

Testing>Final inspection checklist

This is the checklist that we use in the factory: it covers every part of the aircraft and it **must** be completed before your first flight.

Time to complete properly: at least one full day, probably more. Do **not** rush these checks!

Aircraft Registration: _____

Jabiru Model: _____

Firewall forward components

Propeller: Jabiru / Sensenich

Propeller Size:

Propeller Serial No:

Propeller Bolts

- 1 Check torque (Jabiru prop 7 ft/lbs, Senenich prop 12ft/lbs)
- 2 Check tip tracking is accurate to < 2mm, adjust if required
- 3 TorqueSeal the propeller nuts
- 4 Visually check propeller for serviceability

Spinner

- 1 Spinner screws secure
- 2 Check that the spinner and spinner backing plate has been indexed correctly and marked on the spinner and spinner flange
- 3 Visually check spinner tracking with the engine running

Engine

- 1 Engine Serial Number: _____
- 2 Engine mount bolts secure:
 - a) firewall
 - b) engine
- 3 Thrust washers in place and correct
- 4 Fuel hose secure:
 - a) bulkhead to fuel pump
 - b) fuel pump to carburettor
 - c) fuel lines all clamped and tied
 - d) fire sleeve covering clamps and lock wired in place
- 5 Breather hose from fuel pump: drain line routed correctly
- 6 Drip tray under fuel pump: drain line routed correctly

Spark Plugs/Coil leads

- 1 Spark plugs are secure in cylinder heads
- 2 Spark plug leads are secure on spark plugs
- 3 Spark plug leads not rubbing (on air ducts, cylinder heads)
- 4 Terminal nuts are secure
- 5 CHT sender (12mm terminal) secure
- 6 Spark plug leads secure in distributor caps
- 7 16 gauge earth wire secure and clipped to each coil

Ram Air Ducts

- 1 Baffles in place
- 2 Cap screws secure through ducts to cylinder heads
- 3 Springs in place inboard side of ducts
- 4 Spring lock-wire correct and secure
- 5 Check alignment of rubber front lip with the top cowl
- 6 Air ducts not touching the underside of the top cowl or oil door hinge
- 7 Cooling tubes directed onto coils

Engine Oil

- 1 Oil level correct (capacity: 2200 = 2.3 litres, 3300 = 3.5 litres)
- 2 Sump plug tightened and lock wired
- 3 Oil filter secure (spin on filter, hand pressure only)
- 4 Oil cooler bracket secured to engine
- 5 Oil cooler secured to bracket
- 6 Oil cooler hose clamps secure x 4
- 7 Check oil hose routing
- 8 Fire sleeve secure and lock wired over hose clamps
- 9 Oil breather hose and oil bottle secure

Throttle cable

- 1 Cable lock nuts secure on both ends of cable
- 2 Cable end free in carburettor link
- 3 Split pins secure
- 4 2 x 5/16 washers between cable and carburettor link
- 5 Cable alignment correct with outer at both ends
- 6 Cable adjustment

- a) full throttle
- b) idle

Choke Cable

- 1 Lock nuts secure both ends of cable
- 2 Cable end free in carburettor link
- 3 Split pin secure
- 4 Cable alignment correct with outer
- 5 Operational

Carburettor Heat Cable

- 1 Lock nuts secure both ends
- 2 Cable end free in carburettor link
- 3 Split pin secure
- 4 Cable alignment correct with outer
- 5 Operational

Cabin Heat Cable

- 1 Lock nuts secure both ends
- 2 Butterfly sealing in ON and OFF positions
- 3 Over-centre spring fitted properly and working
- 4 SCAT hoses routing – nothing rubbing, etc

Scat Hoses

- 1 Hot air mixer box to carburettor
 - a) hose clamps secure
 - b) hose not bunched up under carburettor
 - c) cobra head fitted and aligned properly
 - d) smooth routing
- 2 NACA duct in cowl to hot air mixer box cold air inlet
 - a) hose clamps secure
 - b) smooth routing and secure
- 3 Heat shroud on muffler to hot air mixer box hot air inlet
 - a) hose clamps secure
 - b) smooth routing

