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GOVERNMENT NOTICE

DEPARTMENT OF TRANSPORT

No. R. 1202

27 September 2002

AVIATION ACT 1962(ACT NO 74 OF 1962) PROPOSED AMENDMENT TO THE CIVIL AVIATION REGULATIONS, 1997

Under regulation 11.03.2(1)(a) of the Civil Aviation Regulations, the Chairperson of the Civil Aviation Regulations Committee (CARCOM) hereby publishes for comment the proposed amendment(s) to the Civil Aviation Regulations, 1997, as set out in the schedule(s). Any comments or representations on the proposed amendment(s) should be lodged in writing with the Chairperson of the Regulations Committee, for attention Mr. Kim Gorringer or Mr. Herman Wildenboer, Private Bag X08, Waterkloof, 0145, fax: (012) 346-5979, or e-mail at gorringerk@caa.co.za or wildenboerh@caa.co.za, before or on 28 October 2002.

SCHEDULE (1)

1. Proposal to amend Part 43 of the Civil Aviation Regulations of 1997

Proposer:

Civil Aviation Authority
Private Bag X08
Waterkloof
0145

Explanation of interest of the Proposer

The Proposer administers the Aviation Act, 1962 (Act No. 74 of 1962) and regulations and technical standards issued in terms thereof.

1.1 Proposed amendment of Part 43 'General Maintenance Rules'

It is proposed to substitute the attached new Part 43 for the current Part 43.

1.2 Motivation:

The CAA is in the process of reviewing its regulations with a view to bring them in line with ICAO standards and international best practices. The current Part 43 caters mainly for general aviation aircraft, and does not address sufficiently large aircraft. Major omissions are *inter alia*

GENERAL MAINTENANCE RULES

- * the requirement for maintenance control manuals;
- * additional maintenance requirements in respect of ETOPS operations;
- * clear instructions in respect of aircraft logbooks;
- * mass and balance aspects; and
- * progressive inspections.

The new Part has been developed by Bureau Veritas, a French organisation involved in inter alia aeronautical research in consultation with the Regulations Review Project Team and the Airworthiness Department of the CAA, and has been discussed with stakeholders in the aviation maintenance sector.

Apart from the regulations themselves, major amendments have been made to the relevant technical standards in Document SA-CATS-GMR.

1.3 Current regulation:

The current regulations are contained in Part 43 of the CAR, as published by Government Notice No. R.1219 of September 26, 1997, (English text) (as amended) and may also be found on the CAA website www.caa.org.za and in the Butterworths Publication 'Aviation Legislation in South Africa', Volume 2.

1.4 Technical Standards:

Proposals for the various Technical Standards required in terms of the above proposed new Part 43 are published on the CAA website www.caa.co.za and copies may be applied for by submitting the application form published as an Aeronautical Information Circular. (A.I. C 18.26 dated 02-11-15)

Annex: Revised Part 43 'General Maintenance Rules'

PART 43**General Maintenance Rules
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SUBPART 1: GENERAL**Applicability**

- 43.01.1** (1) This part shall apply to the maintenance, and the release to service after maintenance, of –
- (a) aircraft registered in the Republic; and
 - (b) aircraft components to be fitted to such aircraft.
- (2) This part shall not apply in respect to any –
- (a) hang-glider including powered hang-glider;
 - (b) paraglider including powered paraglider and paratrike;
 - (c) unmanned free balloon;
 - (d) captive unmanned balloon;
 - (e) kite;
 - (f) model aircraft or
 - (g) parachute;

Falsification, reproduction or alteration of maintenance documents

43.01.2 No person shall make or cause to be made –

- (a) any fraudulent or false entry in any record which is required to be made, kept, or used to show compliance with any requirement prescribed in this Part; or
- (b) any reproduction or alteration for fraudulent purposes, of any record or report made in terms of the provisions of this Part.

