



**Maintenance and Inspection Schedule for RCA Van's Aircraft  
RV14/14a**

NOTE: This maintenance schedule must be used in conjunction with Annex A of SACAA-CATS-44

RCA JOB NUMBER:..... DATE:.....

AIRCRAFT TYPE.....REGISTRATION.....S/N.....  
ENGINE TYPE .....ENGINE S/N.....  
PROPELLER TYPE .....PROPELLER S/N.....

**HOURS AND CYCLES OF OPERATION**

AIRFRAME TOTAL TIME.....LANDINGS.....

ENGINE HOURS SINCE NEW OR LAST OVERHAUL.....  
DATE OF LAST OVERHAUL.....

PROPELLER SINCE NEW OR LAST OVERHAUL/MIDLIFE.....  
DATE OF LAST OVERHAUL.....

MASS & BALANCE DATE LAST ESTABLISHED.....  
(DUE EVERY 60 MONTHS)

**AIRCRAFT DOCUMENTATION**

AUTHORITY TO FLY NO:.....CURRENCY DATE.....  
RADIO STATION LICENSE:.....CURRENCY DATE:.....  
CERT OF REG NO:.....

**LIST OF WALK AROUND PRE INSP DEFECTS NOTED**

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

**LIST OF COMPONENTS DUE FOR OVERHAUL**

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....





| <b>2.0 Structures</b><br><b>2.01 50 Hour</b>  | <b>MECHANIC</b> | <b>INSPECTOR</b> |
|---|-----------------|------------------|
| Check and inspect external surface of fuselage, wings, empennage, nacelles, flaps and control surfaces.   |                 |                  |
| Check and inspect tip up canopy fit, operation and condition including satisfactory operation of latching and locking mechanism and operation of the warning system                               |                 |                  |
| Check protective treatments, drain holes free from obstruction, access panels secure.   |                 |                  |
| <b>2.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |                 |                  |
| Remove all inspection panels, rear cabin bulkhead, internal flap mechanism inspection panels and floor panels over control stick mechanism. Remove fairing over empennage.                        |                 |                  |
| Inspect internal structure of fuselage, wing and empennage revealed by removal of above items.  |                 |                  |
| <b>3.0 Landing Gear</b><br><b>3.01 50 Hour</b>  |                 |                  |
| Remove wheel spats and inspect for damage.  |                 |                  |
| Inspect nose and main wheel spat attachment brackets for cracks. Check bracket mounting bolts for security and re-torque as required.   |                 |                  |
| Inspect landing gear legs and fixed fairings for damage and integrity   |                 |                  |
| Check brake system for leaks.   |                 |                  |
| Inspect brake pads and discs for condition and wear   |                 |                  |
| Check brake fluid reservoir (Fill as required)  |                 |                  |
| Check tyre condition and tyre pressures (Main 40 psi and Nose 35 psi.)<br>Replace wheel spats.  |                 |                  |
| <b>3.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |                 |                  |
| Inspect and check all brake hydraulic pipes, flexible hoses, connections, master cylinders and parking brake system (if fitted) for correct operation.  |                 |                  |
| Inspect wheels for alignment.   |                 |                  |
| Support the weight off the wheels and remove main and tail/nose wheel assemblies. Clean check and lubricate wheel bearings. Check landing gear mounting bolts.                                    |                 |                  |
| Inspect wheels for cracks, corrosion and broken bolts.  |                 |                  |
| Disassemble, clean, inspect and lubricate tail or nose wheel swivel mechanism. Replace worn parts as required. Reset breakout force on nose wheel fork. 26lbs                                     |                 |                  |
| With weight off the nose wheel, inspect the nose gear link assembly for a gap between the elastomer pad and the first elastomer. Added U-1002 isolation washer as required (max 3) to remove gap. |                 |                  |
| <b>4.00 Flying Controls</b><br><b>4.01 50 Hour</b>  |                 |                  |
| Check flying controls for full and free movement and in the correct sense.  |                 |                  |