Nose leg and housing

- 1 Front tyre pressure checked: 34 psi
- 2 [Tyre Pressure] decal in place on spat above grommet
- 3 Nose wheel - ease of rotation
- 4 Nose leg – lubricated and ease of rotation left to right
- 5 Assembly – all bolts secure in nose leg
- 6 Housing bolts secure
- 7 Rod ends secure both sides
- 8 Safety hole in rod ends within limits
- 9 Jam nuts on rod ends secure
- 10 Air valve grommet in place
- 11 Spat retaining screws secure
- 12 Centring springs do not become coil bound full deflection

Electrical

- 1 Battery tie down secure
- 2 Battery terminals secure
- 3 Battery earth secure on firewall
- 4 Starter solenoid locknuts and wires secure
- 5 Regulator wires secure and correct
- 6 Temp sender wires secure (EOT and CHT) plus EGT if fitted
- 7 All wiring cable tied and secure
- 8 Oil pressure wire correct and secure (G terminal)

Cowls

- 1 Top and bottom cowl alignment correct (no gaps)
- 2 Retained nuts secure and correct
- 3 Oil door operational
- 4 Spinner not touching front of cowl and Propeller
- 5 Oil cooler not touching bottom cowling
- 6 Cylinder heads not touching top or bottom cowling
- 7 NACA duct secure with no sharp edges
- 8 Cam locks secure and operational

Interior

Fuel system

- 1 Fuel filter secure and flow direction correct
- 2 Fuel pump (electronic) secure and flow direction correct
- 3 Fuel lines secure:
 - a) fuel pickups and breather lines from wing roots to header tank inlets
 - b) header tank outlet to fuel filter
 - c) fuel filter to electric fuel pump
 - d) electric fuel pump to fuel tap on console
 - e) fuel tap on console to bulkhead fitting
- 4 Fuel line sheathing in place and secure
- 5 Check fuel valve mounting and lever secure to console
- 6 Fuel Breather:
 - a) check breather hose clamps and breather route
 - b) wing breather tube to wing root secure
 - c) check ball in breather in wing tank cap is free
 - d) check fuel breather tube is secure to body fuel filler
 - e) fuel breather check has been conducted:
Note: you must be able to hear air in all outlets independently by:
 - i) Removing filler cap in left wing and blow into tank
 - ii) Removing filler cap in right wing and blow into tank

Fuel gauges

- | | LEFT | RIGHT |
|---|--------------------------|--------------------------|
| 1 Window fitted in fuselage opposite wing roots | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 Calibration decal in place left and right | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Wires connected to left and right senders | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 Left sender drives left gauge and vice versa | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 No leaks from sender boss | <input type="checkbox"/> | <input type="checkbox"/> |

Fuel flow test

- 1 20 litres of fuel in each wing tank
- 2 Check fuel tap has been correctly indexed i.e. ON is on OFF is off
- 3 Select fuel tap on and measure the fuel flow (recorded in *Calibrate fuel gauges* task)
 - a) electric fuel pump OFF _____ litres per minute
 - b) electric fuel pump ON _____ litres per minute

There should be around 1 litre per minute flow with the electric fuel pump ON

Controls

Rudder pedals

- 1 Rudder springs installed properly
- 2 Rudder stops lining up properly
- 3 2 x Pedal mount bolts secure (pushrod to pedals)
- 4 Rudder pedal keepers secure and correct
- 5 2 x ¼" and 4 x 3/16" bolts secure in bearing blocks
- 6 2 x ¼" bolts secure in pushrods (pushrod to nose leg yoke)
- 7 Check jam nuts on rod ends secure x 5
- 8 Check safety hole is within limits on rod ends x 5
- 9 Check rod end free play at full deflection, both directions
- 10 Rudder clear of fin channel. Rudder cannot bind on channel

Rudder cable

- 1 Anchor secure and correct position in clamp
- 2 Rod end secure in pedal with ¼" washer outside
- 3 Safety hole is within limits on rod ends
- 4 Jam nuts on rod ends secured
- 5 Rod end free play at full deflections, in both directions
- 6 Rudder pedal stops adjusted and secure:
rudder should move 78mm left and right from the 5mm offset centre mark

