall be 10/10 (6/6) or better (see para 14.1(i) below).	14.1.1 Where clinical evidence suggests that Snellen may not be appropriate, Landolt ‘C’ may be used for assessment of visual acuity.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 14: Visual Requirements (cont.)	**EMCR(ATC) 14: Visual Requirements (cont.)**
14.1(b) Refractive errors. Refractive error is defined as the deviation from emmetropia measured in dioptres in the most ametropic meridian. Refraction shall be measured by standard methods. Applicants shall be considered fit with respect to refractive errors if they meet the requirements in the paras below.	
14.1(c) At initial examination, an applicant with a refractive error within the range +5.0/-6.0 dioptres: may be assessed as fit if: (1) no significant pathology can be demonstrated; (2) optimal correction has been considered. (3) 5 yearly review is undertaken by an ophthalmologist or vision care specialist acceptable to the AMS. (see para. 14.1.2)	14.1.2 At revalidation or renewal, an applicant with refractive errors of up to +5 dioptres or high myopic refractive errors exceeding -6 dioptres may be considered fit by an AMS if: (1) no significant pathology can be demonstrated; (2) optimal correction has been considered. (3) a 2 yearly review is undertaken by an ophthalmologist or vision care specialist acceptable to the AMS.
14.1(d) At initial examination, an applicant with a refractive error with an astigmatic component, the astigmatism shall not exceed 2.0 dioptres.	14.1.3 At revalidation or renewal, an applicant with an astigmatic component may be considered fit by the AMS subject to a satisfactory report from an ophthalmologist acceptable to the AMS.
14.1(e) In initial applicants the difference in refractive error between the two eyes (anisometropia) shall not exceed 2,0 dioptres. (see para. 14.1.4)	14.1.4 At revalidation or renewal examinations, an applicant with a difference in refractive error between the two eyes of up to 3,0 dioptres may be considered fit by the AMS.
14.1(f) The progress of presbyopia must be checked at every revalidation or renewal examination. The applicant must be capable of reading the Parinaud 2 chart, N5 (or equivalent) at 30-50 cm and the Parinaud 6 chart, N14 (or equivalent) at 100 cm distance, if necessary with the aid of correction.	

