Amateur-Built Fabrication and Assembly Checklist (2011)
Fixed Wing

Name(s)	Van's Aircraft
Address:	14401 N.E. Keil Road, Aurora, OR 97002
Aircraft Model:	RV-14/14A
Date:	6/8/2016
Remarks:	Standard Build Kit

Builder's Manual, Section 4, Standard Parts Index
Revision Level: 8, Date 12/15/15

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).

Instructions For Using The Amateur-Built 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 Mfr Kit/Part/ Component	B Commercial Assistance	C Am-Builder Assembly	D Am-Builder Fabrication
Task #		**Fuselage – 22 Listed Tasks**				
F1	1	Fabricate Longitudinal Members	0.7			
F2		Fabricate Composite Cores or Shells, Skins	N/A			
F3	1	Fabricate Bulkheads or Cross members	0.6			
F4	1	Fabricate Flt Control Push Pull Tubes/Cables	0.3			
F5	1	Assemble Flt Control Push Pull Tubes/Cables	0			
F6	1	Assemble Fuselage Basic Structure	0			

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
F7	1	Fabricate Brackets and Fittings	0.8			
F8	1	Assemble Brackets and Fittings	0			
F9	1	Fabricate Cables, Wire, and Lines	0.2			
F10	1	Assemble Cables, Wire, and Lines	0			
F11	1	Fabricate Fuselage Fuel System Components	1			
F12	1	Assemble Fuselage Fuel System Components	0			
F13	1	Fabricate Fuselage Covering or Skin	0.7			
F14	1	Assemble Fuselage Covering or Skin	0			
F15		Fabricate Windshield	N/A			
F16		Assemble Windshield to Fuselage	N/A			
F17	1	Fabricate Windows	0.8			
F18	1	Assemble Windows to Fuselage	0			
F19	1	Fabricate Doors/Canopy	0.4			
F20	1	Assemble Doors/Canopy to Fuselage	0			
F21		Fabricate Mast and Strut Assembly	N/A			
F22		Assemble Mast and Strut Assembly	N/A			
F23	1	Add Fab item: Roll Over Structure	0.8			
F24	1	Add Assy item: Roll Over Structure	0			
F25	1	Add Fab item: Entry Step	0.9			
F26	1	Add Assy item: Entry Step	0			
Total # of Fuselage Tasks		**Fuselage Subtotal**	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
21		**Fuselage Total Points ►**	7.2	0.0	0.0	0.0

Fuselage Comments:

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #		Wings – 47 Listed Tasks				
W1	1	Fabricate Right Wing Spars	0.8			
W2	1	Fabricate Right Wing Ribs	0.7			
W3	1	Assemble Wing Spars and Ribs to Form Right Wing Primary Structure	0			
W4	1	Fabricate Left Wing Spars	0.8			
W5	1	Fabricate Left Wing Ribs	0.7			
W6	1	Assemble Wing Spars and Ribs to Form Left Wing Primary Structure	0			
W7		Fabricate Composite Cores	N/A			
W8		Assemble Composite Cores to Wing	N/A			
W9	1	Fabricate Wing Leading and Trailing Edges	0.8			
W10	1	Assemble Wing Leading & Trailing Edges to Wing	0			
W11		Fabricate Drag/Anti-drag Truss Members	N/A			
W12		Assemble Drag/Anti-drag Truss Members to Wing	N/A			
W13	1	Fabricate Wing Brackets and Fittings	0.8			
W14	1	Assemble Wing Brackets and Fittings to Wing	0			
W15	1	Fabricate Wing Tips	0.5			
W16	1	Assemble Wing Tips to Wings	0			
W17	1	Fabricate Special Tools or Fixtures	0			
W18	1	Fabricate Aileron Spars	0.8			
W19	1	Fabricate Aileron Ribs or Cores	0.7			
W20	1	Assemble Aileron Spars, Ribs and/or Cores to Form Aileron Primary Structure	0			
W21	1	Fabricate Aileron Brackets and Fittings	0.8			
W22	1	Assemble Aileron Brackets & Fittings to Aileron	0			
W23	1	Fabricate Aileron Covering or Skin (Includes Leading and Trailing Edges)	0.7			
W24	1	Assemble Aileron Covering or Skin to Aileron	0			
W25	1	Assemble Aileron to Wing	0			
W26	1	Fabricate Flap Spars	0.8			
W27	1	Fabricate Flap Ribs or Cores	0.8			
W28	1	Assemble Flap Spars, Ribs or Cores to Form Flap Primary Structure	0			
W29	1	Fabricate Flap Bracket and Fittings	0.8			
W30	1	Assemble Flap Brackets & Fittings to Flap	0			

