

Amateur-Built Fabrication and Assembly Checklist (2009) (Fixed Wing)

Name(s)	ZENITH Aircraft Company
Address:	PO Box 650, Mexico MO 65265
Aircraft Model:	STOL CH 750
Date:	5/11 - 12/2010
Remarks:	NKET Members: William Burke (Lead), Roger Basterash, Matt Tomsheck, Joe Palmisano
This kit was evaluated and may allow a builder to meet the major portion requirements of 14 CFR 21.191(g) per Zenith documents;	
Drawings: Edition 1 Rev 1, Date: 1/29/2010, Parts List, Airframe Packing List, Date: 2/1/2010, and Finishing Packing List, Date 2/1/2010.	

NOTE: This checklist is only applicable to fixed wing aircraft. Evaluation of other types of aircraft (i.e., rotorcraft, balloons, lighter than air) will not be accomplished with this form.

NOTE: This checklist is invalid for and will not be used to evaluate an altered or modified type certificated aircraft with the intent to issue an Experimental Amateur-built Airworthiness Certificate. Such action violates FAA policy and DOES NOT meet the intent of § 21.191(g).

NOTE: Enter "N/A" in any box where a listed task is not applicable to the particular aircraft being evaluated. Use the "Add item" boxes at the end of each section to add applicable unlisted tasks and award credit.

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Fuselage – 24 Listed Tasks				
F1	Fabricate Longitudinal Members	0.4			
F2	Fabricate Composite Cores or Shells, Skins	N/A			
F3	Fabricate Bulkheads or Cross members	0.5			
F4	Fabricate Control Yokes/Sticks	0.9			
F5	Assemble Control Yokes/Sticks	0			
F6	Fabricate Flt Control Push Pull Tubes/Cables	0.7			
F7	Assemble Flt Control Push Pull Tubes/Cables	0			
F8	Assemble Fuselage Basic Structure	0			
F9	Fabricate Brackets and Fittings	0.7			
F10	Assemble Brackets and Fittings	0			
F11	Fabricate Cables, Wire, and Lines	0			
F12	Assemble Cables, Wire, and Lines	0			
F13	Fabricate Fuselage Fuel System Components	N/A			
F14	Assemble Fuselage Fuel System Components	0			
F15	Fabricate Fuselage Covering or Skin	0.7			
F16	Assemble Fuselage Covering or Skin	0			
F17	Fabricate Windshield	0.7			
F18	Assemble Windshield to Fuselage	0			
F19	Fabricate Windows	0.6			
F20	Assemble Windows to Fuselage	0			
F21	Fabricate Doors/Canopy	0.7			
F22	Assemble Doors/Canopy to Fuselage	0			
F23	Fabricate Mast and Strut Assembly	N/A			

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
F24	Assemble Mast and Strut Assembly to Aircraft	N/A			
F25	Add Item:				
F26	Add item:				
Total # of Fuselage Tasks	<u>Fuselage Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
20	<u>Fuselage Total Points</u> ▶	5.9	0.0	0.0	0.0
Fuselage Comments: F3 - Includes welded steel tube cage surrounding the cockpit F13 - Two tabs welded on gascolater component, insignificant credit F23 and F24 (Struts) captured in W48 and W54 (Wing section)					