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 14: Visual Requirements (cont.)	**EMCR(ATC) 14: Visual Requirements (cont.)**
14.1(g) An applicant with diplopia shall be assessed as unfit. (see para 14.1.5).	14.1.5 Phoria testing will identify significant abnormalities in the ocular muscle balance. TNO testing may be carried out if considered appropriate. However, an abnormal result will not necessarily be disqualifying.
14.1(h) An applicant with convergence which is not normal shall be assessed as unfit (see para 14.1.6).	14.1.6 Convergence outside the normal range may be considered acceptable provided it does not interfere with near vision (30–50 cm) and intermediate vision (100 cm) with or without correction.
14.1(i) An applicant with imbalance of the ocular muscles (heterophorias) exceeding (when measured with usual correction, if prescribed): 2.0 prism dioptres in hyperphoria at 6 metres, 10.0 prism dioptres in esophoria at 6 metres, 8.0 prism dioptres in exophoria at 6 metres, and 1.0 prism dioptres in hyperphoria at 33 cm, 8.0 prism dioptres in esophoria at 33 cm, 12.0 prism dioptres in exophoria at 33 cm shall be assessed as unfit unless the fusional reserves are sufficient to prevent asthenopia and diplopia. (see para. 14.1.7)	14.1.7 Above 12 prism dioptres in exophoria, applicants shall be referred to an ophthalmologist for assessment of fusional reserve.
14.1(j) An applicant with binocular visual fields which are not normal shall be assessed as unfit (however, see para 14.1(l)).	
14.1(k) An initial applicant with functionally significant defects of binocular vision, as determined by an ophthalmologist with regard to the working environment, shall be assessed as unfit (see para 14.1.8).	14.1.8 Central vision in one eye below the limits stated may be considered fit for European Class 3 recertification if binocular visual fields are normal and the underlying pathology is acceptable according to ophthalmic assessment by a specialist acceptable to the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 14: Visual Requirements (cont.)	**EMCR(ATC) 14: Visual Requirements (cont.)**
14.1(l) At the initial examination, an applicant having monocular vision must be assessed unfit. At revalidation or renewal, the applicant may be assessed fit if the ophthalmological examination is satisfactory and the condition does not preclude the applicant from safely exercising the privileges of his licence / certificate of competence (see para 14.1.9).	14.1.9 Testing at revalidation or renewal under these circumstances shall include functional testing within the appropriate working environment.
14.1(m) If a visual requirement is met only with the use of correction, the spectacles or contact lenses must provide optimal visual function and be suitable for air traffic control purposes. Correcting lenses, when worn during the exercise of licensed privileges, shall permit the holder of the licence / certificate of competence to meet the visual requirements at all distances. No more than one pair of spectacles shall be used to meet the requirement (however, see para 14.1.12).	14.1.10 It is recommended that a spare set of similarly correcting spectacles is readily available when exercising the privileges of the licence / certificate of competence.
	14.1.11 Where high myopic correction (greater than -6 dioptres) is needed, individuals shall be required to use either contact lenses or spectacles with high-index lenses in order to minimise peripheral field distortion.
	14.1.12 When contact lenses are used they shall be mono-focal, not coloured and not orthokeratological. Monovision contact lenses shall not be used.
EMCR(ATC) 15: Colour Perception	**EMCR(ATC) 15: Colour Perception**
15.1(a) Normal colour perception is required. It is defined as the ability to pass the Ishihara test or to pass an anomaloscope as a normal trichromate (see para 15.1.1).	15.1.1 The Ishihara test is to be considered passed if consecutive plates are identified correctly as specified in the Ishihara User Manual.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 15: Colour Perception (cont.)	**EMCR(ATC) 15: Colour Perception (cont.)**
	15.1.2 Those failing the Ishihara test shall be examined by: anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is normal trichromatic.
15.1(b) An applicant who fails the acceptable colour perception tests is to be considered colour unsafe and shall be assessed as unfit. (see para 15.1.2)	
EMCR(ATC) 16: Otorhinolaryngological System	**EMCR(ATC) 16: Otorhinolaryngological System**
16.1(a) An applicant for or holder of a European Class 3 Medical Certificate shall not possess any abnormality of the function of the ears, nose, sinuses or throat (including oral cavity, teeth and larynx), or any active pathological condition, congenital or acquired, acute or chronic, or any sequela of surgery and trauma which is likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence.	16.1.1 ENT specialists used by AMS should have an understanding of the functionality required by air traffic controllers in the exercise of their licensed functions.
16.1(b) A comprehensive otorhino-laryngological (ORL) examination is required at the initial examination.	16.1.2 At the initial examination a comprehensive ORL examination shall be carried out by or under the guidance and supervision of a specialist in aviation otorhinolaryngology acceptable to the AMS.
16.1(c) A routine otorhinolaryngological (ORL) examination shall form part of all revalidation and renewal examinations (see para. 16.1.3).	16.1.3 At revalidation or renewal examinations abnormal and doubtful cases within the ENT region shall be referred to a specialist in aviation otorhinolaryngology acceptable to the AMS.
16.1(d) An applicant with any of the following disorders shall be assessed as unfit:	
(1) Active pathological process, acute or chronic, of the internal or middle ear. (2) Unhealed perforation or dysfunction of the tympanic membranes (see para 16.1.4).	16.1.4 A single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered acceptable.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 16: Otorhinolaryngological System (cont.)	**EMCR(ATC) 16: Otorhinolaryngological System (cont.)**
(3) Disturbances of vestibular function (see para 16.1.5).	16.1.5 The presence of spontaneous or positional nystagmus shall entail complete vestibular evaluation by a specialist acceptable to the AMS. In such cases no significant abnormal caloric or rotational vestibular responses can be accepted. At revalidation or renewal examinations abnormal vestibular responses shall be assessed in their clinical context by the AMS.
(4) Significant malformation or significant, acute or chronic infection of the oral cavity or upper respiratory tract.	
(5) Significant disorder of speech or voice. (see para. 16.1.6)	16.1.6 Where full assessment and a functional check is needed, due regard should be paid to the operating environment in which the licensed functions are undertaken.
16.1(e) Particular attention shall be paid to significant restriction of the nasal air passage on either side, or of any dysfunction of the sinuses. These should not necessarily entail unfitness provided exercise of the licensed function is not impaired.	
16.1(f) Any speech or voice disorder that reduces intelligibility shall be referred to a speech specialist.	
EMCR(ATC) 17: Hearing Requirements	**EMCR(ATC) 17: Hearing Requirements**
17.1(a) Hearing shall be tested at all examinations. The applicant shall understand correctly conversational speech when tested with each ear at a distance of two metres from and with his back turned towards the AME.	
17.1(b) Hearing shall be tested with pure tone audiometry at the initial examination and at subsequent revalidation or renewal examinations every four years until age forty and every two years thereafter (see para 17.1.1).	17.1.1 The pure tone audiogram shall cover at least the frequencies from 500 – 3000 Hz. Frequency thresholds shall be determined as follows:

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 17: Hearing Requirements (cont.)	**EMCR(ATC) 17: Hearing Requirements (cont.)**
	500 Hz 1,000 Hz 2,000 Hz 3,000 Hz Testing at frequencies at or above 4000 Hz will aid the early diagnosis of Noise Induced Hearing loss (NIH).
17.1(c) At the initial examination for a European Class 3 Medical Certificate there shall be no hearing loss in either ear, when tested separately, of more than 20 dB(HL) at any of the frequencies 500, 1000 and 2000 Hz, or of more than 35 dB(HL) at 3000 Hz. An applicant whose hearing loss is within 5 dB(HL) of these limits in two or more of the frequencies tested, shall undergo pure tone audiometry at least annually. (see para. 17.1.2)	17.1.2 In cases of hearing loss, if at the next annual test there is no indication of further deterioration, the normal frequency of medical examination may be resumed (see para 17.1(b)).
17.1(d) At revalidation or renewal examinations, there shall be no hearing loss in either ear, when tested separately, of more than 35 dB(HL) at any of the frequencies 500, 1000, and 2000 Hz, or of more than 50 dB(HL) at 3000 Hz. An applicant whose hearing loss is within 5 dB(HL) of these limits in two or more of the frequencies tested, shall undergo pure tone audiometry at least annually. (see para. 17.1.2)	
17.1(e) At revalidation or renewal, applicants with hypoacusis may be assessed as fit by the AMS if a speech discrimination test demonstrates a satisfactory hearing ability (see para 17.1.3).	17.1.3 Cases of hypoacusis shall be referred to the AMS for further evaluation and assessment. If satisfactory hearing in a noise field corresponding to normal working conditions can be demonstrated, a fit assessment at revalidation or renewal may be considered by the AMS.

REQUIREMENTS	VARIATIONS TO REQUIREMENTS, AND GUIDANCE
EMCR(ATC) 17: Hearing Requirements (cont.)	**EMCR(ATC) 17: Hearing Requirements (cont.)**
17.1(f) At initial examination, the use of a hearing aid is disqualifying. For a fit assessment at revalidation or renewal examinations, a controller needing hearing aids for both ears shall be assessed as unfit. However, the use of one hearing aid or an appropriate prosthetic aid (such as a special headset with individual earpiece volume controls) may be acceptable for revalidation or renewal when it can improve a controller's hearing to achieve a normal standard (see para 17.1.4)	17.1.4 Full functional and environmental assessments should be carried out with the chosen prosthetic equipment in use to ensure that the individual is able to perform the functions of his licence / certificate of competence and that the equipment is not adversely affected by interference from headsets or other factors. As failure of the equipment is possible, a spare set of the equipment and accessories, such as batteries, shall be available.

EMCR(ATC) 18: Dermatological Requirements	EMCR(ATC) 18: Dermatological Requirements
18.1(a) An applicant for or holder of a European Class 3 Medical Certificate who suffers from any dermatological pathology likely to interfere with the safe exercise of the privileges of the applicable licence(s) / certificate(s) of competence shall be assessed as unfit. (see para. 18.1.1)	18.1.1 Particular attention should be paid to the following disorders (see guidance below). – severe eczema (exogenous and endogenous), – severe psoriasis, – bacterial infections, – eruptions induced by medication, – bullous eruptions, – malignant conditions of the skin, – urticaria. Referral to the AMS should be made if doubt exists about any condition. Further guidance is found at item 3 of Annex 1 to this document. 18.1.2 Any skin condition causing pain, discomfort, irritation or itching can distract the ATCO from their tasks and thus affect safety. 18.1.3 Any skin treatment, radiant or pharmacological, may have systemic effects which must be considered before assessing the individual as fit or unfit.

