



## **Sonex Aircraft, LLC**

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### **B-MODEL CONVERSION PROCESS DESCRIPTION**

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Following is a general description of what is involved in the conversion of a Legacy Model Sonex/WaieX to a B-Model Sonex/WaieX. The majority of the forward fuselage is completely changed (a limited number of small machined angle parts are common between the Legacy and B-Models in the forward fuselage) and as such will be fully detailed in the conversion plans. The tail surfaces are unchanged and can be used as is for a B-Model. Much of the wing and tailcone are the same. We have referred to a “starting point” – the information below gives a more detailed description of how to get to that starting point, either by building up to (if early in your build) or removing parts (if more advanced in your build).

#### **Fuselage**

***For builders early in construction (have not completed Tailcone), SONEX:***

SNX- F27:

- -01L/R not re-used, all other parts common between legacy/B models

SNX- F26:

- New splice fittings,
- other parts common between legacy/B models

SNX- F25:

- Builder can assemble side panels, but should not attach SNX-F27-01R/L or splice plates/fittings (don't complete Details M or P)

SNX- F24:

- New cross tie box structure
- upper and lower cross tie channels common between legacy/B models

SNX- F23:

- All parts common between legacy/B models

SNX- F22:

- All parts common between legacy/B models

SNX- F21:

- Builder can assemble everything except first bulkhead (no detail E, no View J-J or View G-G)
- Pushrod supports should be in lowered seat position (centered).

SNX-F20

- New -01L/R, new -08
- -09R/L not needed
- all other parts common between legacy/B models

SNX-F19

- Builder can assemble all except first bulkhead
  - No Section H-H, no Detail N, Detail C
  - On assembly -01 Turtle Deck Installation:
    - Rivets for turtle deck/side skin joint are labelled as called out on F18. Builder may leave out all of these rivets until page F18 is completed with the conversion plans. If the builder wants to rivet this joint, they

may, but they should leave all rivets forward of the second bulkhead out for ease of install for conversion parts

- Do not proceed any further than F19

***For builders early in construction (have not completed Tailcone), WAIEX:***

WIX- F29:

- All parts common between legacy/B models

WIX- F28:

- -01L/R not re-used, all other parts common between legacy/B models

WIX- F27:

- New splice fittings, other parts common between legacy/B models

WIX-F26:

- Builder can assemble side panels, but should not attach SNXF27-01R/L or and splice plates/fittings (don't complete Details M or P)

WIX-F25:

- All parts common between legacy/B models

WIX-F24:

- New cross tie box structure
- upper and lower cross tie channels common between legacy/B models

WIX-F23:

- All parts common between legacy/B models

WIX-F22:

- All parts common between legacy/B models

WIX-F21:

- Builder can assemble everything except first bulkhead (no detail E, no View J-J or View G-G)
- Pushrod supports should be in lowered seat position (centered).

WIX-F20

- New -01L/R, new -08
- -09R/L not needed
- all other parts common between legacy/B models

WIX-F19

- Builder can assemble all except first bulkhead
  - No Section H-H, no Detail N, Detail C
  - On assembly -01 Turtle Deck Installation:
    - Rivets for turtle deck/side skin joint are labelled as called out on F18. Builder may leave out all of these rivets until page F18 is completed with the conversion plans. If the builder wants to rivet this joint, they may, but they should leave all rivets forward of the second bulkhead out for ease of install for conversion parts
- Do not proceed any further than F19

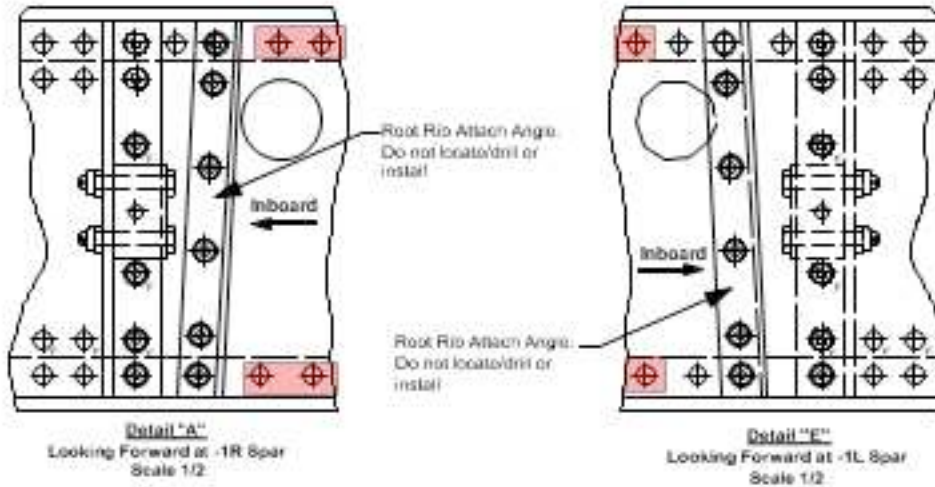
***For builders that have completed Tailcone, SONEX and WAIEX:***

- Remove all parts in the first bulkhead of the tailcone
  - F27-01R/L, F20-01R/L, F20-08, F20-09R/L are all discarded.
  - SNX-F24-05 is common between airplanes and will be reused for your B-Model.
- Remove splice plates/splice fittings. B-Model has all new splice plates.

## Wings

### **For builders early in construction (have not completed wing box), SONEX and WAIEX:**

- For the spars (page W08 for Sonex, W14 for Waix)
  - Do not complete details A, D, E
  - For details A and E, leave out or drill out solid rivets shown highlighted in red below



- Do not complete Root Rib Installation (W17-01L/R), including locating and drilling for root rib attach angles (attach angle install shown on SNX-W08 or WIX-W14)
- Do not skin the wing
- The remainder of the wing is identical for Legacy Models and B-Models

### **For builders that have completed wings, SONEX and WAIEX:**

- If wings are skinned:
  - Drill out, remove, and discard original SNX root doublers
  - Wing skin will need to be trimmed, which can be done with skins installed. Further detail on exactly how to cut this will be provided in the conversion plans. In rough terms, the leading edge is about 3" farther outboard in the B-Model, and the trailing edge of the main wing box is in the same spot. **DO NOT TRIM SKIN UNTIL YOU RECEIVE CONVERSION PLANS!**
- If Root Ribs are installed:
  - Un-bolt root rib angle fittings from the main and rear spars. New root rib angle fittings for the main spar are far enough from the old fittings that there is no interference. The same holes are used to attach the new rear spar root rib angle.
  - The solid rivets that are highlighted red above will need to be drilled out, and additional holes drilled for the new root rib angles. We recommend waiting to complete this until after you have the plans and have trimmed your wing skins if they are installed.
- The remainder of the wing is identical for Legacy Models and B-Models