| 4.00 <b><u>Flying Controls continued</u></b>  |                 |                  |
|---|-----------------|------------------|
| 4.01 <b>50 Hour</b>   | <b>MECHANIC</b> | <b>INSPECTOR</b> |
| Check correct operation of trim mechanisms and that indicator agree with surface movement.  |                 |                  |
| <b>4.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |                 |                  |
| Inspect all control surface hinges, hinge bolts, brackets, push-pull rods, bellcranks, stops, control horns and balance weights. Check associated turnbuckles/locking systems.  |                 |                  |
| Check control neutrals and travels.<br>ELEVATOR UP:.....(30 MAX/25 MIN) DWN:.....(25 MAX/20 MIN)<br>ELEV TRIM UP:.....(13 MAX/11MIN DWN:.....(35 MAX/32 MIN)<br><br>AILERON L UP:.....(32 MAX/25 MIN) DWN:.....(17 MAX/15 MIN)<br>AILERON R UP:.....(32 MAX/25 MIN) DWN:.....(17 MAX/15 MIN)<br><br>RUDDER LEFT:.....(35 MAX/30 MIN)RIGHT:.....(35 MAX/30 MIN)<br><br>FLAPS TRAVEL:.....(35 MAX/33 MIN) |                 |                  |
| Lubricate all rod end and hinges.   |                 |                  |
| Inspect rudder control cables, fairleads and cable guides.  |                 |                  |
| Inspect rudder pedals and pedal mechanism.  |                 |                  |
| Check flap operation, mechanism, and actuating system.  |                 |                  |
| Check and inspect elevator trim for correct operation and security.   |                 |                  |
| Check and inspect aileron trim mechanism for correct operation and security.  |                 |                  |
| <b>5.00 <u>Fuel/Oil Systems</u></b>   |                 |                  |
| <b>5.01 50 Hour</b>   |                 |                  |
| Drain samples from all fuel drain points and check for water, foreign matter and correct colour.  |                 |                  |
| Check fuel tank vents unobstructed.   |                 |                  |
| Inspect fuel system and tank for leaks.   |                 |                  |
| Drain oil sump and replace oil filter.  |                 |                  |
| Inspect oil lines and fittings for leaks, security or damage  |                 |                  |
| Refill engine with oil.   |                 |                  |
| <b>5.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |                 |                  |
| Inspect condition of flexible fuel lines  |                 |                  |
| Check operation of fuel selector valve  |                 |                  |
| Remove, clean and inspect airframe fuel filter.   |                 |                  |
| Inspect fuel gauges for damage and operation.   |                 |                  |





| 7.02 100 Hour/Annual (as 50 Hour and in addition the following)continued  | MECHANIC | INSPECTOR |
|---|----------|-----------|
| Remove alternator drive belt and turn alternator rotor to check condition of bearings for abnormal noise or roughness.              |          |           |
| Inspect condition of alternator and starter (and mounting integrity)  |          |           |
| <b>8.0 Radio</b><br><b>8.01 50 Hour</b>   |          |           |
| Inspect aerials, insulators, instruments and displays.  |          |           |
| Check placards and markings legible   |          |           |
| Carry out VHF ground function check   |          |           |
| <b>8.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |          |           |
| VHF communication - test the function of the system including Audio Panel(if fitted)  |          |           |
| ATC Transponder - carry out check with Field Test Set. Check - frequency tolerance and side-lobe suppression. Check - Mode "C or S" |          |           |
| <b>9.00 General</b><br><b>9.01 50 Hour</b>  |          |           |
| Check fire extinguisher for leakage/discharge.  |          |           |
| Check first aid kit complete and within expiry date   |          |           |
| Check seat belts/harnesses for satisfactory condition, locking and release.   |          |           |
| Check seat belt/harness mounting points and brackets  |          |           |
| Check all controls and switches labelled correctly  |          |           |
| <b>9.02 100 Hour/Annual (as 50 Hour and in addition the following)</b>  |          |           |
| Check cabin ventilation and heating system controls, hoses and ducts  |          |           |
| Check and inspect cabin heat exchanger for signs of exhaust gas leakage.  |          |           |
| Lubricate throughout.   |          |           |
|   |          |           |