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Wings – 51 Listed Tasks				
W1	Fabricate Wing Spars	0.7			
W2	Assemble Wing Spars to Wing	0			
W3	Fabricate Wing Ribs or Cores	0.8			
W4	Assemble Wing Ribs or Cores to Wing	0			
W5	Fabricate Composite Cores	N/A			
W6	Assemble Composite Cores to Wing	N/A			
W7	Fabricate Wing Leading and Trailing Edges	0.7			
W8	Assemble Wing Leading & Trailing Edges to Wing	0			
W9	Fabricate Drag/Anti-drag Truss Members	N/A			
W10	Assemble Drag/Anti-drag Truss Members to Wing	N/A			
W11	Fabricate Wing Brackets and Fittings	0.6			
W12	Assemble Wing Brackets and Fittings to Wing	0			
W13	Fabricate Wing Tips	0.8			
W14	Assemble Wing Tips to Wings	0			
W15	Fabricate Special Tools or Fixtures	N/A			
W16	Fabricate Aileron Spars	0.7			
W17	Fabricate Aileron Ribs or Cores	0.7			
W18	Assemble Aileron Ribs or Cores to Aileron	0			
W19	Assemble Aileron Primary Structure	0			
W20	Fabricate Aileron Leading and Trailing Edges	N/A			
W21	Assemble Aileron Leading and Trailing Edges	N/A			
W22	Fabricate Aileron Brackets and Fittings	N/A			
W23	Assemble Aileron Brackets & Fittings to Aileron	N/A			
W24	Fabricate Aileron Covering or Skin	0.7			
W25	Assemble Aileron Covering or Skin to Aileron	0			
W26	Fabricate Aileron Roll Trim	N/A			
W27	Assemble Aileron Trim Tab/Roll Trim to Aileron	N/A			
W28	Assemble Aileron to Wing	0			
W29	Fabricate Flap Spars	0.7			
W30	Assemble Flap Spars to Flap	N/A			
W31	Fabricate Flap Ribs or Cores	0.7			
W32	Assemble Flap Ribs or Cores to Flap	0			
W33	Assemble Flap Primary Structure	0			
W34	Fabricate Flap Leading and Trailing Edges	N/A			
W35	Assemble Flap Brackets and Fittings to Flap	N/A			
W36	Fabricate Flap Covering or Skin	0.7			
W37	Assemble Flap Covering or Skin to Flap	0			
W38	Assemble Flaps to Wing	0			
W39	Fabricate Wing External Lighting Components	N/A			
W40	Assemble Wing Ext Lighting Components to Wing	N/A			
W41	Assemble Basic Wing Structure	N/A			
W42	Fabricate Wing Fuel System components	N/A			
W43	Assemble Wing Fuel System Components to Wing	N/A			
W44	Fabricate Cables Wires and Lines	0			

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
W45	Assemble Cables Wires and Lines to Wing	0			
W46	Fabricate Wing Covering or Skin	0.7			
W47	Assemble Wing Covering or Skin to Wing	0			
W48	Fabricate Wing Struts/Wires	0.5			
W49	Fabricate Fuel Tank	0.9			
W50	Assemble Fuel Tank to Wing	0			
W51	Calibrate Fuel System Components	N/A			
W52	Add item: Fabricate Flap Bracket and Fittings	N/A			
W53	Add Item: Assemble Flap Leading and Trailing Edges	N/A			
W54	Add Item: Assemble Wing Struts/Wires to Wing/Fuselage	0			
W55	Add Item: Assemble Wing to Next Higher Structure	0			
W56	Add Item: Fabricate Wing Leading Edge Slot, Internal Components and Brackets	0.6			
W57	Add Item: Fabricate Wing Leading Edge Slot Skin	0.4			
W58	Add Item: Assemble Wing Leading Edge Slot	0			
W59	Add item: Assemble Wing Leading Edge Slot to Wing	0			
Total # of Wing Tasks	<u>Wings Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
37	<u>Wings Total Points ►</u>	10.9	0	0	0

Wing Comments:

W22, W23, W35 and W52 credit captured in W11 and W12.

W29 - W38 This aircraft's flaps, although articulated, are joined and move in conjunction with the Ailerons (Flaperons).

W30 credit captured in task W33.

W34 and W35 functions/credit captured in tasks W36 and W37

W41 functions captured in W1 - W14.

W52, W53 and W54 added items were inadvertently omitted from this checklist and will be added at the next revision.

W55 inadvertently omitted from basic checklist. To be added to next checklist revision.

W56, W57, W58 and W59 Wing Leading Edge Slot added because of unique fabrication and assembly complexity that this component added to the wing.

