

Amateur-Built Fabrication and Assembly Checklist (2011) (Powered Parachute)

Name(s)
Address:
Aircraft Model:
Date:
Remarks:

NOTE: This checklist is only applicable to Powered Parachute aircraft. Evaluation of other types of aircraft (i.e., Fixed Wing, Weight Shift Control, 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).

INSTRUCTIONS FOR USING THE AMATEUR-BUILT AIRCRAFT FABRICATION AND ASSEMBLY CHECKLIST (2011):

A point (each task equals 1 point) can be divided over multiple categories (Manufacturer, Commercial Assistance, Amateur Builder Assembly and Amateur Builder Fabrication) into 1/10 fractions. A Manufacturer may be a kit manufacturer, a component manufacturer or a part(s) manufacturer. Commercial assistance (for hire or compensation) may include assistance provided by kit manufacturers, commercial assistance centers, individuals (e.g. A& P mechanics or avionics technicians).

For example, 0.5 (half point) can be assigned to the Manufacturer, 0.3 (3/10 - 3 tenths) as Commercial Assistance, 0.2 to the Amateur Builder as Fabrication, for a total of 1 point.

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/	Commercial	Am-Builder	Am-Builder
		Component	Assistance	Assembly	Fabrication
Task	Airframe/Enclosure – 17 Listed Tasks				
A1	Fabricate Airframe Structural Members				
A2	Fabricate Airframe Structural Brackets, Tabs and Fittings				
A3	Assemble Components from A1 and A2 to Form Basic Airframe Structure				
A4	Fabricate Enclosure Structural Components				
A5	Fabricate Enclosure Brackets, Tabs and Fittings				
A6	Assemble Components from A4 and A5 to Form Enclosure				
A7	Assemble Enclosure to Airframe				
A8	Fabricate Enclosure Covering or Skin				
A9	Assemble Covering or Skin to Enclosure				
A10	Fabricate Doors, Fairings and/or Wing Storage Envelope/Compartment				
A11	Assemble Doors, Fairings and/or Wing Storage Envelope/Compartment To Next Level Structure				
A12	Assemble Fuel System Components to Next Level Structure				
A13	Fabricate Windshield or Windscreen				
A14	Assemble Windshield or Windscreen to Enclosure				
A15	Fabricate Fuel Tank				
A16	Assemble Fuel Tank to Next Level Structure				
A17	Assemble External Lighting Components to Next Level Structure				

A18	Add Fab item:					
A19	Add Assy item:					
A20	Add Fab item:					
A21	Add Assy item:					
Total # of Airframe Tasks		<u>Airframe/Enclosure Subtotal</u>	Mfr Kit/Part/Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
0		<u>Airframe/Enclosure Total Points ▶</u>	0.0	0.0	0.0	0.0

Airframe/Enclosure Comments:

FABRICATION AND ASSEMBLY TASKS		A	B	C	D	
		Mfr Kit/Part/Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication	
Task	WING – 5 Listed Tasks					
W1	Fabricate Wing Canopy (Cut and Sew)					
W2	Fabricate Wing Canopy Support Lines Support Risers					
W3	Assemble Wing Support Lines to Wing Canopy and to Risers, and Attach Risers to Airframe					
W4	Fabricate Wing Steering Lines System					
W5	Assemble Wing Steering Lines to Canopy, and Steering Line System to Airframe Structure					
W6	Add Fab item:					
W7	Add Assy item:					
W8	Add Fab item:					
W9	Add Assy item:					
W10	Add Fab item:					
W11	Add Assy item:					
W12	Add Fab item:					
W13	Add Assy item:					
W14	Add Fab item:					
W15	Add Assy item:					
Total # of Wing Tasks		<u>Wing Subtotal</u>	Mfr Kit/Part/Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
0		<u>Wing Total Points ▶</u>	0	0	0	0

Wing Comments: Use Add item blocks to assign credit for wing deployment components and control system tasks for roadable power parachute vehicles.

