

Condition Inspection Checklist

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Aircraft: VAN'S RV-10
Serial Number: 10227 Registration Number: N730 WL

Aircraft Owner: _____

Date of Inspection: 2 July 2022 Location of Inspection: KIN J Hillsboro

Total Airframe Hours:	<u>240</u>
Total Engine Hours:	<u>28</u>
Total Propeller Hours:	<u>200</u>

Inspection Performed By: _____ Certificate: _____

Preparation — Inspection Consumables

Oil	<u>2 July 2022</u>
Oil filter	<u>2 July 2022</u>
Oil sample kit	<u>N/A</u>
Spark plugs	<u>20</u>
ELT batteries	<u>2 July</u>
ELT remote battery	<u>N/A</u>
Air filter recharge kit	<u>2 July 2022</u>
Brakes	<u>2 July 2022</u>
Tires/tubes	<u>2 July 2022</u>
Wheel bearing grease	<u>2 July 2022</u>
Gasket lube	
Light lubricant	

Time-limited items

Item	Last inst. date	Last inst. HOBBS
ELT batteries (replace every 2 years)		
ELT remote battery (replace every 2 years)	<u>N/A</u>	
Altitude encoder & transponder certification		

Empennage & Fuselage Group

- 1) Remove empennage fairing, fuselage inspection covers, wing root fairings, seats, baggage panels f/r, front floorboard
- 2) Inspect vertical stabilizer and horizontal stabilizer spar attach points
- 3) Inspect elevator horns and attachments, and rear fuse bulkheads area, lubricate rod end bearings
- 4) Inspect rudder and vertical stabilizer for corrosion and condition
- 5) Inspect rudder attach bearings for condition/security, lubricate
- 6) Inspect rudder control stops and cable attachments for security and cotter pin
- 7) Inspect rudder light wire for chafing
- 8) Inspect horizontal stabilizer and elevators for corrosion and condition
- 9) Inspect elevator attach bearings for condition/security, lubricate
- 10) Inspect elevator counterbalance weights for security
- 11) Inspect elevator trim tab, arm, and actuator rod
- 12) Inspect static ports are clear
- 13) Inspect rear fuselage interior: check skin/bulkheads for cracking, damage, or corrosion, inspect all wiring & plumbing
- 14) Inspect elevator bellcrank assembly, lubricate rod end bearings

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- 15) Re-install rear baggage panels
- 16) Reinstall empennage fairing and rear inspection plates

Landing Gear Group

- 17) Remove wheel pants, upper intersection fairings, gear attach covers
- 18) Inspect wheel pants and fairings for cracks, wear, loose or missing fasteners
- 19) Jack plane at tiedown points
- 20) Remove brake assemblies and wheels *Disk P. 0.023 S 0.025 Pad P 0.203 SO.194*
- 21) Inspect tires for wear and cracks, rotate if indicated, replace if necessary *New*
- 22) Check brake cylinders for condition and leaks
- 23) Check brake lines for security and chafing
- 24) Inspect brake linings for wear and condition, re-line if necessary
- 25) Re-pack wheel bearings (hi-temp disc brake grease)
- 26) Clean axle/brake area
- 27) Clean and re-mount wheels and brake assemblies including cotter pin
- 28) Check/set tire air pressure: 26-33 psi
- 29) Clean wheel pants and re-install
- 30) Inspect gear attach bolts for proper torque
- 31) Inspect fuel vent ports for security and condition
- 32) Re-install gear attach covers, upper intersection fairings, wheel pants