Trim

- 1 Trim levers (left and right) are secure
- 2 Lever pivot secure and split pin fitted through nut
- 3 Free play between left and right side levers not excessive
- 4 Friction correct and secure
- 5 Rod end secure
- 6 Safety hole is within limits on rod ends
- 7 Jam nuts on rod ends secured
- 8 Cable position in clamp correct and anchor secure
- 9 Operation full forward and full back trim
- 10 Spring not coil bound with elevator fully deflected up
- 11 Placard fitted to console top in correct sense

Brake

- 1 Handle assembly correct and secure
- 2 Check safety hole within limits
- 3 Operation
- 4 Free play
- 5 Fluid level full
- 6 Stainless striker in place
- 7 Handbrake correct and operational

Throttle

- 1 Cable anchor secure
- 2 Cable alignment correct
- 3 Cable end free in output lever
- 4 Output lever secure
- 5 Input lever x 2 secure
- 6 Throttle lock hole in pilot's input lever
- 7 Bearing blocks x 2 secure
- 8 Throttle stops correct and secure

Main control shaft

- 1 Control stick pivot secure
- 2 Yoke secure (no free play)
- 3 Rod end secure
- 4 Safety hole is within limits on rod ends
- 5 Jam nuts on rod ends secured
- 6 Elevator cable anchor secure and correct position in clamp
- 7 Elevator cable clear of centre console in all positions
(particularly elevator UP and aileron to left hand side)
- 8 Rod end free at full deflections
- 9 Aileron bell crank lines up properly with stops and is not binding

Aileron Cable LEFT RIGHT

- | | | | |
|---|--|--------------------------|--------------------------|
| 1 | Cable anchor wedges in place | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | “R” clips in place | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Rivets x 3 TLR through each bracket and seat back | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Rod end secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Safety hole is within limits on rod ends | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Jam nuts on rod ends secured | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Aileron stoppers secure x 2 (cannot over centre aileron bellcrank) | | <input type="checkbox"/> |

Seat belts LEFT RIGHT

- | | | | |
|---|--|--------------------------|--------------------------|
| 1 | Check bolts are through Nyloc and buckle has free play | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Operation of buckle and length adjustments play | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Belts not twisted play | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Seat belt anchor secure (lower and upper) play | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Door frame compression struts in place, no sharp edges | <input type="checkbox"/> | <input type="checkbox"/> |

Headsets

- | | | | |
|---|-------------|--|--------------------------|
| 1 | Hook secure | | <input type="checkbox"/> |
|---|-------------|--|--------------------------|

Instrument panel

- 1 Secure and level
- 2 Instruments square (check that the slip/skid ball is centred).
- 3 Slip/skid ball air bubble not visible
- 4 Circuit breakers secure and correctly labelled
- 5 Switches secure and correctly labelled
- 6 Registration number displayed on panel
- 7 Mag switch guard in place and square with rounded edges
- 8 All instruments fitted and operational *
- 9 Instrument markings correct
- 10 Altimeter QNH correct
- 11 All avionics installed and operational
- 12 Cigarette lighter / 12v power fitting installed

* Fit 1 metre of rolled up surgical tubing to the brass static tube connector under the panel.

Watch the pressure instruments while slowly unrolling the tubing. The altimeter should start to show an increase in altitude. The vertical speed indicator should start to show a positive rate of climb and the airspeed indicator may show a small positive indication.

When the altimeter shows 2000 feet pinch off the tubing. There will be some initial decrease in altitude and the vertical speed indicator will read zero. The altimeter should then hold the indicated altitude for at least one minute. If altitude is lost then look for leaks.

Note: NEVER apply suction orally or mechanically to a static line - it can damage the instruments.

Flaps

- 1 Mounting bolts secure
- 2 Rod end bolt secure: motor end and flap shaft ends
- 3 Rod end not binding in any position
- 4 Safety hole is within limits on rod end
- 5 Jam nut on rod end secured
- 6 Visual on input switch (knob shape, operation and decal)
- 7 Visual on bearing blocks
- 8 Check all nuts are in safety

Flap indicator

- 1 Secure and correct indication:
 - a) Flaps up
 - b) First stage: half flap
 - c) Second stage: full flap

Upholstery:

- | | | |
|---|----------------------------|--------------------------|
| 1 | Fitted and clean | <input type="checkbox"/> |
| 2 | Seat covers | <input type="checkbox"/> |
| 3 | Map pockets | <input type="checkbox"/> |
| 4 | Flap shaft upholstered | <input type="checkbox"/> |
| 5 | Centre console upholstered | <input type="checkbox"/> |
| 6 | Fuel line covers in place | <input type="checkbox"/> |

Placards and decals:

- | | | |
|---|--|--------------------------|
| 1 | [No Smoking] on panel | <input type="checkbox"/> |
| 2 | [No Intentional Spins] on panel | <input type="checkbox"/> |
| 3 | [Voltage must be displayed at all times] above EMS (if applicable) | <input type="checkbox"/> |
| 4 | [Transponder not calibrated] (if applicable) | <input type="checkbox"/> |
| 5 | Switches labelled (label above switch, [OFF] below switch) | <input type="checkbox"/> |
| 6 | [Aircraft built to LSA standards] decal beside main placard | <input type="checkbox"/> |
| 7 | Warning placard above windscreen. Weight entered | <input type="checkbox"/> |
| 8 | Baggage (Limit, loading rules, seat backs) | <input type="checkbox"/> |
| 9 | Loading stations | <input type="checkbox"/> |

Doors: LEFT RIGHT

- | | | | |
|---|---|--------------------------|--------------------------|
| 1 | Operation: open and shut, latches working | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Restraining straps secure and correct length | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Hinge and pin secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Catches secure and freely operating (main plus top latch) | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Visual on door jamb | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Visual on door seal | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Visual on handle | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Visual on top catch | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Decals | | |
| | a) [Do Not Lean On Door] | <input type="checkbox"/> | <input type="checkbox"/> |
| | b) [Exit] | <input type="checkbox"/> | <input type="checkbox"/> |
| | c) [Open] | <input type="checkbox"/> | <input type="checkbox"/> |

Exterior

Wings: LEFT RIGHT

- | | | | |
|---|---|--------------------------|--------------------------|
| 1 | Root bolts inspected (correct tension) x 2 | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Strut bolts x 2 inspected, correct tension | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Warning decals in wing roots x 2 [Do Not Tighten] | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Wing root cover strips secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Upper strut fairing secure and clear of strut | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Lower wing strut/belly fairings secure | <input type="checkbox"/> | <input type="checkbox"/> |

Flaps

- | | | | |
|---|--|--------------------------|--------------------------|
| 1 | Hinge points secure with pivot bolts in safety | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Pushrod rod ends secure and not binding in any position | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Safety hole in rod ends is within limits | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Jam nuts on rod ends secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Pushrods not fouling on cover strips | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Drive shaft output secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Drain holes have been drilled | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Flap operation: | | |
| | a) flaps up | <input type="checkbox"/> | <input type="checkbox"/> |
| | b) first stage – half flap | <input type="checkbox"/> | <input type="checkbox"/> |
| | c) second stage – full flap, not fouling fuselage | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Flap slot gap even, smooth and the same size on both wings | <input type="checkbox"/> | <input type="checkbox"/> |

Fuel caps

- | | | | |
|---|--|--------------------------|--------------------------|
| 1 | Filler caps secure in fuel filler body | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Earth wires secure from caps to breather fitting in tank | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Quick drain: operation and lock wired | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Decals in place and correct | <input type="checkbox"/> | <input type="checkbox"/> |

Ailerons LEFT RIGHT

- | | | | |
|---|--|--------------------------|--------------------------|
| 1 | Deflections | | |
| | a) Neutral (level with lower wing skin) with stick centred | <input type="checkbox"/> | <input type="checkbox"/> |
| | b) UP _____degrees, or touches template | <input type="checkbox"/> | <input type="checkbox"/> |
| | c) DOWN _____degrees | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Hinge pins and pin retainers secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Rod ends secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Safety hole on rod ends within limits | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Jam nuts on rod ends secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Cable anchor secure and correct position in clamp | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Drain holes | | |
| | a) Wing drain hole in trailing edge | <input type="checkbox"/> | <input type="checkbox"/> |
| | b) Aileron cable inspection windows secure | <input type="checkbox"/> | <input type="checkbox"/> |

Pitot

- | | | | |
|---|---|--|--------------------------|
| 1 | Secure | | <input type="checkbox"/> |
| 2 | ASI operation (see * below) | | <input type="checkbox"/> |
| 3 | Cover present | | <input type="checkbox"/> |
| 4 | Pressure Test with no leaks (see * below) | | <input type="checkbox"/> |

* Slip 1 metre of surgical tubing over the pitot tube. Have one person watch the airspeed indicator while the other person very slowly rolls up the tubing. This will apply pressure to the instrument in a gentle and controllable manner. When the ASI needle reaches cruising speed pinch the tube shut – the ASI should hold that reading for at least one minute. A fast drop off will indicate a leak in the instrument, fitting, lines or the test hose attachment.