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Empennage – 57 Listed Tasks				
E1	Fabricate Horizontal Stabilizer Spars	0.6			
E2	Assemble Horizontal Stabilizer Spar(s) to Stabilizer	N/A			
E3	Fabricate Horizontal Stabilizer Ribs or Cores	0.7			
E4	Assemble Horizontal Stabilizer Ribs or Cores to Stabilizer	N/A			
E5	Fabricate Horizontal Stabilizer Leading and Trailing Edge	N/A			
E6	Assemble Horizontal Stabilizer Leading and Trailing Edges to Stabilizer	N/A			
E7	Fabricate Horizontal Stabilizer Brackets & Fittings	0.5			
E8	Assemble Horizontal Stabilizer Brackets and Fittings to Stabilizer	N/A			
E9	Assemble Horizontal Stabilizer Structure	0			
E10	Fabricate Horizontal Stabilizer Lead/Trailing Edges	N/A			
E11	Assemble Horizontal Stabilizer Lead/Trailing Edges to Stabilizer	N/A			
E12	Fabricate Horizontal Stabilizer Cables, Wires and Lines	N/A			
E13	Assemble Horizontal Stabilizer Cables, Wires and Lines to Stabilizer	N/A			
E14	Fabricate Horizontal Stabilizer Covering or Skin	0.8			
E15	Assemble Horizontal Stabilizer Covering or Skin to Stabilizer	0			
E16	Assemble Horizontal Stabilizer Structure to Fuselage	0			
E17	Fabricate Elevator Spars	0.8			
E18	Assemble Elevator Spars to Elevator	N/A			
E19	Fabricate Elevator Ribs or Cores	0.7			
E20	Assemble Elevator Ribs or Cores to Elevator	N/A			
E21	Assemble Elevator Structure	0			
E22	Fabricate Elevator Leading and Trailing Edge	N/A			
E23	Assemble Elevator Leading and Trailing Edges to Elevator	N/A			
E24	Fabricate Elevator Brackets and Fittings	N/A			
E25	Assemble Elevator Brackets and Fittings to Elevator	N/A			
E26	Fabricate Elevator Covering or Skins	0.8			
E27	Assemble Elevator Covering or Skins to Elevator	0.5			
E28	Fabricate Elevator Trim Tab	0.3			
E29	Assemble Elevator Trim Tab to Elevator	0			
E30	Fabricate Special Tools or Fixtures	N/A			
E31	Fabricate Vertical Stabilizer Spars	N/A			
E32	Assemble Vertical Stabilizer Spar to the Vertical Stabilizer	N/A			
E33	Fabricate Vertical Stabilizer Ribs or Cores	N/A			
E34	Assemble Ribs or Cores to Vertical Stabilizer	N/A			
E35	Fabricate Vertical Stabilizer Leading/Trailing Edges	N/A			
E36	Assemble Leading and Trailing Edges to Vertical Stabilizer	N/A			
E37	Fabricate Vertical Stabilizer Brackets and Fittings	N/A			
E38	Assemble Brackets and Fittings to Vertical Stabilizer	N/A			
E39	Fabricate Vertical Stabilizer Cables, Wires, Lines	N/A			

