

# PROPOSAL TO INSERT SA-CATS 56 ISSUED UNDER THE CIVIL AVIATION REGULATIONS, 2011

## PROPOSER

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## PROPOSER'S INTEREST

Recreation Aviation Administration South Africa (RAASA) is designated by the Director for Civil Aviation in terms of the Civil Aviation Act 2009 and Regulation 149 of the Civil Aviation Regulations to establish standards relating to recreational aviation and oversight over such activities.

RAASA is a member of the Civil Aviation Regulation Committee which includes various sub-committees. This proposal is a subject of these sub-committees as RAASA relies on consultative processes in executing its functions.

## GENERAL EXPLANATORY NOTE

The addition of this submission is to make provision for technical standards to accompany the new Part 56 for NTCA Technical Approved Persons. No provision has previously been made for SA-CATS for Technical Approved Persons which solely maintain NTCA as this is a new part.

For ease of understanding the proposal please note the following in line with the CARCom standards.

Words in **[bold and solid square bracket]** indicate deletions from the existing regulations.

Words underlined with a solid line indicate insertions in the existing regulations.

## PROPOSAL TO INSERT TECHNICAL STANDARDS 56

### SA-CATS 56 : NTCA TECHNICAL APPROVED PERSONS CERTIFICATE

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- 1. Conditions, rules, requirements, procedures and standards for designation of examiners**

**56.01.11 The rules and Code of Ethics for Technical Approved Persons shall be those contained in APPENDIX: RA- 56.01**

**56.01.13 Logbooks**

**1. Completion of logbooks**

**1.1 Category A/B and C/D and W, X, P, E, S**

(a) All Logbooks shall be completed including details of the designation of all aircraft types and engine types to be filled in properly.

(b) The TAP experience shall be logged in hours

(c) Logbooks shall be signed and stamped in the appropriate place by the TAP, TAP I, a TAP DE performing the maintenance as well as a Supervising Inspector, a Quality Manager or Accountable Manager of an AMO or NTCA Approved maintenance facility.

(c) Logbooks shall be updated, signed and stamped on completion of each job card or work pack.

(d) An example of how the experience should be recorded in the logbook shall be as contained in

Appendix RA 56.22

**56.02.2 PRACTICAL TRAINING**

**1. Basic training syllabus for the endorsement: TAP A, B, C, D, W, X, P, E, and S**

**1.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix RA56.03

**2. Basic training syllabus for the trade: Aircraft Structures TAP Category B**

**2.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix RA56-03

**3. Basic training syllabus for the trade: Instrument TAP Category X**

**3.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix RA56.04

**4. Basic training syllabus for the trade: TAP Aircraft Radiotrician Category X**

**4.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix

**4.2 Maintenance practices as per Appendix: RA 56.05**

**5. Basic training syllabus for the trade: TAP Aircraft Electrician Category X**

**5.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix

**5.2 Maintenance Practices as per Appendix: RA 56.06**

**6. Basic training syllabus for the trade: TAP Aircraft Welding Category S**

## **6.1 Introduction**

(1) Competency Based Modular Training (CBMT) as per Appendix

## **6.2 Maintenance Practices as per Appendix RA 56.07**

### **56.02.3 THEORETICAL KNOWLEDGE EXAMINATION**

#### **1. Entry requirements and procedures for theoretical knowledge examinations for Technical Approved Person certificate (Groups A, C, B, D W, X, P, E and S)**

##### **1.1 General**

(1) As per Appendix RA 56.08

#### **2 Knowledge requirements**

##### **2.1 Technical Approved Person certificate (Group An endorsement)**

(1) As per Appendix RA 56.09

##### **2.2 Technical Approved Person certificate (Group C endorsement)**

(1) As per Appendix RA 56.10

##### **2.3 Aircraft TAP certificate (Group B endorsement)**

(1) As per Appendix RA 56.11

##### **2.4 Technical Approved Person certificate (Group D endorsement)**

(1) As per Appendix RA 56.12

##### **2.5 Technical Approved Person certificate (Group W endorsement)**

(1) As per Appendix RA 56.13

##### **2.6 Technical Approved Person certificate (Group X endorsement)**

(1) As per Appendix RA 56.14

##### **2.7 Technical Approved Person certificate (Group P endorsement)**

(1) As per Appendix RA 56.15

##### **2.8 Technical Approved Person certificate (Group E endorsement)**

(1) As per Appendix RA 56.16

##### **2.9 Technical Approved Person certificate (Group S endorsement)**

(1) As per Appendix RA 56.17

#### **3. Theoretical knowledge examination**

(1) An applicant for the initial issuing of a TAP3 certificate shall have passed the online examinations:

(a) TAP general:

- (i) Air law, SA-CAR and SA-CATS; and
- (ii) TAP program manual of procedures.