Logbooks

- 43.01.3** (1) Subject to the provisions of sub-regulation (2), the following logbooks shall be kept in respect of South African aircraft and other specified equipment for the purpose of recording therein the

maintenance history of the equipment to which each relates:

- (a) an approved aircraft logbook for each aircraft;
 - (b) an approved engine logbook for each aircraft engine; and
 - (c) an approved propeller logbook for each propeller.
- (2) Certain non-type certificated aircraft have been exempted from the provisions of sub-regulation (1) in terms of regulation 94.03.2.
- (3) Logbooks should preferably be kept at the aircraft's base of operation. Details in respect of maintenance carried out while away from base shall be transferred to the appropriate logbook(s) within 48 hours after the return of the aircraft to its base of operation or entered within 48 hours of completion of any maintenance performed on the aircraft or other equipment at its base of operation.
- (4) All logbooks to be kept and maintained in terms of the preceding sub-regulations shall be made available to an authorised officer, an inspector or an authorised person at all times for inspection.
- (5) For an aircraft with a maximum approved passenger seat configuration in excess of nine seats, an aeroplane with a maximum certificated mass in excess of 5 700 kg, or a helicopter with a maximum certificated mass in excess of 3 175 kg the logbook may refer to a separate system approved in its approved maintenance schedule for component and major repair tracking. Any entry in such system shall meet the requirements as prescribed for logbooks.
- (6) The format of the logbooks shall be as prescribed in Document SA-CATS-GMR.

Preservation of logbooks

- 43.01.4 (1) The logbooks required to be kept in accordance with this regulation 43.01.3(1) shall be preserved for a period, of not less than six months from the date of destruction of the airframe, engine or propeller for which they were kept: Provided that the Commissioner may prescribe a longer period in respect of the logbooks of an aircraft, its engine(s) or propeller(s) involved on an accident or incident.
- (2) Logbooks shall preferably not be carried in the aircraft to which they relate. Apart from as provided for in sub-regulation (3), the only

exception should be when logbooks are needed with the aircraft for maintenance purposes and no other means of forwarding such logbooks are reasonably available.

- (3) When an aircraft is exported and the logbooks are transported with the aircraft, a copy of the last major overhaul and repairs performed as well as copies of the defects rectification for the last six (6) months prior to export shall be retained by the exporter or the responsible aviation maintenance organisation, as the case may be.

Entries in logbooks

- 43.01.5** (1) Entries in logbooks required to be kept in accordance with regulation 43.01.3(1) shall be made and signed by the holder of an appropriate licence, a person holding a valid authorisation issued in terms of Part 145, or by a person approved for the purpose by the Commissioner. Matters that could not have come to the notice of such licence holder or approved person shall be entered and signed by the pilot-in-command.
- (2) Any record kept for the purpose of compiling a logbook entry or where reference is made to a record system other than the logbook such record shall be produced when called for in the event of any inspection or investigation by an authorised officer, inspector or authorised person.
 - (3) Entries in logbooks shall furnish all the information and particulars provided for in the logbook.
 - (4) Whenever corrections are made to entries in a logbook, the correction shall be made in such a way that the original entry still remains legible. The use of tipex or similar correction methods is prohibited.

Entries of special significance

- 43.01.6** When repairs to an aircraft, aircraft engine or component or fixed or removable equipment were required in consequence either of damage caused by a forced or hard landing or of defects that occasioned a forced landing, the entry or entries made in the relevant logbook or books in respect of such repairs shall state that they were so required and shall identify the forced or hard landing in question.

Maintenance of logbooks

- 43.01.7** The logbooks referred to in regulation 43.01.3(1) shall be kept up to date and maintained in a legible and permanent manner and in accordance with the "Instructions for use" in the logbook.

Loss of logbooks

- 43.01.8** (1) When the registered owner of an aircraft reports the loss of a logbook currently in use, a request to open a substitute logbook shall be made in writing to the Commissioner accompanied by a sworn affidavit and appropriate data for the purpose of reconstructing the logbook.
- (2) When the Commissioner approves the opening of a substitute logbook, the relevant authorisation shall be made a permanent part of that logbook.
- (3) The procedure to be followed for the opening of a substitute logbook is prescribed in SA-CATS-GMR.
- (4) When a logbook has been lost, the relevant Certificate of Airworthiness or Authority to Fly shall be considered invalid until such time that all the requirements for the opening of a substitute logbook have been met.