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/	Commercial	Am-Builder	Am-Builder
		Component	Assistance	Assembly	Fabrication
E40	Assemble Cables, Wires, Lines to Vertical Stabilizer	N/A			
E41	Fabricate Vertical Stabilizer (Fin) Covering or Skin	0.3			
E42	Assemble Vertical Stabilizer Covering or Skin to Vertical Stabilizer	N/A			
E43	Assemble Vertical Stabilizer Structure (Fin) to Fuselage	0			
E44	Fabricate Rudder Spar	0.6			
E45	Assemble Rudder Spar to Rudder	N/A			
E46	Fabricate Rudder Ribs or Cores	0.6			
E47	Assemble Rudder Ribs or Cores to Rudder	N/A			
E48	Assemble Rudder Structure	0			
E49	Fabricate Rudder Leading and Trailing Edge	N/A			
E50	Assemble Rudder Leading and Trailing Edge to Rudder	N/A			
E51	Fabricate Rudder Brackets and Fittings	N/A			
E52	Assemble Rudder Brackets and Fittings to Rudder	N/A			
E53	Fabricate Rudder Covering or Skin	0.5			
E54	Assemble Rudder Covering or Skin to Rudder	0			
E55	Fabricate Rudder Trim Tab	N/A			
E56	Assemble Rudder Trim Tab to Rudder	N/A			
E57	Assemble Rudder to Vertical Stabilizer Fuselage	0			
E58	Add Item: Assemble Vertical Stabilizer Structure	N/A			
E59	Add item: Assemble Elevator to Horizontal Stabilizer	0			
E60	Add item:				
Total # of Empennage Tasks	<u>Empennage Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
23	<u>Empennage Total Points ►</u>	7.7	0	0	0

Empennage Comments:

E5 and E6 are duplicate items and therefore were not scored.

E7 Fabrication of all Brackets and Fittings in the entire empennage section are scored in E7. Assembly for these components are included in E9, E21 and E48.

E58 and E59 added items inadvertently omitted from this checklist revision. Will be added to checklist upon revision.

NOTE: Individual assembly credit was not warranted for each subassembly of the Horizontal Stabilizer, Elevator, Vertical Stabilizer and Rudder. Assembly credit was given at the structure level as follows:

E9: Assemble Horizontal Stabilizer Includes, E2, E4, E8 and E11.

E21: Assemble Elevator Structure Includes E18, E20, E23 and E25.

E31→E43 Aircraft has no Vertical Stabilizer, the entire vertical structure is a fully articulated rudder. However, there is a dorsal fin just forward of the rudder. Credit for this dorsal fin is given in E41 and E43 Skin Covering task, there is no internal structure.

E48: Assemble Rudder Structure Includes E45, E47, E50 and E52.

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Landing Gear – 12 Listed Tasks				
LG1	Fabricate Struts	0.6			
LG2	Fabricate Brake System Components	N/A			
LG3	Fabricate Landing Gear Actuation System Components	N/A			
LG4	Fabricate Landing Gear System Cables, Wires and Lines	N/A			
LG5	Assemble Wheels	0			
LG6	Assemble Brakes, Tires	0			
LG7	Assemble Landing Gear	0			
LG8	Assemble Landing Gear System Components Next Level Structure	0			
LG9	Align Landing Gear	N/A			
LG10	Fabricate Landing Gear Fairings/Gear Doors	N/A			
LG11	Assemble Landing Gear Fairings/Gear Doors to Next Level Structure	N/A			
LG12	Perform Landing Gear Operational Check (Normal, Emergency Systems)	N/A			
LG13	Add item: Fabricate Landing Gear Bracket and Fittings	N/A			
LG14	Add item: Assemble Landing Gear Bracket and Fittings	N/A			
LG15	Add item:				
LG16	Add item:				
Total # of Land Gear Tasks	<u>Landing Gear Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
5	<u>Landing Gear Total Points ►</u>	0.6	0	0	0

Landing Gear Comments:
 LG13 and LG14 added items were inadvertently omitted from checklist. Will be added to checklist upon revision