(2) An applicant for the issuing of a TAP2 certificate with a group A shall have passed the following online examination;

(a) for airframes:

- (i) airframes general; and
- (ii) sheet metal airframes; or
- (iii) wood and fabric covered airframes; or
- (iv) tubular metal and fabric covered airframes; or
- (v) composite airframes, or
- (vi) pressurised airframes.

(b) airframes in the respective sub-categories of:

- (i) microlights and weight shift microlights with a MTOW not exceeding 450kg or 480kg in the case of the amphibian model; or
- (ii) aeroplanes with a MTOW not exceeding 600kg or 650kg in the case of the amphibian model; or
- (iii) aeroplanes with a MTOW not exceeding 1200kg; or
- (iv) gliders, self-launching/sustainer gliders; or
- (v) touring motor gliders.

(c) aeroplane with a MTOW exceeding 1200kg and not exceeding 5700kg in the respective sub-groups, aircraft makes and types by name as applicable.

(d) for gyrocopters and gyrogliders with a MTOW not exceeding 2000kg, in the respective aircraft makes or types by names as applicable:

(e) for helicopters in the respective sub-groups, aircraft makes and types by name as applicable:

- (ii) helicopters with a MTOW not exceeding 3175kg; or
- (iii) helicopters with a MTOW not exceeding 5700kg.

(e) for all other aircraft not listed above, in the respective categories, groups, makes or types by name as applicable:

- (i) balloons, or
- (ii) powered hang gliders, powered paragliders, powered parachutes and powered paratrikes or any other powered derivatives thereof.

(3) An applicant for the issuing of a TAP2 certificate with a group C shall have successfully passed the following online examination:

(a) for engines in the respective sub-groups of:

- (i) engines, and fuel systems general, and
- (ii) horizontally opposed piston engines; or
- (iii) turbo normalised, turbo charged and supercharged piston engines, or
- (iv) in-line piston engines, or
- (v) radial engines, or

- (vi) turbine & jet engines general, or
- (vii) non-aviation engines, or
- (viii) two stroke engines, or
- (ix) diesel and turbo diesel engines or
- (x) electrical engines, or
- (xi) sustainer and self-launch engines for gliders

(4) An applicant for the issuing of a TAP 2 or TAP1 certificate with a group W shall have successfully passed the following online examination:

- (a) class A: avionics, radio and radar equipment; or
- (b) class E: electrical equipment; or
- (c) class I: instrument equipment, or
- (d) class PS: pitot & static systems

(5) An applicant for the issuing of a TAP 2 or TAP1 certificates with a group X shall have successfully passed the following online examination:

- (a) class 1: compasses; or
- (b) class 2 engine ignition equipment; or
- (c) class 4: instruments, including electrically operated instruments; or
- (d) class 5: electrical equipment; or
- (e) class 6: automatic pilots; or
- (f) class 7: avionic equipment, including equipment employing pulse techniques.
- (g) class 7: pitot and static systems

(6) An applicant for the issuing of a TAP2 or TAP1 certificates with a group P shall have successfully passed the following online examination:

- (a) A: fixed pitch propellers of metal construction; or
- (b) B: fixed pitch propellers of composite construction; or
- (c) C: fixed pitch propellers of wooden construction; or
- (d) D: variable pitch ground adjustable propellers of metal construction; or
- (e) E: variable pitch ground adjustable propellers of composite construction; or
- (f) F: variable pitch ground adjustable propellers of wooden construction;
- or
- (g) G: in flight adjustable pitch propellers; or
- (h) H: constant speed propellers.

