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Subject: 27 Lancer 850 - Installation of Top Main Spar

### *New Cyclone Lancer 850*

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Today's task was to install the top main spar on the right wing panel. However since I have had a number of bad experiences, care must be taken that the bow in the top spar out the wing tip does not deform or bow up the flat bottom main spar. My preventative approach was to remove bottom portions of the top spar's hard balsa extension between rib's 11-12, 12-13, and 13-14 as shown below.



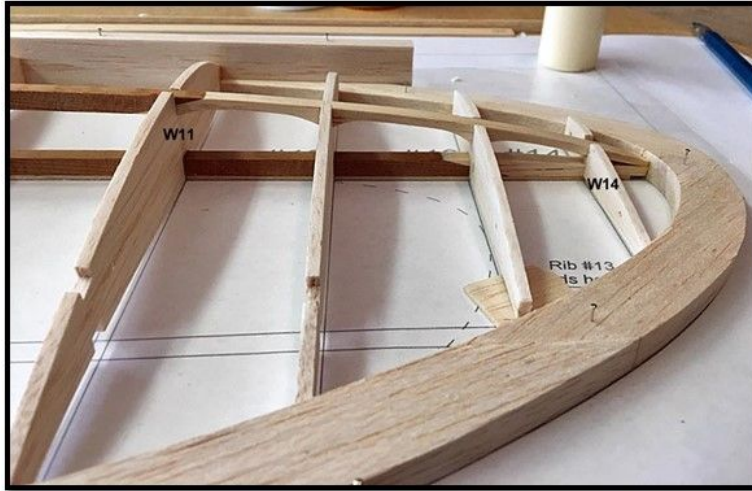
Initially the relieved balsa extension was glued to the inside of the wing tip and to rib's No. 13 and 14 with aliphatic glue and let dry as shown below.



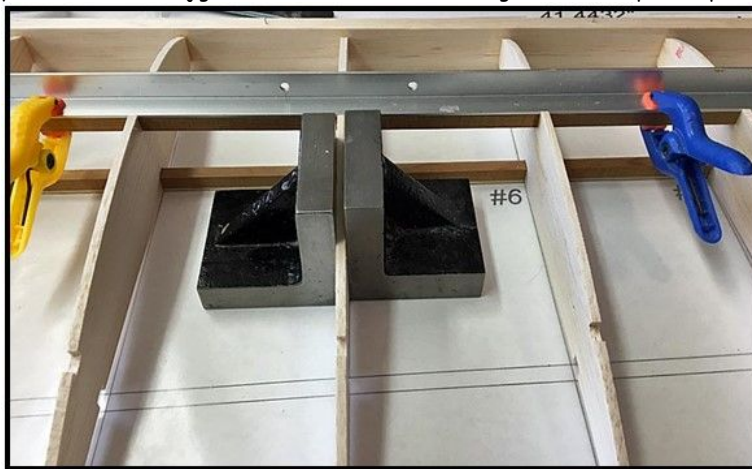
Once the balsa extension had dried, the top main spar was bent down and inserted into the rib notches with most of bending occurring in the balsa extension. A 1/2" aluminum angle was then clamped to the top spar to keep it straight while gluing the spar to the ribs as shown below.



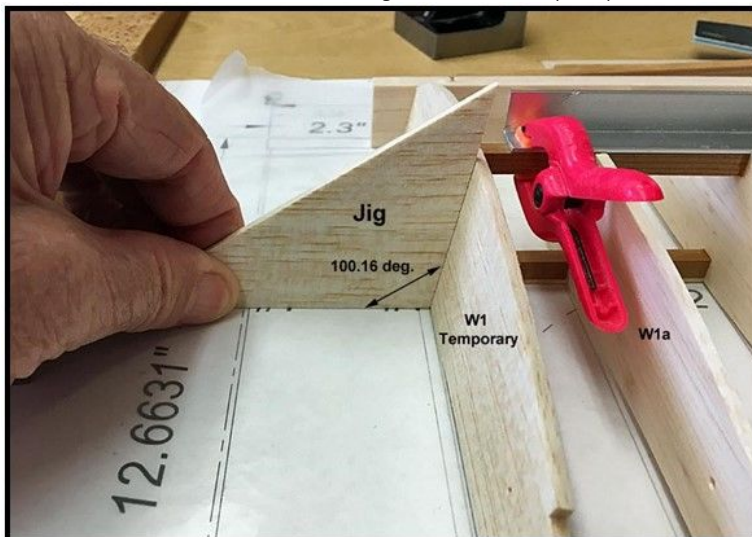
The top spar's balsa extension bent very smoothly as you can see below. However, the notch in rib W14 had to be deepened about 1/16". Also notice also that the spruce/balsa splice is supported by rib W11.



Two 2" steel block squares were used to jig each rib vertical before it was glued to the top main spar as shown below.



The 1/8" wooden jig was used to set the 100.16° inclination angle of the W1 Temporary rib as shown below.



This view from the wing tip shows the top main spar installed on the right wing panel.



This view from the wing root shows the top main spar installed on the right wing panel.....Tandy