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Propulsion – 27 Listed Tasks				
P1	Fabricate Engine Mounts	0			
P2	Assemble Engine Mounts to Next Level Structure	0			
P3	Fabricate Engine Cooling System/Baffles	0			
P4	Assemble Engine Cooling System Baffles to Engine	0			
P5	Fabricate Engine Compartment Overheat/Fire Detection System	N/A			
P6	Assemble Engine Compartment Overheat/Fire Detection System to Engine Compartment	N/A			
P7	Fabricate Induction System	N/A			
P8	Assemble Induction System to Engine	N/A			
P9	Fabricate Exhaust System	0			
P10	Assemble Exhaust System to Engine	0			
P11	Fabricate Engine Control Installation Brackets	N/A			
P12	Assemble Engine Controls to Next Level Structure	N/A			
P13	Rig and Adjust Engine Controls	N/A			
P14	Fabricate Brackets and Fittings	N/A			
P15	Assemble Brackets and Fittings to Next Level Structure	N/A			
P16	Fabricate Cables, Wires and Lines	0			
P17	Assemble Cables, Wires and Lines to next Level Structure	0			
P18	Assemble Engine (Likely N/A)	N/A			
P19	Assemble Engine to Engine Mount	0			
P20	Fabricate Engine Propeller (Likely N/A)	N/A			
P21	Fabricate Propeller Spinner Components	N/A			
P22	Assemble Propeller to Engine	0			
P23	Rig and Track Propeller	N/A			
P24	Fabricate Engine Cowling	0			
P25	Assemble Engine Cowling to Airframe	0			
P26	Fabricate Engine Fuel System Components	N/A			
P27	Assemble Engine Fuel System Components to Next Level Structure	N/A			
P28	Add item: Fabricate Firewall	0.6			
P29	Add item: Assemble Firewall to Next Higher Structure	0			
P30	Add item:				
P31	Add item:				
Total # of Propulsion Tasks	Propulsion Subtotal	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
14	Propulsion Total Points ►	0.6	0	0	0

Propulation Comments:
P28 and P29 added items were inadvertently omitted from this checklist revision.

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #	Cockpit Interior – 11 Listed Tasks				
C1	Fabricate Instrument Panel	0.7			
C2	Fabricate Instrument Panel Bracket and Fittings	N/A			
C3	Assemble Instrument Panel with Fittings and Brackets	0			
C4	Assemble Avionics to Instrument Panel	N/A			
C5	Fabricate Seats	0.6			
C6	Fabricate Seat Brackets and Fittings	N/A			
C7	Assemble Seats to Cockpit	0			
C8	Fabricate Seat Belts Fittings and Shoulder Harness Fittings	0.8			
C9	Assemble Seat Belts and Shoulder Harness to Structure	0			
C10	Fabricate Electrical Wiring, Controls and Switches	0			
C11	Assemble Electrical Systems Controls and Switches to Next Level Structure	0			
C12	Add item: Fabricate Closeout Panels/Floor Panels	0.7			
C13	Add item: Assemble Closeout Panels/Floor Panels	0			
C14	Add item: Fabricate Rudder Pedals	0.6			
C15	Add item: Assemble Rudder Pedals to Next Higher Structure	0			
Total # of Cockpit Tasks	<u>Cockpit Interior Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
12	<u>Cockpit Interior Total Points ►</u>	3.4	0	0	0

Cockpit Comments:

Rudder Pedals include brake lines

C12, C13, C14 and C15 added items were inadvertently omitted from checklist. Will be added to checklist upon revision

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/	Commercial	Am-Builder	Am-Builder
		Component	Assistance	Assembly	Fabrication
Total # of Aircraft Tasks					
111					◀ <u>SUM #1</u>

▶ TOTAL TASKS AND LINE ITEMS



FABRICATION AND ASSEMBLY SUMMARY	A	B	C	D
	Mfr Kit/Part/Component	Commercial Assistance	Am Builder Assembly	Am Builder Fabrication
1. Total Points for Each Category. (Note 1)	29.1			
2. Total Points for Complete Aircraft Construction (SUM # 2 should equal SUM # 1 above). (Note 2)	(SUM #2) ▶ 109.0			
3. Percentage of Each Category as Part of Total Aircraft Construction. (Note 3)	26.70%			
4. Total Percentages for Complete Aircraft Construction (Add all percentages in row 3) Total should equal 100% (± .5%). (Note 4)				
Total Builder Points – Add points in row 1, column C and D only, together. (Note 5)				
Total Builder Percentage – Add percentages in row 3, columns C and D only, together. (Note 6)				