(7) An applicant for the issuing of a TAP 2 or TAP 1 with a group E shall have successfully passed the following online examination:

- (a) G1: gyrocopter
- (b) H1: helicopter

(8) An applicant for the issuing of a TAP 2 or TAP1 with a group S endorsement shall have successfully passed the following online examination:

- (a) A: GMAW / MIG / MAG - CO2 welding, or
- (b) B: GTAW / TIG welding - Argon welding, or

(c) C: FCAW - Flux cored welding.

(d) sub-classes

(i) 1: aluminium frames or structures, or

(ii) 2: steel frames or structures.

#### **56.02.4 EXPERIENCE**

##### **1. Technical Approved Person certificate; Group A - Airframes.**

###### **1.1 Category Aeroplanes: Issue or addition of sub-group, make or type.**

(1) An applicant for the issuing or for the addition of an endorsement in group A, to an existing TAP certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.17**

(2) Where a certificate is already valid under group B for an engine classified under groups 01A to 05A, the experience requirements for the addition of a sub-group, make or type the experience will be half of those required for an initial group A rating for that sub-group, make or type.

###### **1.2. Category Helicopters and gyrocopters: Issue or addition of sub-group, make or type.**

An applicant for the issuing or for the addition of an endorsement in group A, to an existing TAP certificate, with a maximum certificated mass of 3175kg or less, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.18**

##### **2. Technical Approved Person certificate; Group C - Engines**

###### **2.1. Group C: Issue or addition of sub-group, make or type.**

(1) An applicant for the issuing or for the addition of an endorsement in group C, to an existing TAP certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.19**

(2) Where a certificate is already valid under group D for an engine classified under groups 01A to 05A, the experience requirements for the addition of a sub-group, make or type the experience will be half of those required for an initial group C rating for that sub-group, make or type.

##### **3. Technical Approved Person certificate; Group B - Airframes.**

###### **3.1. Category Aeroplanes: Issue or addition of sub-group, make or type.**

1) An applicant for the issuing or for the addition of an endorsement in group B to an existing TAP certificate for the repair and overhaul of airframes shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.20**

**3.2. Category Helicopters and gyrocopters: Issue or addition of sub-group, make or type.**

An applicant for the issuing or for the addition of an endorsement in group B for the repair and overhaul of airframes to an existing TAP certificate, with a maximum certificated mass of 3175kg or less, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.21**

**4. Technical Approved Person certificate; Group D - Engines**

**4.1. Group D: Issue or addition of sub-group, make or type.**

An applicant for the issuing of an endorsement in group D or for the addition of group D to an existing certificate, for the certification of the repair and overhaul of engines shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.22**

**5. Technical Approved Person certificate; Group W – Avionics, electrical equipment and instrument equipment**

**5.1. Group W: Issue or addition of a sub-group, or class.**

An applicant for the issuing of an endorsement in group W or for the addition of group W to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.23**

**6. Technical Approved Person certificate; Group X - Automatic pilots, compasses, electrical equipment, ignition equipment, instruments and avionic equipment**

**6.1. Group X: Issue or addition of a subgroup or class. (Automatic Pilots)**

An applicant for the issuing of an endorsement in group X (automatic pilots) or for the addition of group X to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.24**

**6.2. Group X: Issue or addition of a subgroup or class (Compasses)**

An applicant for the issuing of an endorsement in group X (compasses) or for the addition of group X to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.25**

**6.3. Group X: Issue or addition of a subgroup or class (Electrical equipment)**

An applicant for the issuing of an endorsement in group X (electrical equipment) or for the addition of group X to an existing certificate, shall have aeronautical maintenance



experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.26**

**6.4. Group X: Issue or addition of a subgroup or class (Ignition equipment)**

An applicant for the issuing of an endorsement in group X (ignition equipment) or for the addition of group X to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.27**

**6.5. Group X: Issue or addition of a subgroup or class (Instruments)**

An applicant for the issuing of an endorsement in group X (instruments) or for the addition of group X to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.28**

**6.6. Group X: Issue or addition of a subgroup or class (Avionic equipment)**

An applicant for the issuing of an endorsement in group X (avionic equipment) or for the addition of group X to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.29**

**6.7. Group P: Issue or addition of group P (Propellers)**

An applicant for the issuing of an endorsement in group P or for the addition of group P to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.30**

