CERTIFICATION INSPECTION CHECK LIST FOR:

Amateur-Built Aircraft

Finally, this list is not all-inclusive, but generic in nature. Other things may be added as necessary

Builder: _____ Model _____S/N _____

Registration Number: _____ Date of Inspection_____

Regulatory Prerequisites & Placards

Satisfactory Unsatisfactory Item

1. _____ _____ Meets 51% rule, has invoices, plans, pictures and building records
2. _____ _____ Presents notarized statement FAA Form Eligibility Statement
3. _____ _____ Presents FAA Form 8130-6 Application for A/W Certificate properly filled out
4. _____ _____ ID data plate is fireproof (steel), has Builder's name, model, serial number.
5. _____ _____ ID data plate is installed in proper external location per FAR 45. 11(a).
6. _____ _____ N-Numbers installed, block letters, 3" proper location per FAR 45.25, or 12 inch, if a/c has cruise speed over 180 Knots CAS.
7. _____ _____ Word Experimental Displayed, 2" min size, proper location per FAR 45.23(b).
8. _____ _____ Passenger warning placard (not required for single place) ".This aircraft does not meet U.S. safety standards for certified aircraft..."
9. _____ _____ Registration certificate available in aircraft. (NOT pink slip!)
10. _____ _____ Builder makes statement in logbook that aircraft has been inspected
11. _____ _____ A/C Weight and balance done, and shows within designer's limits.

FAR 91.9 Placards

1. _____ _____ ALL controls - flight and engine, marked as to use. Markings for:
2. _____ _____Throttle- open-closed
3. _____ _____ Carb Heat- pull on
4. _____ _____ Flaps- Up- Down, Degrees/Inches Take Off Setting Marked
5. _____ _____ Trim Tab- Nose Up, Nose Down, Take Off setting
6. _____ _____ Trim Tab- rudder left, rudder right, neutral
7. _____ _____ Mixture- Push rich
8. _____ _____ Fuel On-Off levers
9. _____ _____ Fuel quantity and type marked on or near each cap

Cockpit interior

1. _____ _____ Seat Belts function, and angle is slightly rearward
2. _____ _____ Shoulder harness function, and angle is -5 to + 30 degrees
3. _____ _____ Seat Belt Anchor Points firm, no interference
4. _____ _____ Shoulder Harness Anchor Points firm, no interference
5. _____ _____ Seats and seat tracks o.k., stops on aft of rails

Instruments and required equipment,

1. ___ _____ ELT meeting TSO-C91A properly installed, with remote switch and battery date current and recorded in aircraft records (See Checklist explanations Page) for details FAR 91.205 and others
2. _____ _____ Fuel gauge each tank, has been calibrated and calibration in records showing unusable fuel
3. _____ _____ VFR Day requirements: * Note: All instruments should be marked with green/red line ranges
4. _____ ____ Altimeter
5. _____ ____ Airspeed indicator
6. _____ ____ Tachometer
7. _____ ____ Oil Pressure
8. _____ ____ Oil Temperature
9. _____ ____ Compass
10. _____ ____ For retract gear aircraft, indicator of up/down gear
11. _____ ____ VFR Night Requirements- Day VFR plus:
12. _____ ____ Position Lights
13. _____ ____ Anti-collision strobes/rotating beacon which meets FAA standards
14. _____ ____ Spare fuses
15. _____ ____ Electrical energy sufficient for duration of aircraft range, plus reserve
16. _____ _____ IFR Requirements Day & Night VFR, plus:
17. _____ ____ Working two-way radio.
18. _____ ____ Gyroscopic rate of turn indicator (Turn & Bank or Turn Coordinator)
19. _____ ____ Slip / Skid indicator
20. _____ ____ Sensitive altimeter
21. _____ ____ Artificial horizon
22. _____ ____ Directional gyro
23. _____ ____ Clock
24. _____ ____ Vacuum gauge, if vacuum powered, or volt and amp meter, if electric
25. _____ ____ Heated Pitot
26. _____ ____ Generator or alternator.
27. _____ ____ Alternate Static Source.