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task	Landing Gear – 9 Listed Tasks				
LG1	Fabricate Landing Gear Brackets and Fittings				
LG2	Assemble Landing Gear Brackets and Fittings to Landing Gear System				
LG3	Fabricate Landing Gear "A" Frames/Struts				
LG4	Assemble Landing Gear "A" Frames/Struts				
LG5	Assemble Landing Gear System Steering Mechanisms to Next Level Structure				
LG6	Assemble Brake System (Including Cables and Wires) to Landing Gear and Airframe.				
LG7	Fabricate Wheel Fairings and/or Fenders				
LG8	Assemble Wheel Fairings and/or Fenders To Next Level Structure				
LG9	Assemble Wheels/Tires to Next Level Structure				
LG10	Add Fab item:				
LG11	Add Assy item:				
LG12	Add Fab item:				
LG13	Add Assy item:				
Total # of Land Gear Tasks	<u>Landing Gear Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
0	<u>Landing Gear Total Points ▶</u>	0	0	0	0

Landing Gear Comments:

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task Propulsion – 21 Listed Tasks					
P1	Fabricate Engine Mounts				
P2	Assemble Engine Mounts to Next Level Structure				
P3	Fabricate Engine Cooling System Baffles or Coolant Lines				
P4	Assemble Engine Cooling System Baffles or Coolant Lines to Next Level Components				
P5	Fabricate Induction System				
P6	Assemble Induction System to Engine				
P7	Fabricate Exhaust System				
P8	Assemble Exhaust System to Engine				
P9	Fabricate All Engine Compartment Brackets and Fittings				
P10	Assemble Engine Brackets and Fittings to Next Level Structure				
P11	Fabricate Engine Control Cables, Wires and Lines				
P12	Assemble Engine Control Cables, Wires and Lines to Next Level Structure				
P13	Fabricate Firewall				
P14	Assemble Firewall to Airframe				
P15	Assemble Engine (Likely N/A)				
P16	Assemble Engine to Engine Mount				
P17	Fabricate Propeller Spinner Components (Likely N/A)				
P18	Assemble Propeller and Spinner to Engine				
P19	Fabricate Engine Cowling				
P20	Assemble Engine Cowling to Airframe				
P21	Assemble Engine Fuel System Components to Next Level Structure				
P22	Add Fab item:				
P23	Add Assy item:				
P24	Add Fab item:				
P25	Add Assy item:				
Total # of Propulsion Tasks	<u>Propulsion Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
0	<u>Propulsion Total Points ▶</u>	0	0	0	0

Propulsion Comments:

FABRICATION AND ASSEMBLY TASKS		A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task	Cockpit/Flight Controls 11 Listed Tasks				
C1	Fabricate Instrument Panel, Sub Panels, Brackets and Fittings				
C2	Assemble Panels, Brackets and Fittings to Next Level Structure				
C3	Fabricate Electrical System Wiring, Controls and Switches				
C4	Assemble Electrical System Wiring, Controls and Switches to Next Level Structure				
C5	Fabricate Floor Panels				
C6	Assemble Floor Panels to Next Level Structure				
C7	Fabricate Seats and All Seat Brackets and Fittings				
C8	Assemble Seats, Brackets and Fittings to Next Level Structure				
C9	Fabricate All Seat Belts/Seat Harnesses				
C10	Assemble Seat Belts/Seat Harnesses to Next Level Structure				
C11	Assemble (Rig/Adjust) Flight Control Lines to Mechanical and/or Powered Control Devices and Trimmers				
C12	Add Fab item:				
C13	Add Assy item:				
C14	Add Fab item:				
C15	Add Assy item:				
Total # of_Cockpit Tasks	<u>Cockpit/Flight Controls Subtotal</u>	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
0	<u>Cockpit/Flight Controls Total Points ►</u>	0	0	0	0
Cockpit Comments:					

Total # of Aircraft Tasks	
0	◀ SUM #1

► 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 Number Of Aircraft Tasks	(Note 1)	(SUM #1) ►		0	
2. Total Points for Each Category.	(Note 2)	0.0	0.0	0.0	0.0
3. Total Points for Complete Aircraft Construction (SUM # 2 should equal SUM # 1 above).	(Note 3)	(SUM #2) ►		0.0	
4. Percentage of Each Category as Part of Total Aircraft Construction.	(Note 4)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5. Total Percentages for Complete Aircraft Construction (Add all percentages in row 4) Total should equal 100% (± . 5%). (Note 5)			#DIV/0!		
6. Total Builder Points – Add points in row 2, column C and D only, together.	(Note 6)			0.0	
7. Total Builder Percentage – Add percentages in row 4, columns C and D only, together.	(Note 7)			#DIV/0!	