**6.8 Group E: Issue or addition of Group E (Rotors and rotor hub assemblies)**

An applicant for the issuing of an endorsement in group P or for the addition of group P to an existing certificate, shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.31**

**6.9 Group S: Issue or addition of Group S (Aircraft welding)**

An applicant for the issuing of an endorsement in group S for aircraft welding and certification of welding on aircraft shall have aeronautical maintenance experience after completing the approved program in the applicable category, group or class being applied for as contained in: **Appendix RA-56.32**

**NOTE**

**An “approved program” refers to a program approved for the purpose by the appropriate administrative authority, which includes practical and theoretical training in the maintenance and inspection of Airframes or Engines, Electrical, Instruments or Avionics equipment as per the TAP approved Manual of Procedures Appendix 56.01.**

**56.03.2 TAP instructor Training**

**1. Training standards**

- (1) The training, referred to in regulation 56.03.2, is –
- (a) the appropriate training set out in Appendix RA56.01; and
  - (b) satisfactory completion of a recognized training techniques course;
    - (i) a Grade two instructor - an assessor and moderator course and
    - (ii) a Grade one instructor – a train the trainer course.

### **56.03.3 Theoretical knowledge examination**

- (1) Shall have successfully passed the following theoretical examinations:
- (a) a Grade two instructor: the technical instructor, assessor and moderator examination, or
  - (b) a Grade one: the instructor train the trainer examination.

### **56.03.4 Experience**

#### **1. Requirements**

The experience requirements referred to in regulation 56.03.4 are set out in Appendix RA56.01;

### **56.04.1 DESIGNATION OF EXAMINERS**

#### **1. Conditions, rules, requirements, procedures and standards for designation of examiners**

##### **1.1. Purpose**

This technical standard deals with the selection and designation of TAP Designated Examiners (TAPDE) and identifies the specific functions which, authorised by the appropriate administrative authority, may be performed by TAPDEs.

##### **1.2 Qualification criteria**

###### **(a) General qualifications**

To qualify for a designation as a TAPDE, the applicant must possess the general qualifications listed hereunder, in addition to having the specialised experience appropriate to the particular function for which designation is sought –

- (i) current and thorough knowledge of the Civil Aviation Regulations and relevant Aeronautical Information Circulars, and Civil Aviation Technical Standards, and the TAP Manual of Procedure Appendix: RA 56.01
- (ii) current technical knowledge and experience commensurate with that required for the particular function;
- (iii) unquestionable integrity, co-operative attitude, and ability to exercise sound judgment;
- (iv) the ability to maintain the highest degree of objectivity while performing approved functions on behalf of the appropriate administrative authority in compliance with the SA-CAR and safety goals, notwithstanding any coercion by any person to the contrary;

- (v) at least five years of satisfactory experience as a TAP1 in the field of work covered by the designation, or
  - (vi) At least five years' experience as a Grade one TAP instructor at an approved aviation training organisation (ATO) or an approved NTCA maintenance facility or an approved recreational aviation training facility; and –
  - (vii) Must hold or have held a valid instructor's certification with an appropriate endorsement and must demonstrate the ability to carry out instruction and examination to determine the status of aircraft, engines, propellers, rotors, avionics, instruments, electrical and component parts of a similar type and complexity for which TAPDE designation is sought; or
- (b) Specialised experience. In addition to the general qualifications, specified in sub-paragraph (a), an applicant for designation as examiner shall have any specialised experience, and demonstrated ability acceptable to the appropriate administrative authority for which DE designation is sought –

### **1.3. Application procedure**

- (a) A suitably qualified TAP may apply to be considered by the appropriate administrative authority for designation as a TAPDE.
- (b) Applications shall be initiated by an application in the prescribed form.
- (c) Applications submitted by individual applicants must be accompanied by –
  - (i) a detailed CV and record of experience of all technical training and work performed as a TAP, AME or specialist and
  - (ii) all records of examinations passed and qualifications obtained as a TAP, AME or specialist.
- (ii) all required supporting documents, to substantiate that they meet all the relevant qualifications specified in paragraph 1.2.

## **MOTIVATION**

The current civil aviation regulations do not provide support for the new Part 56 in terms of the technical standards to which the new part 56 refers..