Wing Group

- 33) Remove wing inspection plates
- 34) Inspect entire wing structure internally for cracks and corrosion including fuel tank attach bolts
- 35) Inspect aileron control mechanism (push tubes, rod end bearings, bellcrank) for condition/security, lubricate rod end bearings
- 36) Inspect wing root area including electrical connections and plumbing
- 37) Inspect entire wing structure externally for cracks and condition
- 38) Inspect fuel cap and O ring condition
- 39) Inspect aileron attach bolts/brackets for security, lubricate rod end bearings
- 40) Inspect aileron control stops for security
- 41) Inspect pitot tube and plumbing for security and blockage
- 42) Extend flaps, inspect flap actuator rods and attachment hinge for operation and security, lubricate rod end bearings
- 43) Inspect strobe/nav lights for security and operation
- 44) Inspect landing lights for security and operation
- 45) Reinstall inspection plates and wing root fairings

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Cabin Group

- 46) Check/change ELT batteries, verify operation, armed
- 47) Inspect ELT antenna
- 48) Inspect flap motor mechanism & wiring for damage and proper operation, lubricate rod end bearing
- 49) Inspect condition of seat harnesses and attachments
- 50) Inspect rear flight controls, lubricate rod end bearings
- 51) Inspect rear pax footwell area including spar bolts, antennas, wing wiring connections
- 52) Inspect fuel selector valve, fittings, fuel lines
- 53) Inspect fwd flight control mechanism, lubricate rod end bearings
- 54) Inspect landing gear mounts and mounting hardware
- 55) Check general condition under panel for loose wires, chafing, etc.
- 56) Check all avionics and instruments for mounting security
- 57) Check cabin heater and controls
- 58) Check rudder pedals and brake cylinders for operation and leaks
- 59) Check battery well area: battery cables and all wires
- 60) Inspect left fwd footwell area: aux fuel pump, firewall penetrations, wire bundles, fuel lines, vent tubes
- 61) Inspect canopy structure and mechanism for security and wear
- 62) Inspect canopy and windshield for cracks
- 63) Check fire extinguisher condition
- 64) Verify spare fuses available in pilot storage bin
- 65) Re-install interior floor panels, seats, flap covers, and seat cushions

Propeller Group

- 66) Remove spinner noting orientation
- 67) Inspect spinner and backplate for cracks or damaged
- 68) Inspect prop hub for cracks or leaks
- 69) Inspect crankcase nose seal for oil leaks
- 70) Inspect blades for nicks, cracks and/or surface erosion, repair as necessary
- 71) Re-install spinner

Engine Group

Service items:

- 72) Remove engine cowl
- 73) Clean cowling interior and inspect for cracks, distortion, loose or missing fasteners, heat damage
- 74) Drain engine oil
- 75) Remove spin-on oil filter, replace and safety wire
- 76) Cut open oil filter, inspect for particles
- 77) Refill engine with oil per lubrication chart
- 78) Remove plugs noting current installed location
- 79) Inspect spark plug condition, clean, re-gap to .018"
- 80) Perform leakdown compression test:
#1 _____ #2 _____ #3 _____ #4 _____ #5 _____ #6 _____ #7 _____ #8 _____
- 81) Rotate spark plug position/polarity, apply anti-seize, reinstall, torque to 35 ft. lbs.
- 82) Remove carburetor air box and carburetor heat attachments
- 83) Service K&N air filter element
- 84) Reinstall air box and all attachments

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- 85) Remove and clean carburetor inlet strainer
- 86) Inspect carburetor mounting nuts for security
- 87) Check engine controls for proper movement and security
- 88) Check exhaust system and mounting brackets for cracks
- 89) Retorque exhaust mounting nuts

Inspection items:

- 90) Inspect accessories on rear engine case for security and leaks including: oil temp sender, oil pressure sender, ~~magnetos~~, vacuum pump pad, oil lines & fittings, crankcase breather
- 91) Inspect oil cooler condition including fins for damage or blocking, lines for leaks and/or chafing
- 92) Inspect ignition harness, springs and insulators for condition
- 93) Inspect starter: pinion & ring gears, mounts, connections, lubricate w/grease
- 94) Inspect alternator: mounts, lead connections, belt condition and tension
- 95) Inspect plenum/baffle for damage and air leaks
- 96) Inspect engine mount system for damage and attachment security
- 97) Inspect all firewall penetration seals
- 98) Inspect fuel lines for condition, chafing, and signs of leaks
- 99) Inspect all wire bundles for security and chafing
- 100) Inspect all lines, hoses, and clamps for leaks, improper condition, looseness, and chafing