| 9.03 Other Maintenance/Inspection Requirements   | MECHANIC | INSPECTOR |
|--|----------|-----------|
| Check all mandatory requirements (modifications, Service Bulletins, inspections and Airworthiness Directives) have been complied with.   |          |           |
| Ensure all mandatory placards are legible, correctly positioned and worded.  |          |           |
| Ensure Engine, Airframe and Propeller logbooks have been correctly filled in and are up to date. (All flights and work carried out must be entered and signed up as required)  |          |           |
| Ensure all tools, rags and loose articles are removed from the aircraft.   |          |           |
| Minimum 5 years (earlier if required) reweigh and check weight and balance schedule.   |          |           |
| <b>Carry out an engine ground run and check, as far as possible, all systems and services for correct operation. Check - power plant installation for leaks following run. Ensure all cowlings, access panels are secured.</b> |          |           |

**10.00 Other Maintenance/Inspection Requirements**

| Time Period   | Action  |
|---|---|
| 400 Hours   | Remove rocker box covers. Check for freedom of valve rockers when valves are closed. Look for evidence of abnormal wear or broken parts in the area of the valve tips, valve keeper, springs and spring seat. Any damage requires removal (including piston and connecting rod assembly) and inspection for further damage. |
| 5 years/1000hrs                                       | Remove field brush assembly on Plane Power Alternators and inspect brushes for excess wear.<br>Replace brush assembly if brushes extend less than .250" from edge of brush holder case.   |
| 500 Hrs   | Magneto inspection  |
| 1000 Hours  | Magneto overhaul or replacement.  |
| 8 years or at engine overhaul (whichever comes first) | Replace rubber flexible fuel and oil lines in engine compartment.(earlier if required) All Teflon hoses on condition  |
| On condition  | Replace flexible brake lines in cockpit   |
| Refer to Prop Manufacturer                            | Propeller overhaul or replacement   |
| Refer to Engine or Component Manufacturer             | Engine and engine components overhaul or replacement  |

I HEREBY CERTIFY THAT IN CARRYING OUT THE FOREGOING SPECIFIED MAINTENANCE, ALL THE REQUIREMENTS PRESCRIBED IN THE CIVIL AVIATION REGULATIONS, 2011, THAT ARE APPLICABLE THERETO HAVE BEEN COMPLIED WITH.

DATE:..... SIGNATURE:.....

LICENCE OR APPROVAL NO/STAMP:.....

AMO NAME:..... LICENCE NO.....

AME/AP NAME:..... LICENCE NO.....



#### **10.00 Notes on Mandatory Requirements**

- 10.00 To operate the aircraft an ORIGINAL (or certified copy) valid Authority to Fly issued by the SACAA or RAASA must be carried in the aircraft together with the ORIGINAL (or certified copy) Certificate of Registration, a valid Radio Station License and a current Certificate of Release to Service.
- 10.02 Aircraft insurance is not a legal requirement. It is however SACAA policy for aircraft to have adequate third party insurance.

#### **TORQUE SETTINGS**

|  |                                |                |
|--|--------------------------------|----------------|
| Exhaust Stack (Vetterman Recommendation)           |                                | 140/180 in lbs |
| Lycoming Recommendation: -                         | 5/8-24 plug leads              | 80/90 in lbs   |
|  | 3/4-20 plug leads              | 110/120 in lbs |
|  | Spark Plugs                    | 35 ft lbs      |
|  | Slick Magneto hold-down clamps | 190-220 in lbs |
| General Torque settings STEEL: -<br>(fine threads) | AN3 (3/16 in)                  | 30-40 in lbs   |
|  | AN4 (1/4 in)                   | 50-60 in lbs   |
|  | AN5 (5/16 in)                  | 100-140 in lbs |
|  | AN6 (3/8 in)                   | 160-190 in lbs |