SUBPART 2: MAINTENANCE**Aircraft maintenance schedules**

- 43.02.1** (1) Each aircraft on the South African Civil Aircraft Register shall be maintained according to an approved aircraft maintenance schedule as prescribed in regulation 43.02.8.
- (2) The owner of an aircraft shall draw up, or have drawn up a maintenance schedule for his or her aircraft in accordance with the provisions of Technical Standard 43.02.8 in Document SA-CATS-GMR.
- (3) The owner or the responsible aircraft maintenance organisation shall submit the proposed maintenance schedule to the Commissioner for approval.
- (4) Provided the proposed maintenance schedule meet all the requirements of Technical Standard 43.02.8, the Commissioner shall approve the proposed aircraft maintenance schedule either as submitted or as amended by him or her in the interest of aviation safety.

- (5) The owner may request the Commissioner for, and the Commissioner may refuse or grant a permanent or temporary amendment to the approved aircraft maintenance schedule.
- (6) Notwithstanding the provisions of sub-regulations (1) to (5), the owner of a non-type certificated aircraft, operated in terms of Part 94 of these Regulations, may be exempted from the need to submit an aircraft maintenance schedule for approval to the Commissioner, provided he or she maintains his or her aircraft in accordance with the provisions of Part 24 and Part 94.

Persons to carry out maintenance

- 43.02.2** (1) Subject to the provisions of sub-regulations (2) and (3), no person shall carry out maintenance on an aircraft or aircraft component unless such person –
- (a) is the holder of an aircraft maintenance engineer licence with an appropriate rating issued in terms of Part 66;
 - (b) carries out maintenance under the direct supervision of the holder of an aircraft maintenance engineer licence with an appropriate rating issued in terms of Part 66; or
 - (c) is authorised by the holder of an aircraft maintenance organisation approval with an appropriate rating issued in terms of Part 145, to carry out maintenance within the scope of such approval.
- (2) The holder of a pilot licence with an appropriate type rating issued in terms of Part 61 or Part 62, may carry out the maintenance as prescribed in Document SA-CATS-GMR if –
- (a) such holder is the owner or operator of the aircraft; and
 - (b) the aircraft is used for non-commercial operations.
- (3) Any person may carry out maintenance on an amateur built aircraft or a production-built aircraft, or any component thereof, if such person –
- (a) is authorised by the Commissioner or by the organisation designated for the purpose by the Commissioner in terms of Part 149, as the case may be, to carry out the maintenance; or

- (b) carries out the maintenance under the direct supervision of a person authorised by the Commissioner or by the organisation referred to in sub-regulation (a).
- (4) The routine maintenance, scheduled inspections, structural integrity inspections, overhaul, modification, major repairs and structural repairs on aircraft with a maximum approved passenger seating configuration in excess of 9 seats, on aeroplanes with a maximum certificated mass in excess of 5 700 kg or on helicopters with a maximum certificated mass in excess of 3 175 kg shall be undertaken and certified by an appropriately rated approved Aircraft Maintenance Organisation (AMO) only.

Carrying out of maintenance

43.02.3 Any person who carries out maintenance on an aircraft or aircraft component shall –

- (a) have available adequate accommodation and facilities for the necessary disassembly, proper inspection and re-assembly of the aircraft or aircraft component;
- (b) use methods, techniques and practices which are –
 - (i) prescribed in the current manufacturer's maintenance manual or in any instructions for safe operation and continued airworthiness;
 - (ii) in accordance with the approved maintenance schedule for the aircraft;
 - (iii) in accordance with Document SA-CATS-GMR; or
 - (iv) approved by the Commissioner;
- (c) use the tools, equipment and test apparatus necessary to ensure that the maintenance is carried out in accordance with the appropriate manufacturer's requirements or standard practices approved by the Commissioner;
- (d) on completion of the maintenance, ensure that the condition of the aircraft or aircraft component is satisfactory for release to service and is at least equal to its original or properly modified condition with regard to –
 - (i) aerodynamic function;
 - (ii) structural strength;
 - (iii) resistance to vibration and deterioration; and
 - (iv) other qualities affecting airworthiness;

- (e) use any special or test equipment recommended by the manufacturer, or equivalent equipment approved by the Commissioner; and
- (f) if maintenance is carried out on an aircraft operated under an operating certificate, carry out such maintenance in accordance with the operator's approved maintenance control manual (MCM). The format and requirements for an MCM are prescribed in Document SA-CATS-GMR.