Operational inspection

- 101) Verify all inspection panels and fairings secure
- 102) Brake system check

Test run engine:

- 103) Check oil pressure/temperature within limits
- 104) Check aux fuel pump for proper fuel pressure
- 105) Check ignition switch, both magnetos grounded check
- 106) Check alternator shut off operation
- 107) Check fuel gauges for operation
- 108) Magneto check **N/A**
- 109) Check static run up
- 110) Check for proper idle RPM
- 111) Check RPM rise upon leaning mixture
- 112) Check fuel selector for engine shutoff

After shutdown:

- 113) Inspect fwf area for fuel, oil, and hydraulic systems for leaks
- 114) Re-install cowling

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Documentation

- _____ 115) Verify Registration, Airworthiness Certificate, and Operating Limitations in aircraft
- _____ 116) Verify external data plate secure and installed
- _____ 117) Verify EXPERIMENTAL placard installed in cockpit
- _____ 118) Verify PASSENGER WARNING placard installed in cockpit
- _____ 119) Verify pre-flight checklist and Pilot's Operating Handbook in aircraft
- _____ 120) Verify equipment list up to date
- _____ 121) Review Airworthiness Directives for applicability and compliance
- _____ 122) Review Service Bulletins/Letters for compliance
- _____ 123) Check altitude encoder & transponder certification (every 24 months)
- _____ 124) Document Condition Inspection and record maintenance performed in airframe and engine logs

NOTES:

Service Bulletin 00002 Nov 5, 2020 VS-1010 Bottom
Rudder Hinge Bracket cracks Due to impact loads on the R-1007B
Rudder Stop. If cracked Replace with VS-01010-1 inspect Annual condition.
SB-00006 MAY 6, 2020 Potential Leaking of Kavalico pressure sensors

SB-19-09-09 Feb. 26, 2020 Nose Gear leg

SB-18-03-30 Mar. 30, 2018 Elevator Control Stop inspection

SB 16-03-28 Mar. 28, 2016 Cracking of wing aft spar web at the inboard
aileron hinge bracket attach rivets



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TOTAL PERFORMANCE

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SERVICE LETTER SL-00062

Date Released: September 12, 2022

Date Effective: September 12, 2022

Subject: Warning Regarding Modifications to Van's Aircraft Designs Using Van's Aircraft Parts/Materials and/or Third-Party Parts/Materials

Affected Models: All RV Aircraft Models - Ongoing

Required Action: Review and Understand

Synopsis:

Builders and owners sometimes make modifications to their RV aircraft, which are not represented in the Van's Aircraft provided and approved design documentation. While some modifications may be relatively minor in nature, others may in some way affect critical systems, aircraft structure, weight and balance, and/or other performance factors, in manners which may or may not be evident to the person making the change and/or the pilot of the modified aircraft. In addition, certain types of changes in combination may have a cumulative negative effect(s). The effects of changes may not be evident without detailed engineering testing and/or analysis.

Every modification carries with it certain unenumerated/unknown/unevaluated risks, and any individual change or combination of changes may result in the introduction of new or additional risks and/or defects in the resulting one-off aircraft design. Van's Aircraft does not evaluate, review, test, approve, or in any other way provide its support for deviations from its published and maintained aircraft designs. Any changes, enhancements, or modifications made by the builder, owner, or any other person are made at that person(s) own risk, and the person(s) making the changes, as well as anyone who operates the airplane at any point in the future, bears the responsibility for evaluating, understanding, and accepting any consequences of such deviations from the aircraft plans. Van's Aircraft shall not be liable for changes that represent a departure or deviation from the original aircraft design and/or plans.

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