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
W31	1	Fabricate Flap Covering or Skin (Includes Leading and Trailing Edges)	0.7			
W32	1	Assemble Flap Covering or Skin to flap	0			
W33	1	Assemble Flaps to Wing	0			
W34		Fabricate Wing External Lighting Components	N/A			
W35		Assemble Wing Ext Lighting Components to Wing	N/A			
W36	1	Assemble Basic Wing Structure	0			
W37	1	Fabricate Wing Fuel System components	0			
W38	1	Assemble Wing Fuel System Components to Wing	0			
W39	1	Fabricate Cables Wires and Lines	0.3			
W40	1	Assemble Cables Wires and Lines to Wing	0			
W41	1	Fabricate Wing Covering or Skin	0.7			
W42	1	Assemble Wing Covering or Skin to Wing	0			
W43		Fabricate Wing Struts/Wires	N/A			
W44		Assemble Wing Struts/Wires	N/A			
W45	1	Fabricate Fuel Tanks	0.2			
W46	1	Assemble Fuel Tanks to Wing	0			
W47	1	Assemble Wings to Next Higher Structure	0			
W48	1	Add Fab item: Stall Warning System	0.8			
W49	1	Add Assy item: Stall Warning System	0			
W50	1	Add Fab item: Wing to Fuselage Fairings	0.3			
W51	1	Add Assy item: Wing to Fuselage Fairings	0			
Total # of Wing Tasks		**Wings Subtotal**	4	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
43		**Wings Total Points ►**	13.5	0	0	0

Wing Comments:

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #		**Empennage – 42 Listed Tasks**				
E1	1	Fabricate Horizontal Stabilizer Spars	0.7			
E2	1	Fabricate Horizontal Stabilizer Ribs or Cores	0.7			
E3	1	Assemble Horizontal Stabilizer Ribs or Cores to Form Primary Horz-Stab Structure	0			
E4	1	Fabricate Horizontal Stabilizer Brackets & Fittings	0.9			
E5	1	Assemble Horizontal Stabilizer Brackets and Fittings to Stabilizer	0			
E6		Fabricate Horizontal Stabilizer Lead/Trailing Edges	N/A			
E7		Assemble Horizontal Stabilizer Lead/Trailing Edges to Stabilizer	N/A			
E8		Fabricate Horizontal Stabilizer Cables, Wires and Lines	N/A			
E9		Assemble Horizontal Stabilizer Cables, Wires and Lines to stabilizer	N/A			
E10	1	Fabricate Horizontal Stabilizer Empennage Covering or Skin	0.6			
E11	1	Assemble Horizontal Stabilizer Empennage Covering or Skin to Stabilizer	0			
E12	1	Assemble Horizontal Stabilizer Structure to Fuselage	0			
E13	1	Fabricate Elevator Spars	0.7			
E14	1	Fabricate Elevator Ribs Cores	0.7			
E15	1	Assemble Elevator Spars, Ribs or Cores to Form Primary Elevator Structure	0			
E16	1	Fabricate Elevator Brackets and Fittings	0.9			
E17	1	Assemble Elevator Brackets and fittings to Elevator	0			
E18	1	Fabricate Elevator Covering or Skins (Includes Leading and Trailing Edges)	0.4			
E19	1	Assemble Elevator Covering or Skins to Elevator	0			
E20	1	Fabricate Elevator trim Tab	0.3			
E21	1	Assemble Elevator Trim Tab to Elevator	0			
E22	1	Assemble Elevator to Horizontal Stabilizer	0			
E23	1	Fabricate Vertical Stabilizer Spars	0.7			
E24	1	Fabricate Vertical Stabilizer Ribs Cores	0.7			
E25	1	Assemble Spars, Ribs and/or Cores to Form Primary Vertical Stabilizer Structure	0			
E26	1	Fabricate Vertical Stabilizer Brackets and Fittings	0.9			
E27	1	Assemble Brackets and Fittings to Vertical Stabilizer	0			
E28		Fabricate Vertical Stabilizer Cables, Wires and Lines	N/A			
E29		Assemble Cables, Wires, Lines to Vertical Stabilizer	N/A			
E30	1	Fabricate Vertical Stabilizer Covering or Skin (Includes Leading and Trailing Edges)	0.6			