Rectification of unsatisfactory items

- 43.02.4** (1) When during any maintenance or at any other time any part, product, component, equipment or item is found to be unserviceable or is unlikely to remain serviceable under normal operating conditions during the period preceding the next inspection, such rectification action as considered necessary shall be taken to ensure the continued serviceability of the part, component or item prior to releasing the aircraft to service.
- (2) Deferred defects shall be transferred from the flight folio onto a work sheet. Any maintenance carried out to restore the serviceability of any part, component, equipment or item shall be clearly recorded in the relevant logbook or other approved recording system, and be certified by an appropriately rated licence or approval holder prior to releasing the aircraft to service.
- (3) The person certifying the entry referred to in sub-regulation (2) shall furthermore certify in the relevant flight folio that the deferred defect has been rectified, and he or she shall date and sign the entry accordingly.

Overhaul, repair and substitution of major components

- 43.02.5** (1) Unless the Commissioner has approved in writing otherwise, an aircraft and its components and installed equipment shall be overhauled or substituted at such times as recommended or specified by its manufacturer.
- (2) Overhaul of a Class I or Class II product and repairs to the primary structure of an aircraft, its engine(s) or propeller(s) shall be undertaken by an appropriately-rated approved aircraft maintenance organisation only.
- (3) The procedure for reinstating the validity of a certificate of airworthiness, deemed suspended when an aircraft is involved in

an accident or incident that renders one or more Class I products defective is prescribed in Document SA-CATS-GMR.

- (4) The requirements for the overhaul of components and equipment installed on an aircraft and of engines and propellers are those prescribed in Document SA-CATS-GMR.
- (5) Where the Commissioner has approved a time between overhaul (TBO) that differs from that recommended or specified by the manufacturer, such TBO shall be specified in the aircraft's approved maintenance schedule. Furthermore, where a manufacturer has not recommended or specified the overhaul of an item at certain times but where the Commissioner considers its overhaul at certain intervals necessary in the interest of safety, he or she may prescribe a time between overhaul for such item in the aircraft's approved maintenance schedule.
- (6) The requirements for the substitution of products, components and parts with new or overhauled items are those prescribed in Documents SA-CATS-GMR.

Maintenance for IFR operations

43.02.6 Any person who carries out an inspection or maintenance on equipment required for communication, navigation and surveillance in an aircraft to be used under IFR shall carry out the inspection as prescribed in Document SA-CATS-GMR.

Mass and Balance

- 43.02.7** (1) Except with the written permission of the Commissioner, no person may operate any South African registered aircraft unless its current empty mass has been established by means of a mass meter and its centre of gravity computed within the preceding five years.
- (2) Whenever alterations are made which could influence an aircraft's empty mass or its centre of gravity, the mass and balance data shall be amended.
 - (3) An aircraft's empty mass shall be established by means of computation or by means of a mass meter by an appropriately approved aircraft maintenance organisation or a person acceptable to the Commissioner. The aircraft's new centre of gravity shall be computed thereafter.
 - (4) The mass meter to be used shall, within the periods of 12 months immediately preceding the date of determination of the aircraft's empty mass, either—

- (a) have been certified by a Government Assize Officer; or
 - (b) if an electronic mass meter, have been tested by the South African Bureau of Standards or a similar body acceptable to the Commissioner.
- (5) The mass and centre of gravity data, as supplied by the manufacturer in respect of new aircraft, shall be acceptable for the purpose of this regulation for the first five-year period, provided that the empty mass was established by means of a mass meter.
- (6) For the purpose of this regulation, the empty mass of an aircraft (as ascertained when the mass was last determined or computed) shall be the mass of the aircraft and its powerplant(s), including any engine coolant, unusable fuel, total oil, total hydraulic fluid, any fixed ballast, and all items of fixed equipment.
- (7) Notwithstanding the provisions of the preceding sub-regulations, the Commissioner may at any time, when he or she deems it necessary in the interest of public safety, require the mass of any aircraft to be established by means of a mass meter or its centre of gravity to be computed.
- (8) The procedure to establish mass and the form on which the results of balance computations must be recorded shall be as prescribed in the Document SA-CATS-GMR.

