



## NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE

**RSA PAD No: 13-002**

**Date: 8 August 2013**

In accordance with the SACAA Continuing Airworthiness Procedures, the Director of Civil Aviation (DCA) is proposing the issuance of a RSA Airworthiness Directive (AD) applicable to the aeronautical product(s) identified below. All interested persons may send their comments, referencing the PAD number above, to the email address specified in the Remarks section, prior to the consultation closing date indicated.

<b>Type Approval Holder's Name:</b> Various		<b>Type/Model Designation(s):</b> Various	
<b>TCDS Number:</b>	Various	<b>Foreign AD:</b>	Nil
<b>Supersedure:</b>	RSA AD 97-02	<b>ATA:</b>	Various
<b>Manufacturer(s):</b>	Various		
<b>Applicability:</b>	All aircraft with structures of tubular steel construction, semi-monocoque and monocoque construction, unless the manufacturer has a structural inspection or aging fleet program in place.		

**Reason:**

This directive is published to highlight the critical requirements pertaining to inspections required to be carried out on **aging aircraft including complete airframes, electrical, avionic and engine installations**. Propellers and their associated parts are catered for under the Mid-life inspection requirements as published in the SA-CATS-43 document.

<b>Effective Date:</b>	(TBD: 14 days after final AD issue Date)
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**Required Action(s) and Compliance Time(s):**

1. Where applicable the following NDT techniques shall be used as inspection methods in cases where access to certain areas of the aircraft is made difficult:

- Low/High frequency eddy current
- Radiography
- Video/Optical fibre scopes (Borosopes)
- Ultrasonic testing
- Magnetic particle
- Fluorescent Dye penetrant

**1.1** A visual inspection may be carried out by the AMO involved in the completion of the MPI or phase inspection to all areas where no restrictions in access to various aircraft structures requiring inspection as per paragraph 3 of this directive exist. **(Appropriate certification in the aircrafts technical records to be made by appropriately rated AMO's only).**

**1.2** When NDT inspections is required to be carried out, access to the various aircraft structures must be at its highest level e.g. at the time of a MPI or phase inspection and when Inspection panels are removed, open and accessible to NDT staff. When a repeat inspection is required, the approved NDT facility must indicate to the relevant AMO or aircraft owner / operator when the next inspection will be required in accordance with paragraph **2.2** and **2.3** of this AD.

**1.3** AMO's carrying out inspections on aircraft requiring further inspections from approved NDT facilities must advise the NDT facility on the following information:

- Aircraft type
- Aircraft location
- Applicable SB, SL and AD requirements
- All other relevant information to aid in preparation of equipment and relevant techniques to be followed.

## **2. Frequency of inspections:**

- 2.1** The appropriate visual and if required NDT method of inspection is to be performed at **twenty five years** from date of manufacture on aircraft in normal categories. This only applies to aircraft that does not have a continued airworthiness program or aging aircraft program as mentioned above. For crop spraying or aerobatic aircraft, the relevant NDT method of inspection must be carried out at a **maximum of ten years** from the date of manufacture.
- 2.2** The above mentioned inspections must be repeated after every **five year** period if no corrosion or crack indications are found.
- 2.3** Where corrosion is found during the initial inspection affecting any of the **aircraft's structural parts**, the relevant inspection method shall be repeated **at least every two years** by an approved AMO or approved NDT facility.

## **3. Areas to be inspected (All aircraft):**

- 3.1** All areas of inspection as called for by the manufacturer in their SB's, SI's and any other publications; for Cessna type aircraft compliance with the aging aircraft program is mandatory. (Continuous Airworthiness)
- 3.2** All areas concealed by ceconite coverings, fabric, sheet metal or composites.
- 3.3** Lapjoints of riveted structures
- 3.4** Wing spars
- 3.5** All castings or forgings
- 3.6** Door frames, rudder posts, ailerons, flaps and their attachment points, lift struts and built up parts or products.
- 3.7** Lower longeron and welded clusters
- 3.8** Rear fuselage of a tail wheel type aircraft
- 3.9** Any other areas prone to corrosion

## **4. Areas to which special attention must be given on all other aircraft types including Piper Aircraft and Hawker Beech aircraft types:**

- 4.1** Wing to fuselage fittings
- 4.2** Carry thru attachment fittings
- 4.3** Areas around the left and right hand fuel tanks
- 4.4** Lift strut supports, attachments and fittings
- 4.5** Main and nose landing gear structures, attachments and wheel axles
- 4.6** Main landing gear actuators and saddle brackets.(Nose Landing Gear)
- 4.7** Engine mount welded tubular clusters and firewall attachments
- 4.8** Tail cone area-steel attachments on aluminium
- 4.9** Main and rear spar attachment to ribs, stringers, skins and centre section
- 4.10** Interior of fuselage hull and empennage
- 4.11** All control surface attachments
- 4.12** Elevator and rudder torque tubes
- 4.13** Circumferential and longitudinal lap joints
- 4.14** Main spar caps

## **5. Inspection requirements pertaining to piston and turbine engine power plants:**

- 5.1** For all aircraft fitted with piston engines, the requirements of AIC 18-19 to continue engines in service which has accumulated 12 years calendar time since overhaul but has not exceeded the hourly life limit becomes mandatory with this directive.
- 5.2** For all aircraft fitted with turbine engines, the manufacturer's requirements remains mandatory as required by Part 43 of the South African Civil Aviation Regulations, 2011.

**6. Actions to be taken on airframe related discrepancies:**

- 6.1 Should cracks or corrosion be detected, the necessary corrective action shall be taken in line with the manufacturers recommendations and the Director of Civil Aviation notified within 48 hours.
- 6.2 All maintenance must be recorded in the appropriate logbook and the relevant NDT test reports and CRMA's affixed therein.

**7. Documentation and preservation of records:**

7.1 All documentation and records shall be preserved as required by the relevant CAR 43 & 145 applicable thereto.

8. **Compliance: At the next mandatory periodic inspection (MPI) or phase inspection** which ever applies if not already accomplished when the aircraft attains the ages as specified in paragraph 2.1 of this AD or engines that's accumulated 12 years in service since overhaul. **Compliance with this directive is not necessary if the manufacturer has a continued airworthiness program or aging aircraft fleet program in place**  
**Comply Within 12 Calendar Months of the effective date.**

<b>Ref Publications:</b>	As applicable by aircraft type
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**Remarks:**

- 1. This Proposed AD will be closed for consultation on **08/09/2013**.
- 2. Enquiries regarding this AD should be referred to the Certification Department, SACAA at email [adw@caa.co.za](mailto:adw@caa.co.za)

For: DIRECTOR OF CIVIL AVIATION	NAME IN BLOCK LETTERS	DATE OF ISSUE