

Introduction

This is the table of contents for a backup copy of Bob Wilson's Dragonfly plans. They only authorize building of Bob's next Dragonfly. If you have any questions, please contact Viking Aircraft Company. The text comes from the errata sheets.

When printing to 11x17, use 55% shrinking to fit on a single page.

Chap 01 INTRODUCTION BUILDING

cover

A_01_material The 4 1/2 pound urethane quantity should be two sheets 3/4"x24"x96", not 1 1/2 sheets. The 8 pound urethane dimensions may be either 1"x24"x12" or 1"x16 1/2"x18" or equivalent. The lengths and dimensions of most of the metal materials are **not** critical, but must be of sufficient length or size to serve the intended purpose. All MS revets are "AD" type. The fuel drain is a CAV 110 or equivalent, not CAV10.

The proper main wheel assembly (Mark I) is an Azuza wheel and brake with ball bearings, not tapered roller bearings that utilizes a 5/8" diameterx.120" wall 4130 settel axle. Change throughout the plans to the proper 5/8" axle and 3/4"x.058" axle spacers.

A_02_material (added per errata) Elevator torque tube, 1" diamter, can be shorter than 103", to a standard length, is OK since several inches are eventually trimmed off of each end. Four MSP-45 pop-rivets are required, not two MSP-55.

B_photos

C_photos

01-01

01-02 The scale length should be 5 ft not 4 ft.

01-03

01-04

01-05

01-06

01-07

01-08

01-09

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01-18

01-19

01-20

01-21

Chap 02 FUSELAGE BULKHEADS, SIDES AND BOTTOM

All

02-01

02-02

02-03 Column 1, para 2, the templates will not produce the exact shape of the the cutout and should be used as a guide to the proper contour. Refer to the side view of the fuselage on page L1. If the cutout is left a little small, it may be enlarged the first time you fit the canard to the fuselage. If it is too large, it may be filled in with dry micro during the finishing stages when you make the final canard or wing fit up. The cut outs are not critical.

02-04

02-05 (Column 2, The text should read: "notice that these strips are glued to the bottom 1 1/4 inches inboard of the edge")

02-06

02-07

02-08 The glass-to-glass bonds along the top edge of the intercostal bulkhead and along the bottom edge of the canopy bulkhead were omitted. Also, add to the appropriate drawings.

Add 1/2" to the aft edge of the intercostal bulkhead drawing.

02-09 The outboard edge of the fuel tank access ports should be 5.6" from the edges of the tank, not the center of the port as shown. These glass-to-glass areas are 5" in diameter which allows a 4" hole to be cut later.

02-10

Chap 03 WING ASSEMBLY

03-01

03-02

03-03

03-04

03-05

03-06

03-07

03-08 Column 2, line 4: change "outboard" to "inboard." Glue all foam cores together using micro.

03-09

03-10

03-11 Column 2, be chareful when cutting the carbon fiber that you don't make each cut an inch too long. One inch added to each end will add up so you will be about 4 feet short of carbon by the time you get to the fin spar. If you run out, buy more carbon fiber by the foot.

03-12

03-13 Column 2, para. 2, Add: Shoulder Harness attach points - Cut 20, 4 inch by 4 inch plys of 10oz BI cloth. Fiber orientation is optional. Next cut four 1"x1"x14" 2024 T-3 or 6061 T-6 aluminum squares. Bond the aluminum squares to the underside of the wing with flox. All four aluminum squares should be 4 inches aft of the wing leading edge. Next glass over each aluminum square with 5 plys of 10oz BI cloth, lapping onto the lower wing skin. Use plenty of flox to eliminate air bubbles. After cure, drill and tap each aluminum square (1/4x28) to accept an AN-4 shoulder harness attach bolt.

Chap 04 THE CANARD

04-01

04-02

04-03

[04-04](#)
[04-05](#)
[04-06](#)

Chap 05 FUSELAGE ASSEMBLY

[All](#)

[05-01](#)
[05-02](#)

[05-03](#) Column 1, para. 3, add "Join the fuselage sides to the bottom using 4" wide 10oz fiberglass tapes. Use two plies forward of the wing drag bulkhead and one ply aft of the wing drag bulkhead. Do not apply a tape joint inside the fuel tank.

[05-04](#)

[05-05](#) Column 1, para 3, add: The sheet of foam used for the aft cover will be easier to bend into position if it is trimmed so it does not extend aft of the smallest former station by more than one inch. If you have trouble with the foam breaking, try warming it, hair dryer, or add several additional score marks using a saw. Some builders have attached the foam to the strings by "sewing" it in place using strong thread rather than gluing using Bondo. Glass over the threads and cut them off flush with the exterior of the foam to remove the part from the mold.