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GLOSSARY

For the purposes of this document, the following definitions shall apply.

Problematic Alcohol abuse	The habitual use of alcohol in such a way that it interferes with physical, mental and/or social well-being or is interfering with the safe execution of the ATCOs tasks.
Aeromedical Centre (AMC)	A centre staffed by physicians appropriately trained and authorised by the Aeromedical Section to carry out medical examinations in accordance with medical standards and requirements established by the Aeromedical Section. It may be part of, or separate from, the Aeromedical Section.
Authorised Medical Examiner (AME)	A physician appropriately trained and authorised by the Aeromedical Section to carry out medical examinations for the issue of medical certificates which support the air traffic control licence.
Aeromedical Section (AMS)	The body responsible for implementation and application of European Class 3 aeromedical standards.
Date to date	A period from the date of issue (of a medical certificate) to the same date in the appropriate calendar year; for instance a medical certificate issued on 23 June 00 to an air traffic controller aged under forty will expire on 23 June 02.
Problematic Drug abuse	Improper utilisation of any substance which has not been appropriately prescribed for that individual and or is interfering with the safe execution of the ATCOs tasks.
Initial	Used in association with (medical) certificate or (medical) examination to indicate the very first occasion for an individual on which a medical certificate towards a licence is issued or the first examination leading to the issue of such a medical certificate is conducted.
Licence	The terms ‘licence’ or ‘air traffic controller’s licence’ shall have the same meaning as ‘certificate of competence and licence’ or

	'licence/certificate' as applied to air traffic controllers.
Renewal	The process which takes place whereby a medical examination is carried out following expiry of the current medical certificate. The new medical certificate will be issued with a validity from the date of renewal for the appropriate period of one or two calendar years, date to date.
Revalidation	The process whereby a medical examination is carried out within a 45-day period preceding the date of expiry of the current medical certificate, enabling the new certificate to be issued with a validity from the date of expiry for the appropriate period of one or two calendar years, date to date.

ABBREVIATIONS AND ACRONYMS

For the purposes of this document, the following abbreviations and acronyms shall apply.

ACE	Angiotensin Converting Enzyme
AMC	Aeromedical Centre
AME	Authorised Medical Examiner
AMRSG	ATCO Medical Requirements Study Group *(EATCHIP/EATMP, HRT)*
AMS	Aeromedical Section
ATC	Air Traffic Control
ATCO	Air Traffic Controller Officer
ATM	Air Traffic Management
ATS	Air Traffic Services
CAA SRG	Civil Aviation Authority Safety Regulation Group *(UK)*
dB(HL)	Decibels(Hearing Loss)
DFS	Deutsche Flugsicherung GmbH *(Germany)*
DGAC	Direction Générale de l'Aviation Civile *(France)*
DAS	Directorate ATM Strategies
DAS/HUM	Human Factors Management Business Division
EATMP	European Air Traffic Management Programme *(formerly EATCHIP)*
ECAC	European Civil Aviation Conference
ECG	Electrocardiogram
EEG	Electroencephalogram
ENT	Ear-Nose-Throat
ESARR	EUROCONTROL Safety Regulatory Requirements

	(SRC)
ESARR 5	EUROCONTROL Safety Regulatory Requirement for ATM Services' Personnel *(SRC)*
FEV1/FVC	Forced Expiratory Volume (in one second) / Forced Vital Capacity
g/dl	grammes per decilitre
HRT	Human Resources Team *(EATCHIP/EATMP)*
HUM	Human Factors Management Business Division
Hz	Hertz *(cycles per second)*
IAA	Irish Aviation Authority
ICAO	International Civil Aviation Organization
IFATCA	International Federation of Air Traffic Controllers' Associations
JAA	Joint Aviation Authorities
JAR-FCL	Joint Aviation Requirements – Flight Crew Licensing *(JAA)*
LVNL	Luchtverkeersleiding Nederland *(ATC The Netherlands)*
LWG	(The European ATC) Licensing Work Group *(EATCHIP/EATMP, HRT)*
mmHg	Millimetres of mercury *(a unit of pressure)*
MRI	Magnetic Resonance Imaging
NIH	Noise Induced Hearing loss
ORL	Otorhinolaryngological
REM	Rapid Eye Movement
SARPS	Standards and Recommended Practices *(ICAO)*
SRC	Safety Regulation Commission *(EUROCONTROL)*
ST	Specialist Task *(EATCHIP)*
STD	Standard *(EATCHIP/EATMP)*