Mandatory inspections

- 43.02.8** (1) Any person who carries out a mandatory inspection shall carry out the tests and inspections in accordance with the approved maintenance schedule for a particular aircraft at the prescribed times or intervals.
- (2) Mandatory inspections include—
- (a) for aeroplanes with a maximum certificated mass of 5 700 kg or less or a maximum approved passenger seating configuration of not more than 9 seats, and for helicopters with a maximum certificated mass of 3 175 kg or a maximum approved passenger seating configuration of not more than 9 seats, either —
 - (i) a mandatory periodic inspection; or
 - (ii) inspections in accordance with an approved progressive inspection programme;

- (b) for any aircraft, other than those referred to in sub-regulation (a), the approved maintenance schedule for the particular category and type of aircraft at the intervals prescribed by the schedule.
- (3) An aircraft referred to in sub-regulation (2)(a)(i) that has not accumulated 100 hours within 12 months since its last inspection shall undergo a mandatory periodic inspection before it is being released to service.
- (4) An aircraft referred to in sub-regulation (2)(a)(ii) that has not completed its progressive inspection programme within the period specified by the manufacturer or the Commissioner shall undergo the remainder of the progressive inspection programme before it is being released to service.
- (5) The maintenance schedules referred to in sub-regulation (1) are those defined in Document SA-CATS-GMR

Air Speed Indicator and Altimeter system tests and inspections

43.02.9 Any person who carries out air speed indicator and altimeter system tests and inspections shall –

- (a) perform the tests and inspections as prescribed in Document SA-CATS-GMR; and
- (b) for the altimeter tests, record on the altimeter case, the date on which and maximum altitude to which the altimeter has been tested.

ATC transponder tests and inspections

43.02.10 Any person who carries out ATC transponder tests and inspections shall perform the tests and inspections as prescribed in Document SA-CATS-GMR.

Emergency locator beacon tests and inspections

43.02.11 Any person who carries out emergency locator beacon tests and inspections shall perform the tests and inspections as prescribed in Document SA-CATS-GMR.

Inspection requirements

43.02.12 Any person who carries out an inspection shall –

- (a) carry out the inspection so as to determine that the aircraft or aircraft component under inspection, complies with all appropriate

airworthiness requirements prescribed in Part 21 or Part 24, as the case may be; and

- (b) if carrying out a mandatory periodic inspection, progressive inspection or scheduled inspection, use a checklist which includes the scope and detail of the tests and inspections referred to in Regulation 43.02.8.

Non-destructive testing

43.02.13 Any person who performs a non-destructive test on an aircraft, aircraft component or aircraft part shall –

- (a) be the holder of a certificate appropriate to the technique being used and to the level of qualification required, as specified in Document SA-CATS-GMR, or an equivalent certificate approved by the Commissioner;
- (b) perform the non-destructive test using appropriate methods, techniques and standard practices, as specified in Document SA-CATS-GMR; and
- (c) use test equipment necessary to ensure that the non-destructive test is performed in accordance with the appropriate manufacturer's requirements.

Airworthiness limitations

43.02.14 Any person who carries out maintenance specified in the Airworthiness Limitations section of a manufacturer's maintenance manual, or any instructions for safe operation and continued airworthiness, shall carry out the maintenance in accordance with that section.

Modifications

- 43.02.15** (1) No person shall, without the prior written approval of the Commissioner, carry out any modifications, including changes to equipment or the installation thereof, which affect, or are likely to affect, the serviceability of the aircraft, or the safety of its occupants or of any other persons or property.
- (2) Before the approval of the Commissioner is considered for a modification as referred to in sub-regulation (1), the owner of the aircraft, or any other person who applies for the modification, shall –
- (a) furnish the Commissioner with such information, data, calculations, reports on tests, drawings or wiring diagrams

relating to the design, and proof of effectiveness or airworthiness of such modification, as the Commissioner may require; and

- (b) be accompanied by the appropriate fee as prescribed in Part 187.
- (3) Notwithstanding the provisions of sub-regulation (1) and (2), such modifications as may from time to time be recommended by the manufacturer of the type of aircraft or equipment concerned, may be carried out if the modifications are carried out in accordance with the said manufacturer's recommendations.

