



Aug/Sept-2017

# AUG/SEPT

Texas Flying Legends' P-47D-23RA  
by Chuck Cravens



AIRCORPS AVIATION



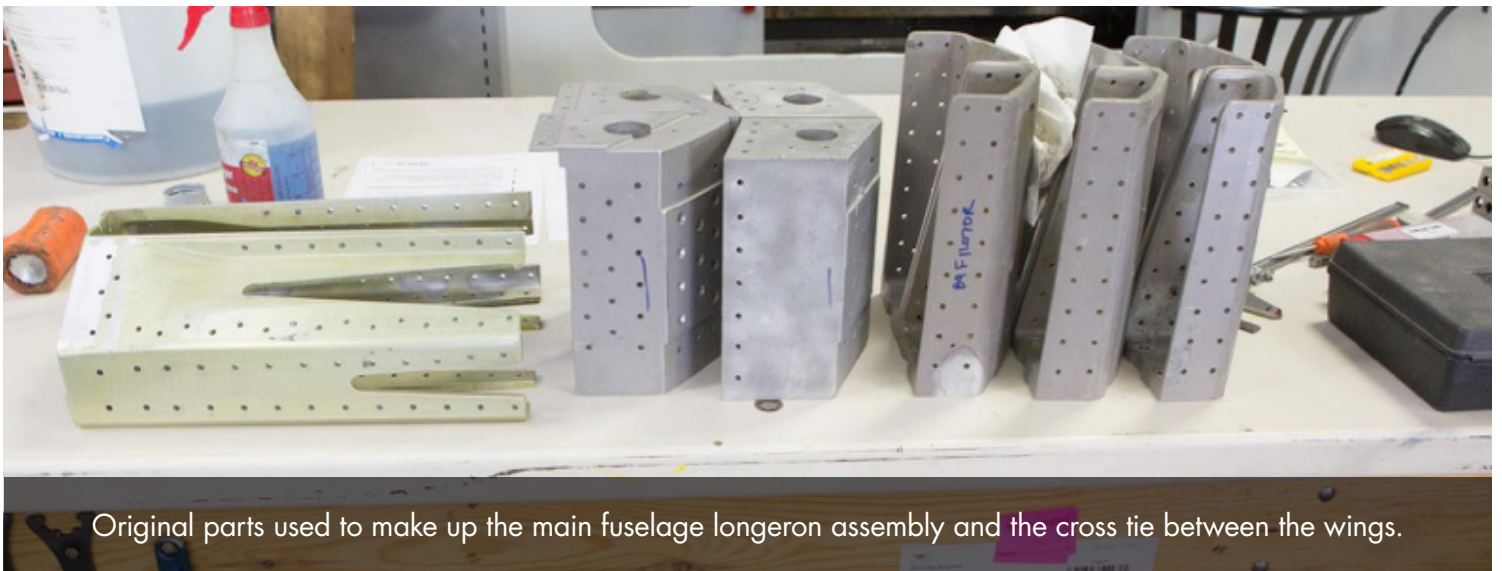
The P-47 fuselage fixture is a major project in itself!



