

From: "Tandy Walker" <rdb435021@icloud.com>

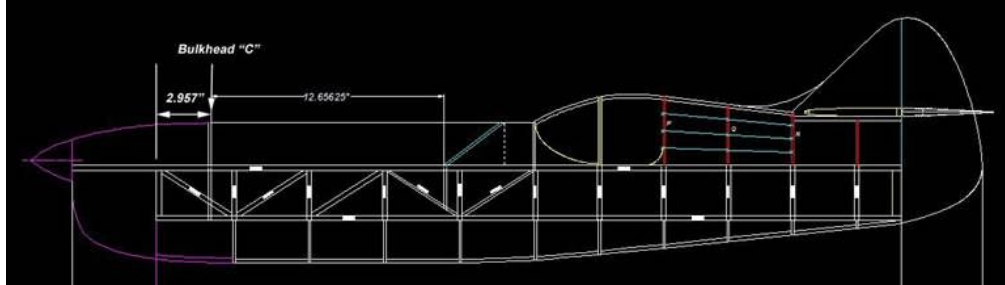
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Date: 3/2/2018 2:08:00 PM

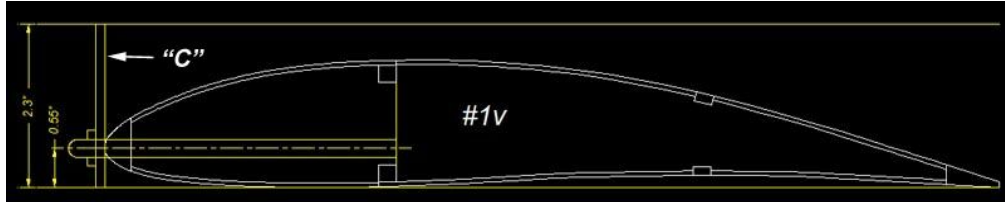
Subject: 77 Lancer 850 - Bulkhead C and Front Wing Attachment

Report No. 77  
*New Cyclone Lancer 850*  
 March 2, 2018

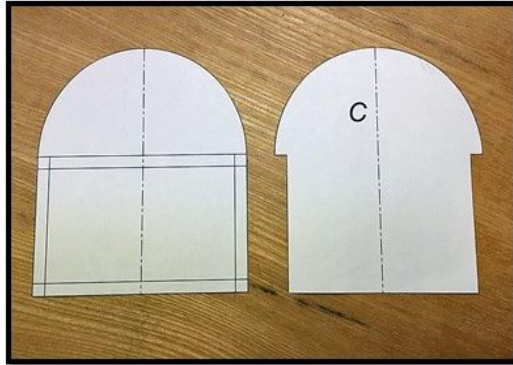
The rear face of the 1/8" plywood bulkhead "C" is located 2.957" aft of fuselage's front frame as shown on the profile drawing below.



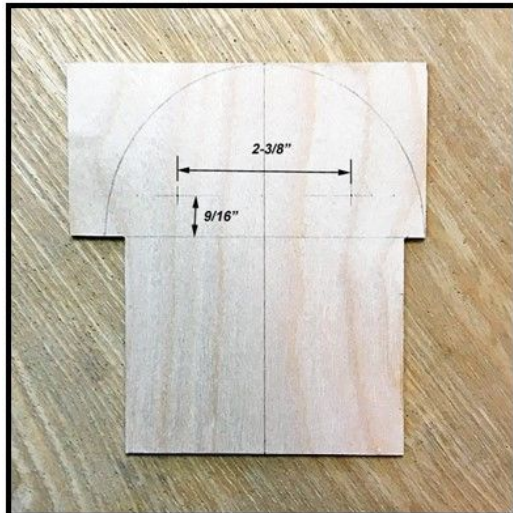
This bulkhead is in front of the wing and serves as the wing's front attachment to the fuselage. Two 1/4" wing dowels insert into holes in the C bulkhead as shown below.



These are the patterns cut from drawings of the C bulkhead that Alfredo generated in his ACAD program.



