



Aviation Maintenance Repair & Overhaul Business Association

REMOVING THE UNCERTAINTY OF ICAO ANNEXES

To remove any confusion the following excerpts from ICAO Annex 6, Parts II (GA aeroplanes) & III (Helicopters) relate to mandatory requirements expressed as “shall” and recommended practices expressed as “should”. Too often, Government employees state they are applying ICAO requirements without producing the standards. ICAO has extremely well documented outcomes and should be the basis of Australian legislation. These standards provide flexibility for the GA industry and AMROBA continues to lobby to remove unnecessary government costs.

ICAO STANDARDS AND RECOMMENDED PRACTICES

CHAPTER 1. DEFINITIONS

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

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

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

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

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

Category I (CAT I) operation. A precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m.

Category II (CAT II) operation. A precision instrument approach and landing with a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft), and a runway visual range not less than 350 m.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Helicopter. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

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

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

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

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

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

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

CHAPTER 4. FLIGHT PREPARATION AND IN-FLIGHT PROCEDURES

4.4 Aeroplane airworthiness and safety precautions

4.4.1 A flight shall not be commenced until the pilot-in-command is satisfied that:

- a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;
- b) the instruments and equipment installed in the aeroplane are appropriate, taking into account the expected flight conditions;
- c) any necessary maintenance has been performed in accordance with Chapter 8;
- d) the mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;
- e) any load carried is properly distributed and safely secured; and
- f) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.



CHAPTER 6. AEROPLANE INSTRUMENTS AND EQUIPMENT

Note.— Specifications for the provision of aeroplane communication and navigation equipment are contained in Chapter 7.

6.1 All aeroplanes on all flights

6.1.1 General

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

6.1.2 Instruments

An aeroplane **shall** be equipped with instruments which will enable the flight crew to control the flight path of the aeroplane, carry out any required procedural manoeuvre, and observe the operating limitations of the aeroplane in the expected operating conditions.

6.1.3 Equipment

6.1.3.1 All aeroplanes on all flights.

6.1.3.1.1 All aeroplanes on all flights **shall** be equipped with:

- a) an accessible first-aid kit;
- b) portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane. At least one **shall** be located in:
 - 1) the pilot's compartment; and
 - 2) each passenger compartment that is separate from the pilot's compartment and not readily accessible to the pilot or co-pilot;
- c) 1) a seat or berth for each person over an age to be determined by the State of Registry; and
2) a seat belt for each seat and restraining belts for each berth;
- d) the following manuals, charts and information:
 - 1) the flight manual or other documents or information concerning any operating limitations prescribed for the aeroplane by the certificating authority of the State of Registry, required for the application of Chapter 5;
 - 2) current and suitable charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;
 - 3) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and
 - 4) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2;
- e) spare electrical fuses of appropriate ratings for replacement of those accessible in flight.

6.2 All aeroplanes operated as VFR flights

6.2.1 All aeroplanes when operated as VFR flights **shall** be equipped with:

- a) a magnetic compass;
- b) an accurate timepiece indicating the time in hours, minutes and seconds;
- c) a sensitive pressure altimeter;
- d) an airspeed indicator; and
- e) such additional instruments or equipment as may be prescribed by the appropriate authority.

6.2.2 **Recommendation.**— *VFR flights which are operated as controlled flights **should** be equipped in accordance with 6.6.*



CHAPTER 8. AEROPLANE MAINTENANCE

Note 1.— For the purpose of this chapter “aeroplane” includes: powerplants, propellers, components, accessories, instruments, equipment and apparatus including emergency equipment.

Note 2.— Guidance on continuing airworthiness requirements is contained in the Airworthiness Manual (Doc 9760).

8.1 Responsibilities

8.1.1 The owner of an aeroplane, or in the case where it is leased, the lessee, **shall** ensure that:

- a) the aeroplane is maintained in an airworthy condition;
- b) the operational and emergency equipment necessary for the intended flight is serviceable;
- c) the Certificate of Airworthiness of the aeroplane remains valid; and
- d) the maintenance of the aeroplane is performed in accordance with a maintenance programme acceptable to the State of Registry.