Test flights

- 43.02.16** (1) After any major repair or major modification to an aircraft, test flights shall, if required by the Commissioner, be carried out in the aircraft under such conditions and in the manner as prescribed in the SA-CATS-GMR.
- (2) Only essential crew shall be carried aboard any aircraft undergoing a test flight.

Temporary and permanent repairs after accidents or incidents

- 43.02.17** (1) Any temporary or permanent repair to an aircraft or aircraft component which has been damaged after an accident or an incident, shall be carried out in accordance with the requirements as prescribed in Document SA-CATS-GMR.
- (2) Following the permanent repair of an aircraft that has been involved in an accident, as defined in sub-paragraph (b) of the definition of 'accident' in Part 1 of these Regulations, the aircraft shall be inspected by an airworthiness inspector of the Civil Aviation Authority, or an other person specifically appointed for the purpose in writing by the Commissioner, before it is released to service. This inspection has as objective to verify that the repair has been carried out in accordance with the applicable structural repair manual or other approved data, including any modification approval, as the case may be.
- (3) The applicable inspection fees, as prescribed in Part 187, shall be payable by the approved maintenance organisation or approved repair facility that carried out the repair.

Aircraft compass requirements

- 43.02.18** Any compass fitted to an aircraft, shall be swung and maintained in

accordance with the requirements as prescribed in Document SA-CATS-GMR.

Extended range twin turbine-engine operations (ETOPS)

43.02.19 The additional maintenance requirements for twin-engine turbine aeroplanes certified for extended-range operations shall be as prescribed in Document SA-CATS-GMR.

Aircraft withdrawn from service for storage

43.02.20 Aircraft withdrawn from service for storage shall meet the preservation instructions of the aircraft's manufacturer as prescribed in the relevant maintenance manuals, service bulletins, service letters or service instructions for the inoperative period. Before such an aircraft is returned to service, any prescribed maintenance shall be carried out prior to release to service.

Suspected, unapproved parts

43.02.21 Any Class I, Class II or Class III part, component or product, whether new or previously used, for which no historical records are available or traceable, or for which the available records do not confirm that they have been approved by a responsible aviation authority, shall be considered to be unserviceable and may not be fitted to any type-certificated aircraft, nor to any non-type certificated aircraft operated or intended to be operated in terms of Part 96.

SUBPART 3: RECORDING OF MAINTENANCE

Maintenance records

- 43.03.1** (1) Any person who carries out maintenance on an aircraft or aircraft component shall record, on completion of the maintenance –
- (a) details of the maintenance including, where applicable, the type of inspection and any approved data used;
 - (b) for a mandatory periodic, progressive or scheduled inspection, whether a detailed inspection or routine inspection of the particular components or areas of the aircraft was carried out;
 - (c) the serial numbers, if any, of components removed or fitted;
 - (d) details of measurements or test results obtained, including the results of any ground or air tests;
 - (e) for an air speed indicator or altimeter system pitot static test and inspection, the date on which, and maximum altitude to which the altimeter has been tested;
 - (f) the date of completion of such maintenance;
 - (g) the references to the documents used to carry out the maintenance and their revision status;
 - (h) the name of the person completing such maintenance, if other than the person certifying the release to service;
 - (i) the location and, if applicable, the name of the facility where such maintenance was carried out; and
 - (j) where such maintenance has been carried out as a consequence of the failure of any equipment, or damage caused by forced landing or accident, the reasons for carrying out the maintenance.
- (2) The person who carries out the maintenance shall –
- (a) record the details referred to in sub-regulation (1) in the appropriate logbook or in a maintenance record approved by the Commissioner;

- (b) where worksheets or other associated maintenance records are used to document the details of the maintenance, make a reference to those records in the logbook, flight folio or in the maintenance record approved by the Commissioner.
- (3) The manner in which the logbooks, flight folios and maintenance records, referred to in sub-regulation (2), shall be completed and the period for which such documents shall be retained shall be as prescribed in SA-CATS-GMR.