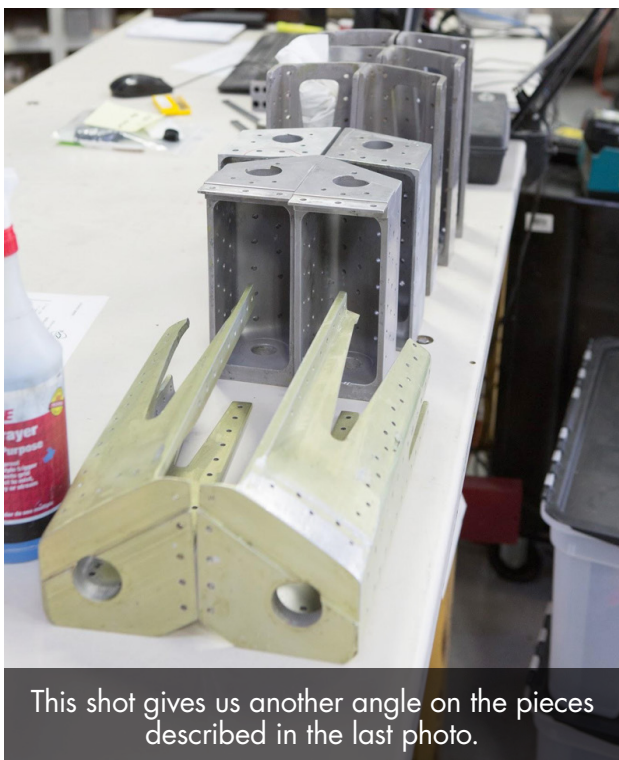
## Update

Parts fabrication and creation of a suitable dead-straight fuselage fixture are the current focal points this month as they have been for a while now. A P-47 has about three times as many parts as a Mustang!

## Fuselage Parts Fabrication



Original parts used to make up the main fuselage longeron assembly and the cross tie between the wings.

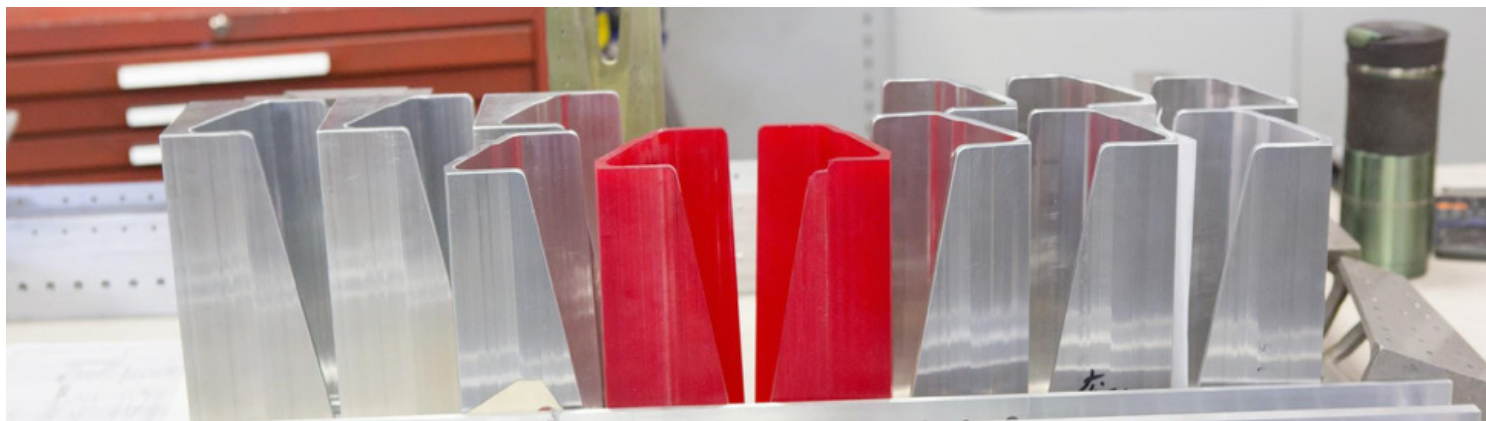


This shot gives us another angle on the pieces described in the last photo.

In the image above, to the left are the top forward longeron reinforcements which end up positioned where the longeron meets the firewall. The middle, shorter pieces, called the firewall extensions, attach to the forward side of the firewall. The firewall is between them and the longeron reinforcement forging. Finally, the parts on the right are all made from the same basic forging, but are 6 distinctly different parts that are used to reinforce and connect the longeron with the cross ties.