8.1.2 The aeroplane **shall** not be operated unless it is maintained and released to service under a system acceptable to the State of Registry.

8.1.3 When the maintenance release is not issued by an approved maintenance organization in accordance with Annex 6, Part I, 8.7, the person signing the maintenance release shall be licensed in accordance with Annex 1.

[**Air Transport – Part I, 8.7 (g)** a description of the procedures for preparing the maintenance release and the circumstances under which the release is to be signed;

h) the personnel authorized to sign the maintenance release and the scope of their authorization;

8.7.5.3 The competence of maintenance personnel **shall** be established in accordance with a procedure and to a level acceptable to the State granting the approval. **The person signing a maintenance release shall be qualified in accordance with Annex 1.]**

8.2 Maintenance records

8.2.1 The owner **shall** ensure that the following records are kept for the periods mentioned in 8.2.2:

- a) the total time in service (hours, calendar time and cycles, as appropriate) of the aeroplane and all life limited components;
- b) the current status of compliance with all mandatory continuing airworthiness information;
- c) appropriate details of modifications and repairs;
- d) the time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the aeroplane or its components subject to a mandatory overhaul life;
- e) the current status of the aeroplane’s compliance with the maintenance programme; and
- f) the detailed maintenance records to show that all requirements for signing a maintenance release have been met.

8.2.2 The records referred to in 8.2.1 a) to e) **shall** be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in 8.2.1 f) for a minimum period of one year after the signing of the maintenance release.

8.2.3 The lessee of an aeroplane **shall** comply with the requirements of 8.2.1 and 8.2.2, as applicable, while the aeroplane is leased.

Note.— Maintenance records or related documents, other than a valid certificate of airworthiness, need not be carried in the aeroplane during international flights.

8.3 Continuing airworthiness information

The owner of an aeroplane over 5 700 kg maximum certificated take-off mass, or in the case where it is leased, the lessee, **shall**, as prescribed by the State of Registry, ensure that the information resulting from maintenance and operational experience with respect to continuing airworthiness, is transmitted as required by Annex 8, Part II, 4.3.5 and 4.3.8.

8.4 Modifications and repairs

All modifications and repairs **shall** comply with airworthiness requirements acceptable to the State of Registry. Procedures **shall** be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

8.5 Maintenance release

8.5.1 A maintenance release **shall** be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work performed has been completed satisfactorily.



8.5.2 A maintenance release **shall** contain a certification including:

- a) basic details of the maintenance carried out;
- b) date such maintenance was completed;
- c) when applicable, the identity of the approved maintenance organization; and
- d) the identity of the person or persons signing the release.

CHAPTER 6. HELICOPTER MAINTENANCE

Note 1.— For the purpose of this chapter “helicopter” includes: powerplants, power transmissions, rotors, components, accessories, instruments, equipment and apparatus including emergency equipment.

Note 2.— Reference is made throughout this chapter to the requirements of the State of Registry. When the State of the Operator is not the same as the State of Registry, it may be necessary to consider any additional requirements of the State of the Operator.

Note 3.— Guidance on continuing airworthiness requirements is contained in the Airworthiness Manual (Doc 9760).

6.1 Operator’s maintenance responsibilities

6.1.1 Operators **shall** ensure that, in accordance with procedures acceptable to the State of Registry:

- a) each helicopter they operate is maintained in an airworthy condition;
- b) the operational and emergency equipment necessary for the intended flight is serviceable; and
- c) the Certificate of Airworthiness of the helicopter they operate remains valid.

6.1.2 An operator **shall** not operate a helicopter unless it is maintained and released to service by an organization approved in accordance with Annex 6, Part I, 8.7 or under an equivalent system, either of which shall be acceptable to the State of Registry.

6.1.3 When the State of Registry accepts an equivalent system, the person signing the maintenance release **shall** be licensed in accordance with Annex 1.

6.1.4 An operator **shall** employ a person or group of persons to ensure that all maintenance is carried out in accordance with the maintenance control manual.