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ANNEX 1: ADDITIONAL GUIDANCE MATERIAL

1. Sleep Apnoea Syndrome (see paragraphs 3.2(i) and 3.2.7)

Sleep apnoea syndrome may be primary (central) or obstructive, the latter most commonly affecting overweight males, especially between the ages of forty and sixty. The syndrome results from frequent periods of apnoea during sleep, associated with loud snoring. Sleep recordings reveal apnoeic episodes in Rapid Eye Movement (REM) and non-REM sleep. There may be an absence of respiratory effort with cessation of diaphragmatic movement. The upper airway can remain open even without airflow (central apnoea) or there may be excessive respiratory effort due to airways obstruction. Chronically disturbed nocturnal sleep and hypoxaemia causes excessive daytime sleepiness. This leads to inappropriate and unrefreshing naps, an obvious safety hazard in an ATCO whose sleep may already be disturbed by shift working. Sleep apnoea syndrome evolves gradually and may not be fully described by the individual affected. It should be considered with any presentation of sleepiness which is not improved by a period of undisturbed sleep. Investigation should include respiratory studies and sleep recordings. It can be treated, but a diagnosis will require the ATCO to be assessed as temporarily unfit until all aspects of treatment and recovery can be assessed by a specialist acceptable to the AMS.

1.1. ATCO education and compliance with medical instruction are essential components of the fitness assessment, and shall be confirmed by the appropriate specialist.

2. Testing regimes for asymptomatic HIV positive individuals (see paragraphs at 8.1(b) and 8.1.2 and 8.1.3)

In general, a testing regime would entail appropriate basic testing at three-monthly intervals and more extensive testing at six-monthly intervals. The recommended scope of these tests is outlined below.

The initial examination should include a complete evaluation of the immunological status. Attention should also be paid to transient difficulties (including psychological upset and the use of psychoactive substances) which may follow notification of HIV seropositivity.

The three-monthly examination should include determination of the CD-4 and T-cell status. A CD-4 count of less than 200 per microlitre is considered to be a sensitive indicator of cognitive changes.

The six-monthly examination should include a complete neurological examination, looking particularly for extra pyramidal signs and any ocular disfunction. Since seizures may occur without any premonitory symptoms, an EEG is an essential element of the assessment.

Cognitive function tests should be performed as a baseline when HIV seropositivity is first identified, and then regularly at three monthly follow-up intervals.

ANNEX 2: EUROPEAN CLASS 3 MEDICAL CERTIFICATE

Cover Page

Authority Name and Logo

European Class 3 Medical Certificate

Pertaining to an Air Traffic Controller Licence

Requirements and notes:

Size of each page shall be one eighth A4.

Whole certificate shall be printed on one side of A4 paper.

Security paper, with impressions that do not photocopy, should be used.
Enter name of issuing Authority name and Logo.

All printed text shall be in English. National language may be added if required.

The folded Medical Certificate will fit in the ATCO plastic licence holder.

Page 2

Limitations

Description

A description of all certificate limitations shall be entered

Page 3

State of Issue **Xxxxxxxxx** **Reference Number** **xxxxxxxxxxx**	States shall issue individual numbers for each certificate.
Last and first name of holder **Xxxxxxxxxxxxxxx xxxxxxxxxxxxx**	Names should be spelt out in full.
Date and place of birth **xx-xx-xxxx xxxxxxxxxxxxx**	Standard date format shall be used, i.e. day/month/year (e.g. 10-08-1947).
Nationality **Xxxxxxxxxxxxxxx**	
Signature of holder **Xxxxxxxxxxxxxxx**	

Page 4

Issuing Authority **Xxxxxxxxx**	
Class of Certificate **Xxxxxxxxxxxxxxx**	
Expiry Date **xx-xx-xxxx**	
Date of Issue **xx-xx-xxxx**	
AME name, number and signature **Xxxxx xxxxxxxxxx xxxxxx** **Xxxxxx xxxxxxxxx**	
Seal or stamp of Issuing Authority	Seal or stamp may be entered electronically or manually.