Recording of overhaul

43.03.2 No person shall state in any maintenance document entry required by the Regulations, including a job card, logbook or a certificate of release to service, that an aircraft, airframe, engine or engine module, propeller, rotor, appliance or other aircraft component has been overhauled unless it has been –

- (a) disassembled, cleaned, inspected, repaired as necessary, and reassembled, using methods, techniques and practices acceptable to the Commissioner; and.
- (b) tested to the original tolerances and limits or to approved oversize or undersize dimensions in accordance with –
 - (i) current approved standards and technical data that have been developed and documented by the holder of a type certificate or supplemental type certificate issued in terms of Part 21 in a manual, airworthiness directive, service letter, service bulletin or other similar document declared mandatory by the Commissioner; or
 - (ii) other standards or technical data approved by the Commissioner.

Recording of major repairs and modifications

43.03.3 Any person who carries out a major repair or a major modification shall, in addition to the entry referred to in Regulation 43.03.01, record the repair or modification and process the certificate relating to the maintenance of the aircraft in the manner as prescribed in Document SA-CATS-GMR.

Recording of inspection and certification

43.03.4 (1) Whenever any inspection prescribed in regulation 43.02.8 is carried out, it shall be recorded in the appropriate logbook(s) and be certified as follows:

- (a) Mandatory inspections or any maintenance to an aircraft issued

with a standard category certificate of airworthiness: by the holder of an aircraft maintenance organisation (AMO) approval with the appropriate ratings.

- (b) Mandatory inspections or any maintenance to an aircraft with an Authority to Fly issued in terms of Part 24: by the holder of an aircraft maintenance engineer (AME) licence or a recreational aircraft maintenance person (RAMP) certificate with the appropriate ratings.
- (2) Any aircraft on which the last mandatory inspection was certified by the holder of an aircraft maintenance engineer licence and for which the issue of a standard category certificate of airworthiness in terms of Part 21 is requested shall be inspected and certified by the holder of an appropriately-rated approved aircraft maintenance organisation.
- (3) Any overhaul classed as mandatory for aircraft issued with a standard category certificate of airworthiness shall be carried out at the times specified and be certified in the prescribed manner by an appropriately rated approved aircraft maintenance organisation only.
- (4) Any additional work, performed during an inspection, shall be recorded on a check list and be certified in the relevant logbook(s) by the responsible aircraft maintenance engineer or by an authorised person in the aircraft maintenance organisation concerned.
- (5) Records, pertaining to life-limited or previously used parts, shall be available and traceable. Parts with no historical record shall be considered to be unserviceable and such parts shall not be fitted to an aircraft.

SUBPART 4: RELEASE TO SERVICE

Persons to certify release to service

- 43.04.1** (1) Subject to the provisions of sub-regulations (2) and (3), no person shall certify an aircraft or aircraft component for release to service after maintenance unless such person –
- (a) is the holder of an aircraft maintenance engineer licence with an appropriate rating issued in terms of Part 66;
 - (b) is authorised by the holder of an aircraft maintenance organisation approval with an appropriate rating issued in terms of Part 145, to certify maintenance within the scope of such approval;
 - (c) is authorised by the Commissioner, or in the case of an amateur-built or production-built aircraft issued with an Authority to Fly in terms of Part 24 by the organisation designated for the purpose in terms of Part 149, to certify an aircraft or aircraft component for release to service; or
 - (d) for maintenance carried out outside the Republic, holds a licence or equivalent authorisation issued by an appropriate authority acceptable to the Commissioner, for the type of aircraft or aircraft component.
- (2) The holder of a pilot licence with an appropriate type rating issued in terms of Part 61 or Part 62 may certify maintenance which has been carried out in accordance with the conditions referred to in Regulation 43.02.1(2).

Requirements for certifying release to service

- 43.04.2** No person shall certify an aircraft or aircraft component for release to service after maintenance unless such maintenance has been carried out in accordance with the provisions of this Part and, in respect of such maintenance, the aircraft or aircraft component is fit for release to service.

Validity of a certificate of release to service

- 43.04.3** (1) A certificate of release to service for an aircraft shall be validated for a period not exceeding 100 hours or twelve months of flight time, whichever comes first, or such other time as approved in the progressive inspection programme referred to in sub-regulation 43.02.8(2)(a)(ii).
- (2) When a certificate of airworthiness becomes invalid due to an

aircraft sustaining a defect not affecting the primary structure, the validity of the certificate is restored when the defect has been rectified and the necessary certification has been made.