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
E31	1	Assemble Vertical Stabilizer Covering or Skin to Vertical Stabilizer	0			
E32	1	Assemble Vertical Stabilizer to Next Higher Structure	0			
E33	1	Fabricate Rudder Spar	0.7			
E34	1	Fabricate Rudder Ribs or Cores	0.6			
E35	1	Assemble Rudder Spars, Ribs and/or Cores to Form Primary	0			
E36	1	Fabricate Rudder Brackets and Fittings	0.9			
E37	1	Assemble Rudder Brackets and Fittings to Rudder	0			
E38	1	Fabricate Rudder Covering or Skin (Includes Leading and Trailing Edges)	0.6			
E39	1	Assemble Rudder Covering or Skin to Rudder	0			
E40	1	Fabricate Rudder Trim Tab	0			
E41	1	Assemble Rudder Trim Tab to Rudder	0			
E42	1	Assemble Rudder to Vertical Stabilizer	0			
E43	1	Add Fab item: Elevator Trim Wire Harness	0.5			
E44	1	Add Assy item: Elevator Trim Wire Harness	0			
E45		Add Fab item:				
E46		Add Assy item:				
Total # of Empennage Tasks		**Empennage Subtotal**	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
38		**Empennage Total Points ►**	12.1	0	0	0

Empennage Comments:.

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #		**Landing Gear – 14 Listed Tasks**				
LG1	1	Fabricate Landing Gear Struts or Major Components	0.8			
LG2	1	Assemble Landing Gear Struts or Major Components to Form Primary Landing Gear Structure	0			
LG3	1	Assemble Landing Gear System Components Next Level Structure	0			
LG4	1	Fabricate Brake System Components	1			
LG5	1	Assemble Brake System Components to Wheels/Gear	0			
LG6	1	Assemble Wheels and Tires to Landing Gear	0			
LG7	1	Fabricate Landing Gear Bracket and Fittings	0.7			
LG8	1	Assemble Landing Gear Bracket and Fittings to Landing Gear	0			
LG9		Fabricate Landing Gear Actuation System Components	N/A			
LG10		Assemble Landing Gear Actuation System Components to Next Higher Structure	N/A			
LG11	1	Fabricate Landing Gear System Cables, Wires and Lines	0			
LG12	1	Assemble Landing Gear Cables, Wires and Lines to Next Level Structure	0			
LG13	1	Fabricate Landing Gear Fairings/Gear Doors	0.5			
LG14	1	Assemble Landing Gear Fairings/Gear Doors to Next Level Structure	0			
LG15		Add Fab item:				
LG16		Add Assy item:				
Total # of Land Gear Tasks		**Landing Gear Subtotal**	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
12		**Landing Gear Total Points ►**	3	0	0	0

Landing Gear Comments: Both the tricycle and taildragger landing gear configuration was evaluated. The percentage of work required between the two configurations was negligible.