Note: NEVER blow into a pitot tube – it can damage the ASI.

Stall warning:

- | | | |
|---|--|--------------------------|
| 1 | Stall warning horn secured in cabin | <input type="checkbox"/> |
| 2 | Operation correct (suck to ensure reed is working) | <input type="checkbox"/> |
| 3 | Gauze and lip installed correctly and clear | <input type="checkbox"/> |

Main Undercarriage LEFT RIGHT

- | | | | |
|----|--------------------------------|--------------------------|--------------------------|
| 1 | Main gear legs secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Stub axle secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Hubs secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Stub axle extension is secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Calliper secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Discs secure | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Ease of rotation | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Tyre pressure 45 psi | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | [Tyre Pressure] decal in place | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | Brake line not rubbing on spat | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Spats | | |
| | a) screws secure | <input type="checkbox"/> | <input type="checkbox"/> |
| | b) clear of tyre | <input type="checkbox"/> | <input type="checkbox"/> |
| | c) retain nuts | <input type="checkbox"/> | <input type="checkbox"/> |
| | d) outer edge – nothing rubs | <input type="checkbox"/> | <input type="checkbox"/> |
| | e) air valve grommet in place | <input type="checkbox"/> | <input type="checkbox"/> |
| | f) [No Step] decal in place | <input type="checkbox"/> | <input type="checkbox"/> |

Empennage

Elevator Deflections

- 1 UP _____ degrees, or touches the UP template
- 2 DOWN _____ degrees, or touches the DOWN template
- 3 2mm clearance to the stop on fuselage at full DOWN deflection

Elevator

- 1 Hinge pins and retainers secure
- 2 Rod ends secure
- 3 Safety in rod ends within limits
- 4 Jam nuts on rod ends secure
- 5 Cable anchor secure and correct position in clamp
- 6 Drive plate secure
- 7 Rod end free play at full deflections
- 8 End-plug not touching end-cap full deflection down
- 9 Elevator min 2mm clear of stabiliser channel
- 10 Elevator cannot bind on horizontal stabiliser channel

Trim

- 1 Pivots secure
- 2 Spring rod
 - a) split pins secure
 - b) springs lubricated
 - c) black block secure and free
 - d) rod ends secure
 - e) safety hole within limit
 - f) jam nuts secure
 - g) rod end free at full deflections
- 3 Trim cable
 - a) cable anchor secure and correct position in clamp
 - b) rod ends secure
 - c) safety hole in rod ends within limits
 - d) jam nuts on rod ends secure
 - e) rod end free at full deflections

Ventral Fin:

- 1 Retained nuts in fuselage secure
- 2 Elevator horn not hitting cut-out in ventral fin at full up deflection
- 3 Inspection holes drilled
- 4 Drain holes drilled out
- 5 Ventral fin secure onto fuselage

Rudder:

- 1 Centre 5mm offset to right when pedals level
- 2 Deflection
 - a) Left

 __mm from the offset centre mark
 - b) Right

 __mm from the offset centre mark
- 3 2mm clearance to the stops on fuselage at full deflection
- 4 Hinge pin and pin retainers secure
- 5 Rod end secure
- 6 Safety in rod end within limits
- 7 Jam nut on rod end secure
- 8 Cable anchor secure and correct position in clamp
- 9 Rod end free at full deflections

Static Vent:

- 1 Tip secure
- 2 Holes clear
- 3 Decal in place

Note that leak testing of the static system has been performed as part of the instrument checklist.

I hereby certify that I have completed this Final Inspection Checklist:

Owner / Builder / Engineer (strike out any that do not apply)

Date