

# Condition Inspection Checklist

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Aircraft:

RV-6

Serial Number:

20999

Registration Number:

N134JB

N134JB

Aircraft Owner:

Brooks Mershon

Date of Inspection:

05/07/2019

Location of Inspection:

KLMO

KLMO

Total Airframe Hours:	1493.2
Total Engine Hours:	1493.2
Total Propeller Hours:	11.6

INSTALLED - 11.6 = 1481.6

Inspection Performed By:

Certificate:

## Preparation — Inspection Consumables

Oil	
Oil filter	
Oil sample kit	
Spark plugs	
ELT batteries	
ELT remote battery	
Air filter recharge kit	
Brakes	
Tires/tubes	
Wheel bearing grease	
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)		
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
- ☒ 21) Inspect tires for wear and cracks, ~~rotate if indicated~~, replace if necessary
- ☒ 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 *L = 27.5 PSI R = 29.5 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~~ TRI-GEAR
- ✓ 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 BRAKE MASTER CYL. ON FIREWALL (ENG. SIDE)
- ✓ 59) Check battery well area: battery cables and all wires SEAL @ BATT. CASE
- ✓ 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
- N/A 75) ~~Remove spin-on oil filter, replace and safety wire~~
- N/A 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 72/80 #2 74/80 #3 78/80 #4 71/80
- ✓ 81) Rotate spark plug position/polarity, apply anti-seize, reinstall, torque to 35 ft. lbs.
- N/A 82) ~~Remove carburetor air box and carburetor heat attachments~~
- N/A 83) ~~Service K&N air filter element~~
- N/A 84) ~~Reinstall air box and all attachments~~

- ✓ 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 *TEMP?*
- ✓ 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 *BATTERY CABLE & BOWSTERS (OIL LEAKS THROUGH)*
- ✓ 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
- ✓ 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 f/w 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 *USER LIST (ELECTRONIC)*
- ☒ 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:

- replace broken (left) Cowl pin from Van's Aircraft
- glass cowl inlets (Rick Hall)
- ✓ - ~~REPAIR FIREWALL THROUGH HOLES~~
- FUTURE MIX → REPLACE ALTERNATOR BELT
- POSSIBLE OIL LEAK ON OIL PRESSURE SENDER