Systems

Wire type and size is appropriate for load being carried, and connections are solid. All installed systems perform as intended.

Electrical

1. _____ _____ Battery & Electrical System, wiring adequate size and secure
2. _____ _____ Switches marked for operation, and wired properly
3. _____ _____ Circuit Breakers or fuses labeled for value and function, and wired properly
4. _____ _____ Ground on battery to airframe, or wired into place properly
5. _____ _____ Ammeter
6. _____ _____ Voltmeter
7. _____ _____ Landing Lights / Position Lights wired correctly
8. _____ _____ Cockpit lights/ Instrument lighting
9. _____ _____ Battery case and battery securely mounted
10. _____ _____ Battery vented overboard

Avionics

1. _____ _____ Antennas are properly installed, and have proper support/doubler plates
2. _____ _____ Coax Cable secured, with slack enough to prevent disconnection
3. _____ _____ Radios/Avionics and cooling fans are mounted securely
4. _____ _____ Avionics gear is wired properly, and functions
5. _____ _____ Transponder "Mode C" check done, and in aircraft records

Fuel System

1. _____ _____ Caps fit, and are vented on all tanks
2. _____ _____ Fuel drains installed at lowest portion of tank, and at lowest point in fuel lines
3. _____ _____ Fuel Vent System contains no loops which would block venting
4. _____ _____ Shutoff valve/ Selector switch ease of operation, and clearly marked for intended operation
5. _____ _____ Fuel Line routing proper material and diameter for intended fuel supply
6. _____ _____ Fuel Strainer functional and safety wired
7. _____ _____ Fuel Lines protected from chafing, and secure from "catching a foot."(Checklist explanations Page)
8. _____ _____ Fuel line routing avoids areas of heat

Gear/Wheel/Brake Systems

1. _____ _____ Retractable Gear functions- Operations check
2. _____ _____ Emergency gear extension test
3. _____ _____ Clearance in wheel wells
4. _____ _____ Brake System line routing, reservoir, pumps
5. _____ _____ Brake & Wheel installation secure
6. _____ _____ Taxi test on gear toe in/ toe out o.k.
7. _____ _____ Tires are clear of pants or struts, including clearance of "mud scraper", no binding
8. _____ _____ Wheel Pants are secure
9. _____ _____ Tail Spring secure, well designed, and is clear of rudder

Control Surfaces

Designers Recommended limits: This Plane Measures:

1. Aileron Up travel: _____ Degrees/Inches _____ Degrees/Inches
2. Down travel : _____ Degrees/Inches _____ Degrees/Inches
3. Elevator Up travel: _____ Degrees/Inches _____ Degrees/Inches
4. Down travel: _____ Degrees/Inches _____ Degrees/Inches
5. Rudder Left/Right _____ Degrees/Inches _____ Left_____ Right

General Condition- Fuselage, Wing, Tail Assembly

1. _____ _____ Skin condition, wrinkles, rivets, or tape
2. _____ _____ Vertical Fin, movement and condition
3. _____ _____ Elevator assembly, movement and condition
4. _____ _____ Trim Tabs function, no binding, heavy structure to reduce flutter potential
5. _____ _____ Control Travel "Stops"
6. _____ _____ Control Cables Safety Wired Correctly
7. _____ _____ Counterweights secure
8. _____ _____ Doors close securely and open properly, if open in flight, markings
9. _____ _____ Windows secure, and markings for distance if open in flight
10. _____ _____ Canopy secure
11. _____ _____ Canopy emergency release marked red and copper safety wired
12. _____ _____ Canopy locks/door locks work

Flight Controls

1. _____ _____ Proper tension of cables
2. _____ _____ Safety wiring of cables
3. _____ _____ Clearance on controls/no hitting panel or floorboards
4. _____ _____ Freedom of movement
5. _____ _____ PROPER DIRECTION
6. _____ _____ Is everything safetied?