FABRICATION AND ASSEMBLY TASKS			A	B	C	D
			Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
Task #		**Propulsion – 26 Listed Tasks**				
P1	1	Fabricate Engine Mounts	0.9			
P2	1	Assemble Engine Mounts to Next Level Structure	0			
P3	1	Fabricate Engine Cooling System/Baffles	0.5			
P4	1	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	1	Fabricate Induction System	0.6			
P8	1	Assemble Induction System to Engine	0			
P9	1	Fabricate Exhaust System	1			
P10	1	Assemble Exhaust System to Engine	0			
P11	1	Fabricate Engine Control Installation Brackets	0.8			
P12	1	Assemble Engine Controls to Next Level Structure	0			
P13	1	Fabricate Brackets and Fittings	0.7			
P14	1	Assemble Brackets and Fittings to Next Level Structure	0			
P15	1	Fabricate Cables, Wires and Lines	0.9			
P16	1	Assemble Cables, Wires and Lines to next Level Structure	0			
P17		Assemble Engine (Likely N/A)	N/A			
P18	1	Assemble Engine to Engine Mount	0			
P19		Fabricate Engine Propeller (Likely N/A)	N/A			
P20	1	Fabricate Propeller Spinner Components	0.4			
P21	1	Assemble Propeller and Spinner to Engine	0			
P22	1	Fabricate Engine Cowling	0.4			
P23	1	Assemble Engine Cowling to Airframe	0			
P24	1	Assemble Engine Fuel System Components to Next Level Structure	0			
P25	1	Fabricate Firewall	0.8			
P26	1	Assemble Firewall To Next Level Structure	0			
P27		Add Fab item:				
P28		Add Assy item:				
P29		Add Fab item:				
P30		Add Assy item:				
Total # of Propulsion Tasks		**Propulsion Subtotal**	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
22		**Propulsion Total Points ►**	7	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 Interior – 23 Listed Tasks**				
C1	1	Fabricate Instrument Panel	0			
C2	1	Fabricate Instrument Sub Panels, Brackets and Fittings	0.7			
C3	1	Assemble Instrument Panel, Sub Panels and Brackets and Fittings to Next Higher Structure	0			
C4	1	Assemble Avionics to Instrument Panel	0			
C5	1	Fabricate Seats	0.7			
C6	1	Fabricate Seat Brackets and Fittings	0.8			
C7	1	Assemble Seats and Brackets and Fittings to Cockpit	0			
C8	1	Fabricate Seat Belts and Shoulder Harness Fittings and Brackets	0.9			
C9	1	Assemble Seat Belts and Shoulder Harness Fittings and Brackets to Structure	0			
C10	1	Fabricate Electrical Wiring, Controls and Switches	0.9			
C11	1	Assemble Electrical Systems Controls and Switches to Next Level Structure	0			
C12	1	Fabricate Control Yokes/Sticks	0.9			
C13	1	Assemble Control Yokes/Sticks to Flight Control System	0			
C14		Fabricate All Flight Control Push Pull Tubes and/or Cables	N/A			
C15		Assemble Flight Control Push Pull Tubes and/or Cables to Next Higher Structure	N/A			
C16	1	Fabricate Rudder Pedals	0.7			
C17	1	Assemble Rudder Pedals to Next Higher Structure	0			
C18		Fabricate Roll-Pitch and Yaw Trim Systems	N/A			
C19		Assemble Roll-Pitch and Yaw Trim Systems to Next Higher	N/A			
C20	1	Fabricate Flap/Spoiler Controls	1			
C21	1	Assemble Flap/Spoiler Controls to Next Higher Structure	0			
C22	1	Fabricate Closeout Panels/Floor Panels	0.8			
C23	1	Assemble Closeout Panels/Floor Panels	0			
C24	1	Add Fab item: Air Vents	0.9			
C25	1	Add Assy item: Air Vents	0			
Total # of Cockpit Tasks		**Cockpit Interior Subtotal**	Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
21		**Cockpit Interior Total Points ►**	8.3	0	0	0

Cockpit Comments:

Total # of Aircraft Tasks	
157	**◄ 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)**		**157**	
2. Total Points for Each Category. (Note 2)	**51.1**	**0.0**	**0.0**	**0.0**
3. Total Points for Complete Aircraft Construction (SUM # 2 should equal SUM # 1 above). (Note3)	**(SUM #2) ►**		**157.0**	
4. Percentage of Each Category as Part of Total Aircraft Construction. (Note 4)	**32.55%**	**0.00%**	**0.00%**	**0.00%**
5. Total Percentages for Complete Aircraft Construction (Add all percentages in row 4) Total should equal 100% (± . 5%). (Note 5)		**32.5%**		
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)			**0.00%**	

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 six 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, Wings, Empennage, Landing Gear, Propulsion 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 on row2, 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 (±) deviation limited to ½ % (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

► "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 assist
(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.