6.1.5 The operator **shall** ensure the maintenance of its helicopters is performed in accordance with the maintenance programme approved by the State of Registry.

6.2 Operator’s maintenance control manual

6.2.1 The operator **shall** provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance control manual, acceptable to the State of Registry, in accordance with the requirements of 9.2.

6.2.2 The operator **shall** ensure that the maintenance control manual is amended as necessary to keep the information contained therein up to date.

6.2.3 Copies of all amendments to the operator’s maintenance control manual **shall** be furnished promptly to all organizations or persons to whom the manual has been issued.

6.2.4 The operator **shall** provide the State of the Operator and the State of Registry with a copy of the operator’s maintenance control manual, together with all amendments and/or revisions to it and **shall** incorporate in it such mandatory material as the State of the Operator or the State of Registry may require.

6.3 Maintenance programme

6.3.1 The operator **shall** provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the State of Registry, containing the information required by 9.3. The design and application of the operator’s maintenance programme **shall** observe Human Factors principles.

Note.— Guidance material on the application of Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).

6.3.2 Copies of all amendments to the maintenance programme **shall** be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.



6.4 Maintenance records

6.4.1 An operator **shall** ensure that the following records are kept for the periods mentioned in 6.4.2:

- a) the total time in service (hours, calendar time and cycles, as appropriate) of the helicopter and all life limited components;
- b) the current status of compliance with all mandatory continuing airworthiness information;
- c) appropriate details of modifications and repairs to the helicopter and its major components;
- d) the time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the helicopter or its components subject to a mandatory overhaul life;
- e) the current status of the helicopter's compliance with the maintenance programme; and
- f) the detailed maintenance records to show that all requirements for a maintenance release have been met.

6.4.2 The records in 6.4.1 a) to e) **shall** be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in 6.4.1 f) for a minimum period of one year after the signing of the maintenance release.

6.4.3 In the event of a temporary change of operator, the records **shall** be made available to the new operator. In the event of any permanent change of operator, the records **shall** be transferred to the new operator.

6.5 Continuing airworthiness information

6.5.1 The operator of a helicopter over 3 180 kg maximum mass **shall** monitor and assess maintenance and operational experience with respect to continuing airworthiness and provide the information as prescribed by the State of Registry and report through the system specified in Annex 8, Part II, 4.3.5 and 4.3.8. [MDR/SDR]

6.5.2 The operator of a helicopter over 3 180 kg maximum mass **shall** obtain and assess continuing airworthiness information and recommendations available from the organization responsible for the type design and **shall** implement resulting actions considered necessary in accordance with a procedure acceptable to the State of Registry.

Note.— Guidance on interpretation of “the organization responsible for the type design” is contained in the Airworthiness Manual (Doc 9760).

6.6 Modifications and repairs

All modifications and repairs **shall** comply with airworthiness requirements acceptable to the State of Registry. Procedures **shall** be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

6.7 Maintenance release

6.7.1 A maintenance release **shall** be completed and signed to certify that the maintenance work has been completed satisfactorily and in accordance with approved data and the procedures described in the maintenance organization's procedures manual.

6.7.2 A maintenance release **shall** contain a certification including:

- a) basic details of the maintenance carried out including detailed reference of the approved data used;
- b) date such maintenance was completed;
- c) **when applicable**, the identity of the approved maintenance organization; and
- d) the identity of the person or persons signing the release.

6.8 Records

6.8.1 An operator **shall** ensure that the following records are kept:

- a) in respect of the entire helicopter: the total time in service;
- b) in respect of the major components of the helicopter:
 - 1) the total time in service;
 - 2) the date of the last overhaul;
 - 3) the date of the last inspection;
- c) in respect of those instruments and equipment, the serviceability and operating life of which are determined by their time in service;
 - 1) such records of the time in service as are necessary to determine their serviceability or to compute their operating life;
 - 2) the date of the last inspection.

6.8.2 These records **shall** be kept for a period of 90 days after the end of the operating life of the unit to which they refer.