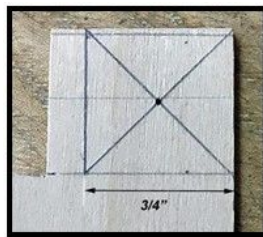
The C pattern was traced onto a piece of 1/8" five-ply birch plywood as shown below. The centers of the two 1/4" holes were located as shown after some very careful measuring.



The C bulkhead was cut out and the two 1/4" holes drilled as shown below.



Two 3/4" square hole doublers were cut out of 1/8" plywood as shown below.



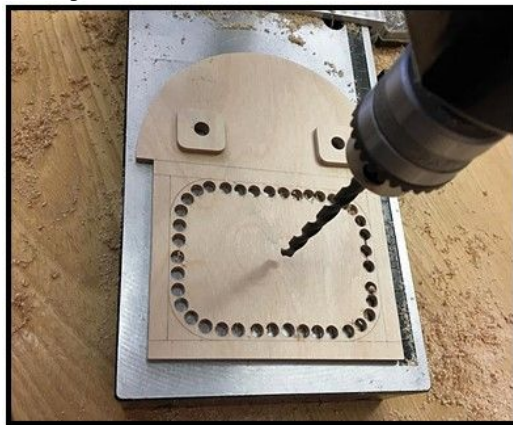
The fuselage was placed on the work table and the C bulkhead was positioned and clamped in place inside the fuselage frame. The wing was placed on the two top longerons and slid forward to insert the two wing dowels into the holes in the C bulkhead. Of course the holes were a slight mismatch with the dowels. A piece of 220 grit paper wrapped around a smaller dowel was used in an iterative process of sand and fit, sand and fit until the dowels freely slid into the holes. This resulted in the holes having some slight gaps around segments the 1/4" dowels. With the C bulkhead clamped in the fuselage and the wing dowels inserted as shown below, the close fitting 1/8" plywood hole doublers were slipped onto the dowels and glued to the front face of the C bulkhead using aliphatic glue. Now the wing dowels are held firmly in the hole doublers and the slight hole gaps in the C bulkhead are of no consequence.



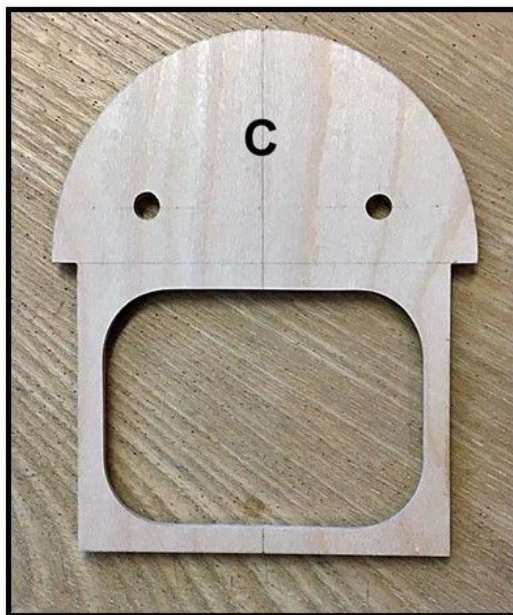
This is the front side of the C bulkhead with the hole doublers glued in place. However, a large part of the plywood in the lower area of the C bulkhead must be removed to allow access and equipment mounting.



A 1/4" perimeter margin was drawn around the lower part of the C bulkhead edges. An 11/16" radius corner ark were drawn in the corners using a 1-3/8" metal washer. Since I do not have any kind of a power saw, I have to resort to drilling a series closely spaced holes near the edges of the area to be removed as shown below.



After the webs are cut through and the center removed, a Dremel sanding drum was used to rough out the inside of the opening in the bottom of the C bulkhead. Final sanding of the opening was done with 220 grit paper wrapped around a large dowel as shown below.



This picture shows the large opening with the C bulkhead clamped in the fuselage, but not yet glued in place.....Tandy