[05-06](#)

[05-07](#)

[05-08](#) Column 2, The lower forward angle of the fuselage console side should be changed to 87 degrees, not 93 degrees, and the the length of the upper edge should be 34.4", not 34.7".

[05-09](#)

[05-10](#)

[05-11](#)

[05-12](#)

[05-13](#)

[05-14](#)

[05-15](#)

[05-16](#)

[05-17](#) (disregard)

Chap 06 CONTROL SYSTEM

[06-01](#)

[06-02](#)

[06-03](#)

[06-04](#)

[06-05](#)

[06-06](#)

[06-07](#) Rudder horn: the pop rivets that lock the rudder to the lower hinge thimble and lock the rudder to the rudder horn are installed after finishing and painting.

[06-08](#)

[06-09](#)

[06-10](#) Rudder horn: the radii on the ends of the rudder horn should be 3/8" and not 11/32" and not 3/4" and 11/16" as shown on the drawing.

[06-11](#)

[06-12](#)

[06-13](#)

Chap 07 COCKPIT INTERIOR

[07-01](#)[07-02](#)[07-03](#)[07-04](#)[07-05](#)[07-06](#)

[07-07](#) Brake torque tube bearings: the aft edge of the BL-10.9 bearing should be 2 1/8", not 2 3/4".

[07-08](#)[07-09](#)[07-10](#)[07-11](#)[07-12](#)

[07-13](#) The tail wheel assembly requires a piece of steel tubing or bushing stock 3/8"x.058"x1.9" to serve as a bushing between the axle bolt and bearing if the bearing is 3/8" ID. Use a piece of 1/2"x.120" tubing if your bearing is 1/2" ID.

[07-14](#) Column 1, para 3: Braze an AN3-13A bolt into each end of the tail wheel push rod rather than using the fork-end and stud-end and rivets. Use an AN 665-21R clevis terminal and an AN 315-3 lock nut on both ends of the rod. The overall length of the rod assembly will vary slightly depending on the exact distance from the rudder horn to the tail wheel assembly.

[07-15](#)

Chap 08 LANDING GEAR

[08-01](#)[08-02](#)[08-03](#)[08-04](#)[08-05](#)[08-06](#)[08-07](#)

Chap 09 THE CANOPY

[09-01](#)[09-02](#)[09-03](#)[09-04](#)[09-05](#)[09-06](#)[09-07](#)[09-08](#)

Chap 10 COWLING

[10-01](#) Column 1, para 3, change "canopy" to "cowling."

[10-02](#)[10-03](#)

Chap 11 MISCELLANEOUS

[11-01](#)[11-02](#)[11-03](#)

Chap 12 INSTRUMENTS AND WIRING

[12-01](#)[12-02](#)

Chap 13 ENGINE INSTALLATION

[All](#)[13-01](#)[13-02](#)

[13-03](#) Add to the side view of the engine motor mount, the distance from the top of the upper legs at the firewall to waterline zero is 6.8". The distance from waterline zero to bottom of the lower legs at the firewall is 7.4". The photos show a slightly different mount design than the drawings.

[13-04](#)[13-05](#)[13-06](#)[13-07](#)[13-08](#)[13-09](#)

Chap 14 FINISHING

[14-01](#) Post cure: it is desirable to raise the temperature of the cured parts to a temperature higher than they will see in service before any substantial load is placed on them to eliminate high temperature creep. This is most important for the canard spar. The best method is to leave the parts out in the sun after they are covered with grey primer. An alternate method for weak sunlight is to put the canard and wing in the sun with the black spar caps exposed. The proper temperature is reached when you can not hold your hand on the surface for 10 seconds. Be sure the parts are well supported and not subject to any loads and do not overheat your parts.

[14-02](#)[14-03](#)[14-04](#)[14-05](#)

Chap 15 FIRST FLIGHT - Weight and Balance

[15-01](#)[15-02](#)[15-03](#)

[15-04](#)[15-05](#)

Charts 01

[1](#) Fuselage bulkhead, 10" before instruments and wing, BL82.

[2](#) Canard jig template.

[3](#)

[4](#)

[5](#) (L1 - fuselage layout)

Charts 02

[6](#)

[7](#)

[8](#)

[9](#)

[10](#)

[11](#) Mark II gear

[12](#)

Tri-gear

[1](#)

[2](#)

[3a](#)

[3b](#)

[4](#)

[5](#)

[6](#)

[7](#)

[8](#)

errata

[1](#) (added)

[2](#) Aft cockpit air vent exit: Cut an oval shaped hole in the bottom at station 150. Make air exit hole slant aft and make it about one square inch in cross sectional area. Glass inside with one ply of 6oz BI cloth.

(added)

[3](#)

[4](#)

[5](#)

[6](#)

[7](#)

[8](#)