

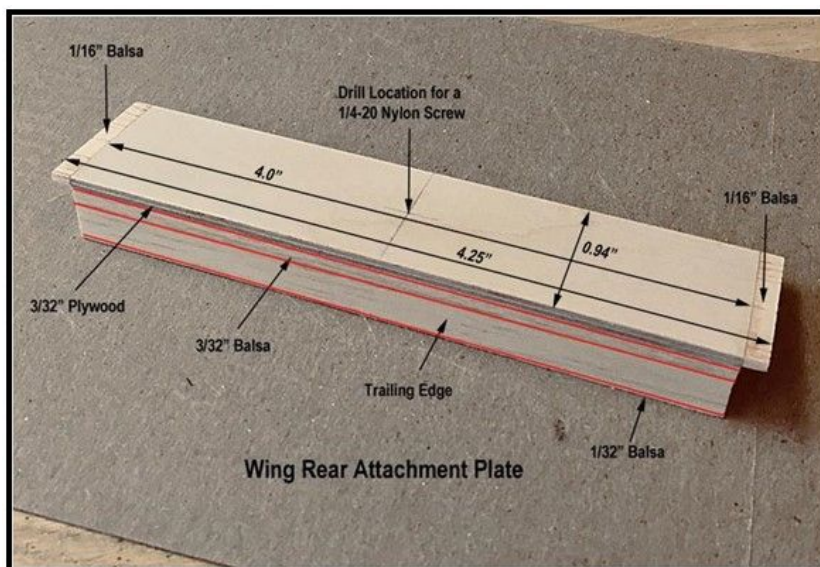
From: "Tandy Walker" <rdb435021@icloud.com>  
 To: "Tandy Walker" <rdb435021@icloud.com>  
 Date: 2/2/2018 2:59:44 PM  
 Subject: 51 Lancer 850 - Wing Rear Attachment

Report No. 51  
 New Cyclone Lancer 850  
 February 2, 2018

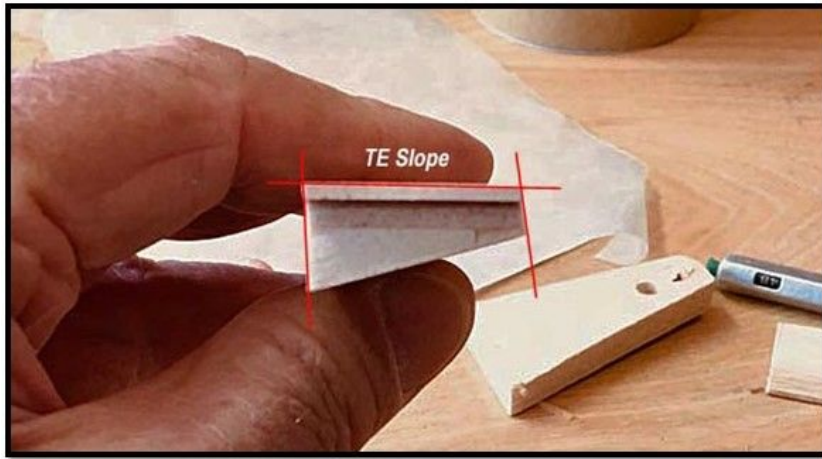
This report deals with the design and construction of the wing's rear attachment plate. The plate was made out of 3/32" plywood laminated with three separate pieces of hard balsa. The first lamination of 3/32" hard balsa was clamped and glued as shown below.



This picture shows the completed plate lamination. Pieces of 1/16" balsa were glued on each end of the plate as shown below.



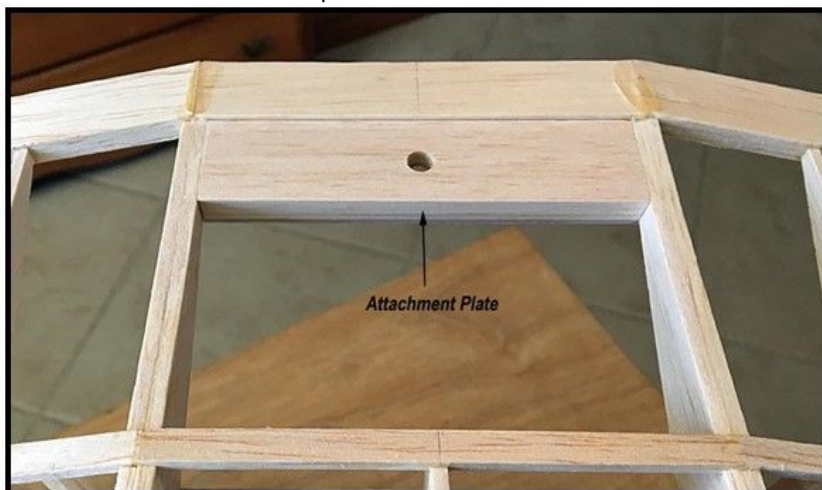
The rear edge of the attachment plate was sloped to fit the trailing edge as shown below.



A 1/4" hole was drilled in the attachment plate on the Micro Mark drill press as shown below. Notice that the plate was shimmed up level so that the axis of the hole is perpendicular to the top face of the rear attachment plate.



This shows a trial fit of the rear attachment plate in the center section from a bottom view of the wing.



This picture shows the rear attachment plate integrated into the wing structure from a top view of the center

section with the remaining segment of the rib #0 also glued in place. Notice the large 1/8" trailing edge gussets glued to the trailing edge on either side of the center section for additional support to the wing's attachment plate. Also a 1/4-20 nylon screw was inserted into plate's hole that will attach the rear portion of the wing to the fuselage structure.



In the picture below, the Lancer 850 wing structure is finally complete and ready for the leading edge and center section 1/16" balsa planking. The leading edge planking and vertical shear webs should be done first to complete the wing's D-Box. However since I am most concerned about how to accomplish this, I won't start until I have thought this out carefully.



The concerns that I posted in Report No. 37 is repeated below to refresh your memory:

*After planking the top and bottom of the right wing tip, I am concerned about how to accomplish the bonding of the top and bottom leading edge planking:*

- 1. Aliphatic glue applied on the top edge of the 12 ribs, down the length of the top of the main spar, and along the forward edge of the planking will in all probability start to dry out before I have time to get the top planking positioned in place and firmly pinned down. However, there is the possibility I could use medium CA applied from the underneath side of the top planking since the bottom planking will not be in place yet.*
- 2. Then there is the problem with the bottom planking. Medium CA will be difficult, if not impossible, to apply to the bottom planking since the top planking will limit access to the inside of the bottom planking. CA would have to be applied by reaching in between the two main spar and trying to drip it on the joints! :O(*

*I have been worrying about this dilemma since yesterday afternoon. What I really need is a glue that will not start to set up for about 10 to 15 minutes. A two-part 45 minute epoxy would work, but it is both heavy and messy to work with. Since I have not been able to resolve this issue in my mind, I sure would appreciate any input or recommendations any of you guys might have to address this problem.....Tandy*