NOTES: Instructions For Completing Fabrication and Assembly Checklist Summary

1. TOTAL NUMBER OF AIRCRAFT TASKS (Sum #1): To find the total points awarded for all tasks, add together the five individual "Total # of Tasks" blocks located at the bottom left of each aircraft tasks section.

2: TOTAL POINTS FOR EACH CATEGORY: [Columns A, B, C and D]. Each columns' total points are tallied by adding the sum of the points awarded in each respective column for each of the tasks in the section (Fuselage/Airframe, Wings, Empennage, Landing Gear, Propulsion, Main and Tail Rotor and Cockpit). Include points assigned to 'Additional Items' at the end of each section. Boxes with a N/A (not applicable) or an asterisk, have zero points.

3: TOTAL POINTS FOR COMPLETE AIRCRAFT CONSTRUCTION: (SUM#2) In row 3 of the Summary section, add together the numbers in each block in row 2, tallied from each of the four column category totals, (Columns A+B+C+D). Compare SUM #1 to SUM #2. SUM #1 should be equal to SUM #2, (Verify the two sums are equal within a deviation of ± 0.5). Total points will vary from aircraft to aircraft depending on number of add items and N/As (Not Applicable) applied. (e.g., 133 listed task points, plus 5 Add items, minus 22 N/As = 116 tasks).

4: PERCENTAGE OF EACH CATEGORY AS PART OF TOTAL AIRCRAFT CONSTRUCTION: To compute category percentages, divide the number in each individual block found on row 2 by Sum #2 on row 3. For example if the total points of Mfr Kit/Part/Component category (Column A) = 40 and Sum #2 = 120, then divide 40 by 120 to reach 33.3%. Do this for each individual block on row 4 for each column. Percentages may be rounded to the nearest tenth, (22.86% is rounded to 22.9%).

5: TOTAL PERCENTAGES FOR COMPLETE AIRCRAFT CONSTRUCTION: Add up the percentages of each of the four categories (Columns A+B+C+D) found on row 4. Total must be equal to 100% with a (\pm) deviation limited to $\frac{1}{2}$ % (0.5%). Example; a derived percentage between 99.5% and 100.5% is acceptable. If this computation falls outside the accepted deviation then an error has occurred in row 2, 3 or 4.

6: TOTAL BUILDER POINTS: Add together the two point tallies from row 2, Columns C and D blocks only. Total will vary from aircraft to aircraft depending on number of N/As applied.

7. TOTAL BUILDER PERCENTAGE: Add together the two percentage tallies from row 4 Columns C and D blocks only. Total must exceed 50% to be eligible for amateur built status and to meet major portion requirement under 14 CFR, Part 21.191(g) Operating amateur-built aircraft.

EXPLANATIONS AND EXAMPLES

► All Points are added at the end of the form in the Summary section under their respective categories. The point total is comprised of all the credits awarded for primary delineated tasks plus any credits given for 'Additional items.

► "Additional Items" may be assigned points the same as primary listed tasks if work or parts not reflected in the main entries need to be credited.

► The applicants completion of tasks can be documented in a number of ways and may include:

- (1) Builder's logs.
- (2) Photographs/video/DVD.
- (3) Drawings.
- (4) Engineering data when necessary.
- (5) Relevant documentation (e.g., plans) and references (e.g., handbooks) used.
- (6) Documentation concerning any commercial assistance used.
- (7) Documentation concerning any non-commercial assistance used.
- (8) Part inventories and histories.
- (9) Receipts, Catalogs.
- (10) Log book entries.

In addition to using this checklist, the builder should document the entire fabrication and assembly process. To issue an airworthiness certificate the FAA must make a major portion determination (the major portion of an aircraft was fabricated and assembled by an amateur builder (s)). Making this finding requires sufficient, credible and adequate documentation.