Pages 5 & 6

Initial Medical Examination: Date: xx/xx/xxxx State:		
Date of	Last	Next
General Examination	xx/xx/xxxx	xx/xx/xxxx
Electrocardiogram	xx/xx/xxxx	xx/xx/xxxx
Audiogram	xx/xx/xxxx	xx/xx/xxxx
Ophthalmology	xx/xx/xxxx	xx/xx/xxxx

Pages 7& 8 Medical Certification summary of Minimum Periodic Requirements

Initial Examination	AMC
Issue of Medical Certificate	Initial AMS Renewal AMC/AME AMS approval
Validity of Medical Certificate	Under 40 – 2 Years Over 40 – 1 Year
Blood Tests	At initial examination Under 40 – 4 yearly Over 40 – 2 yearly
Chest X-Ray & EEG	If medically indicated
Electrocardiogram	At initial examination Under 30 – 4 yearly Over 30 – 2 yearly
Audiogram	At initial examination Under 40 – 4 Years Over 40 – 2 Years
Comprehensive Ophthalmological Examination	At initial examination Within +5/-6 dioptres – 5 yearly Above +5/-6 dioptres – 2 yearly In cases of functional performance.
Tonometry	Over 40 – 2 Years
Pulmonory Function Test	At initial examination At renewal if medically indicated
Urinanalysis	At every examination

ANNEX 3: AIR TRAFFIC CONTROL SAFETY REGULATION PROCEDURES – MEDICAL

Note:- This annex is taken from the European Manual of Personnel Licensing – Air Traffic Controllers.

1.1 General

The holders of air traffic controller licences and student air traffic controller licences are required to have a minimum standard of medical fitness to ensure they are fit to provide an ATC service and to minimise, as far as possible, the risk that they will become suddenly incapacitated to an extent that the safety of aircraft could be compromised.

The designated Aeromedical Authority will be required to apply the minimum medical standards notified in the EUROCONTROL Document 'Requirements for European Class 3 Medical Certification of Air Traffic Controllers' (EATMP, 2003 – L4) for initial and renewal medical examinations for the issue of medical certificates associated with the Harmonised European ATC licence.

1.2 Student Air Traffic Controller and Air Traffic Controller Licence Holders

1.2.1 Requirement

An air traffic controller shall not provide an air traffic control service unless he or she holds a valid medical certificate of the appropriate category.

A student air traffic controller or trainee air traffic controller shall not provide an air traffic control service under supervision unless he or she holds a valid medical certificate of the appropriate category.

The holder of a student air traffic controller or air traffic controller licence who fails a medical examination shall not provide an air traffic controller service even though the previous medical certificate held may not have expired.

The holder of a student air traffic controller or air traffic controller licence who fails a medical examination or has any medical limitations or conditions placed on the medical certificate, shall notify the Unit management.

A licence holder who becomes aware of a decrease in his medical fitness that may render him unable to safely exercise the privileges of his licence shall inform Unit management.

Unit management must inform the Designated Authority when a licence holder has been assessed as medically unfit to provide an ATC service.

1.2.2 Guidance

Individual licence holders are responsible for ensuring they hold a valid medical certificate and may be responsible for arranging their own initial and renewal medical examinations. However, the Licensing Administration and/or operational Units may have procedures for advising licence holders when medical certificates are due for renewal and for arranging medical examinations. Whatever the procedures employed, States should clearly define where the responsibility lies.

Holders of air traffic controller licences shall have their European Class 3 Medical Certificates renewed or revalidated every two years. It is recommended that when the holders of air traffic controller licences have passed their fortieth birthday, the two-year interval specified above should be reduced to one year. The designated Aeromedical Authority may require additional medical examinations at its discretion.

The designated Aeromedical Authority should specify those medical examinations that it will require to conduct and those that may be conducted by other authorised aeromedical examiners.

The Licensing Administration should notify the administration procedures for applications for initial medical examinations and for renewal of medical certificates.

1.3 Injury, Illness and Pregnancy

1.3.1 Requirement

The validity of the medical certificate of a licence holder who suffers personal injury or illness involving incapacity will be deemed to be suspended and the holder must inform the designated Aeromedical Authority of the situation.

A woman who has reason to believe that she is pregnant must inform the designated Aeromedical Authority.