Engine Compartment

1. _____ _____ Engine Compression in Logs1=___ 2=____ 3=____ 4=____ 5=____ 6=___
2. _____ _____ Throttle cables anchored and functional, spring open
3. _____ _____ Clearances in engine compartment
4. _____ _____ Carb Heat Control- Functional
5. _____ _____ Mixture Control- Functional, spring full-rich
6. _____ _____ Fuel Hose routing to avoid heat & bends (Firesleave preferred)
7. _____ _____ Fuel strainer safety wired
8. _____ _____ Fuel Hose diameter sufficient for engine
9. _____ _____ Fuel and Oil Hoses proper material
10. _____ _____ Oil System Hose & Cooler installation
11. _____ _____ Prop Governor. Functional, proper lines
12. _____ _____ Firewall steel, no openings
13. _____ _____ Engine Mount secure, no cracks
14. _____ _____ Alternator, belts, accessories properly installed
15. _____ _____ Heater hoses proper material
16. _____ _____ Heater design minimizes CO poisoning chances
17. _____ _____ Baffles appear correct
18. _____ _____ All electrical and ignition wires appear correct
19. _____ _____ Cowling secure, (INSTALL IT NOW).

Propeller

1. _____ _____ Propeller nicks
2. _____ _____ Safety Wired Bolts of sufficient size
3. _____ _____ Bolts torqued properly
4. _____ _____ Bolts clear engine, proper length
5. _____ _____ Prop clears ground in takeoff attitude by >7"
6. _____ _____ Prop Spinner o.k., clear of cowl, not uneven spin
7. _____ _____ Ready for Run-up.

Test Run Engine Note: At least one hour of runup should have been done previously, and logged in the aircraft logbook. The engine compressions should also be recorded after one hour of runup. Some may be low on a fresh overhaul engine, but it is important to get this information as a base line!

1. _____ _____ Engine starts easily
2. _____ _____ Oil Pressure comes up quickly to proper level
3. _____ _____ Oil Temp comes off cold peg
4. _____ _____ Check all instrument operations/tach/oil/volts/ etc.
5. Record all data five minutes after startup here
   _____
   _____
6. _____ _____ Carb Heat Functions, RPM Drop is _____
7. _____ _____ Mag Drop, Left is _____ Right is _____
8. _____ _____ Fuel Gauges show calibrated
9. _____ _____ Mixture/Throttle/Prop controls work
10. _____ _____ Fuel Shutoff works
11. _____ _____ No abnormal vibration
12. _____ _____ Propeller tracks within specs

Airworthiness Directive Compliance

1. _____ _____ Engine AD's which apply have been complied with, and how
   (Attach list if necessary)
2. _____
3. _____ _____ Equipment AD's which apply have been complied with, and how
   (Attach list if necessary)
4. _____

Certification

1. _____ _____ Logs present and builder records the following statement: " **I certify that I have built this aircraft for my own education and recreation, and I have inspected it fully. I am the manufacturer, and I consider it eligible for issuance of an Experimental Airworthiness Certificate for the purpose of operating amateur-built aircraft under provisions of FAR 21.191(g). "**
2. _____ Discuss operating limitations with applicant, flight test areas, and flight test time.
3. _____ _____ Airworthiness application properly filled out and signed?
4. _____ Sign Logbook and issue certificate, if applicable.
5. **OR** _____ Provide list of deficiencies to applicant, if applicable

Builder: _____ Model _____

S/N _____

Registration Number: _____ Date of Inspection_____

Unsatisfactory Conditions

N _____

1. The following unsatisfactory conditions were noted in your inspection. It is your responsibility to correct these conditions prior to obtaining an airworthiness certificate. Please correct the deficiencies and return this list, with evidence of the corrections, to the certificating inspector.
2. Condition:_____

   Corrective action taken: _____
   _____
3. Condition:_____

   Corrective action taken: _____
   _____

4. Signed: _____