- (3) When a certificate of airworthiness becomes invalid due to an aircraft sustaining a serious defect in an accident or incident that affects the serviceability of a Class I product, the certificate of release to service shall be invalidated. Regulation 43.02.5 provides for its reinstatement.

Certifying after inspection

43.04.4 Any person who certifies an aircraft or aircraft component for release to service after carrying out an inspection shall enter in the appropriate logbook or other maintenance record approved by the Commissioner –

- (a) the statement as prescribed in Document SA-CATS-GMR; and
- (b) in addition to the statement referred to in paragraph (a), his or her signature, licence or authorisation number and the date of the entry.

Certifying after maintenance

43.04.5 (1) Any person who certifies an aircraft or aircraft component for release to service after maintenance shall enter in the appropriate logbook or other maintenance record approved by the Commissioner –

- (a) the statement as prescribed in Document SA-CATS-GMR;
- and
- (b) in addition to the statement referred to in paragraph (a), his or her signature, licence or authorisation number and the date of the entry.

- (2) If components are not installed in or allocated to an aircraft, the person certifying release to service shall certify the release to service on the appropriate form as prescribed in Document SA-CATS-GMR.

Discrepancies

43.04.6 Any person who carries out an inspection and who does not release the aircraft or aircraft component to service shall –

- (a) provide the owner or operator with a signed and dated list of the discrepancies, including any equipment which is marked

“inoperative” in terms of paragraph (b), if such person is satisfied that the aircraft –

- (i) is not airworthy; or
 - (ii) does not comply with the applicable type certificate data, airworthiness directives or other approved data upon which the airworthiness of such aircraft depends;
- (b) for those items which appear to be imperative, place a label on each inoperative instrument and the cockpit controls of each item of inoperative equipment, marking each item “inoperative”;
- (c) enter the appropriate statement, as prescribed in Document SA-CATS-GMR, in the appropriate logbook or flight folio; and
- (d) enter his or her signature, licence or authorisation number, and the date of the entry.

Flight manual data

43.04.7 If the approved data for a repair or modification to an aircraft or aircraft component include changes to the operating limitations or flight data in the aircraft flight manual, the person certifying release to service shall not certify the release to service until the changes have been incorporated into the flight manual.

Duplicate inspection of controls

- 43.04.8 (1)** No person shall certify an aircraft component for release to service after the initial assembly, subsequent disturbance or adjustment of any part of an aircraft or component control system unless –
- (a) a duplicate safety inspection of the control system has been carried out; and
 - (b) the duplicate safety inspection is recorded and certified in the appropriate logbook, or other maintenance record approved by the Commissioner.
- (2) A duplicate safety inspection authorised in terms of sub-regulation (1), shall consist of-
- (a) an inspection by a person referred to in Regulation 43.04.1 to certify the release to service of the control system after maintenance; and
 - (b) a second inspection carried out by another person who is a person referred to in Regulation 43.04.1.

Ground running checks – reciprocating engines

43.04.9 No person shall certify a reciprocating engine-powered aircraft for release to service after a mandatory inspection unless such person ensures that –

- (a) a ground run of the aircraft engine has been carried out to determine satisfactory performance, in accordance with the manufacturer's recommendations, for –
 - (i) the power output (static and idle RPM);
 - (ii) the ignition system;
 - (iii) the fuel and oil pressure; and
 - (iv) the cylinder or coolant temperature, and oil temperature; and
- (b) the ambient conditions of temperature and atmospheric pressure and details of the results are recorded –
 - (i) in the appropriate engine or aircraft logbook; and
 - (ii) in the maintenance record.

Ground running checks – turbine engine

43.04.10 No person shall certify a turbine engine-powered aircraft for release to service after a mandatory inspection unless such person ensures that –

- (a) a ground run of the aircraft engine has been carried out to determine satisfactory performance, in accordance with the manufacturer's recommendations;
- (b) the ambient conditions of temperature and atmospheric pressure and details of the results are recorded;
- (c) the engine parameters are recorded in accordance with the manufacturer's recommendations --
 - (i) in the appropriate engine or aircraft logbook; or
 - (ii) in the maintenance record.

Flight folio completion

43.04.11. No person shall certify an aircraft or aircraft component for release to service in an aircraft flight folio unless each applicable section of the flight folio has been completed. This includes the section where any rectification of deferred defects must be recorded.