The designated Aeromedical Authority shall impose any limitations or conditions it thinks fit to the medical certificate and the holder of the medical certificate shall not provide an air traffic control service unless he or she complies with those limitations or conditions.

1.3.2 Guidance

Where the medical certificate is suspended due to personal injury or illness, the designated Aeromedical Authority should advise the licence holder of any conditions or procedures for having the suspension lifted.

Any limitations or conditions imposed shall be clearly indicated on the medical certificate to the extent that Unit management can tell from the medical certificate if the controller concerned is complying with those limitations or conditions.

Note:
An example of a condition notified on a medical certificate would be requiring that a controller wears correcting spectacles.

States may set a maximum period of time during which a controller may be ill or incapacitated before the medical certificate is deemed to be suspended and the designated Aeromedical Authority informed.

1.4 Psychoactive Substances (alcoholic drink and problematical drugs and medicines)

An air traffic controller who is providing an air traffic control service while under the influence of psychoactive substances may not be aware that his judgement and skill have been degraded to the extent that the service being providing is unsafe. This may be the case where psychoactive substances are being abused, or where medicines have been prescribed by a doctor, or non prescription medicines obtained for a minor illness.

States may already have employment legislation relating to the abuse of drink or drugs in the workplace. Where this is not specific to aviation, or no such legislation exists, States will be required to introduce procedures to ensure, as far as possible, that student air traffic controllers or air traffic controllers do not provide an air traffic control service while under the influence of psychoactive substances.

1.4.1 Requirement

The holder of a student air traffic controller or air traffic controller licence shall not provide an air traffic control service, while under the influence of psychoactive substances, including any medicine that might have a negative influence on their capacity to provide a safe air traffic control service.

It is the responsibility of the student air traffic controller and air traffic controller licence holders to ensure they do not take medicine before or while providing an air traffic control service that would have a detrimental effect on their operational performance. The designated Aeromedical Authority shall ensure that licence holders are able to obtain the necessary advice and/or information to enable them to decide if they should, or should not, provide an ATC service while taking specific medicines.

Unit management shall have a process for monitoring controllers for psychoactive substance abuse. A controller who is suspected of being under the influence of psychoactive substances shall be immediately withdrawn from the operational position and the designated Aeromedical Authority advised of what has happened.

1.4.2 Guidance

The designated Aeromedical Authority should make provisions to enable licence holders to ask for advice and/or provide information in the form of Aeronautical Information Circulars on which prescription or non prescription medicines will, or are likely to, impair their ability to the extent that they should not provide an air traffic control service.

Designated Aeromedical Authorities developing procedures for monitoring controllers for alcohol or drug abuse should refer to ICAO Annex 1 (1988) and ICAO Doc. 9654-AN/945 ‘Manual on Prevention of Problematic Use of Substances in the Aviation Workplace’ (1995).

ANNEX 4: MEDICAL CERTIFICATION SUMMARY OF MINIMUM PERIODIC REQUIREMENTS

Initial Examination	AMC
Issue of Medical Certificate	Initial AMS Renewal AMC/AME AMS approval
Validity of Medical Certificate	Under 40: 2 Years Over 40: 1 Year
Blood Tests	At initial examination Under 40: 4 yearly Over 40: 2 yearly
Chest X-Ray & EEG	If medically indicated
Electrocardiogram	At initial examination Under 30: 4 yearly Over 30: 2 yearly
Audiogram	At initial examination Under 40: 4 Years Over 40: 2 Years
Comprehensive Ophthalmological Examination	At initial examination Within +5/-6 dioptres: 5 yearly Above +5/-6 dioptres: 2 yearly
Tonometry	Over 40: 2 Years
Pulmonary Function Test	At initial examination At renewal if medically indicated
Urinanalysis	At every examination

ANNEX 5: DECLARATION OF NATIONAL VARIATIONS TO REQUIREMENTS

It is appreciated that legal or other circumstances within a particular State may prevent that State from complying with a particular medical requirement. These circumstances shall be evaluated by the National Supervisory Authority. The State is advised to file a difference to the nominated body responsible for management of this document (currently under the temporary custodianship of the AMRTF pending further deliberation within EUROCONTROL). It is intended that these differences will be noted in this Annex.

The correspondence address for notification of differences is:

Head of DAS/HUM Business Division
EUROCONTROL Headquarters
Rue de la Fusée, 96
B-1130 BRUXELLES

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