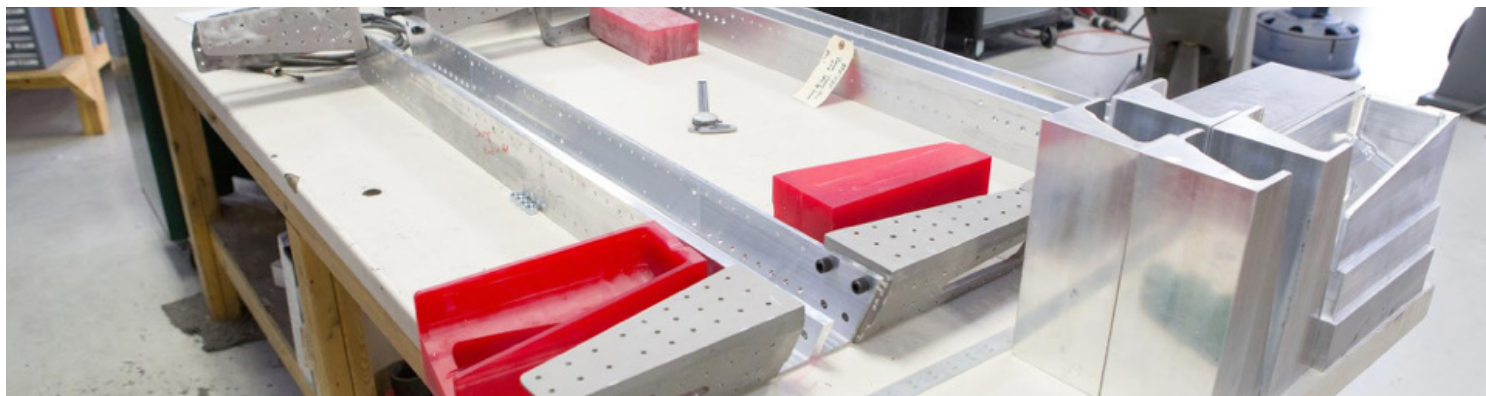
Here is a closer view of the original forward upper fuselage longeron reinforcements.



Very early stage in the fabrication, the REN plastic three dimensional model has been machined and the aluminum replacements for the original forgings have been fabricated.



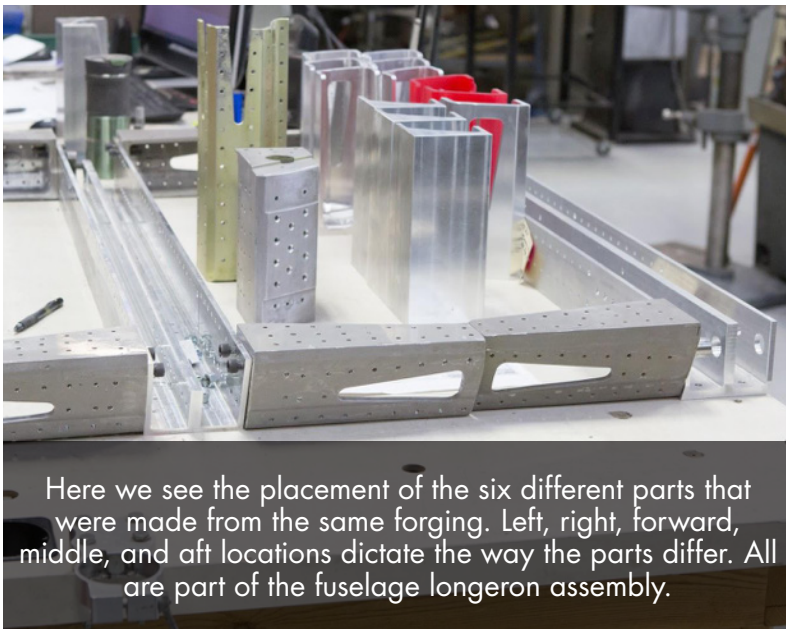
Here are new parts beside the originals in a slightly more advanced stage of fabrication.



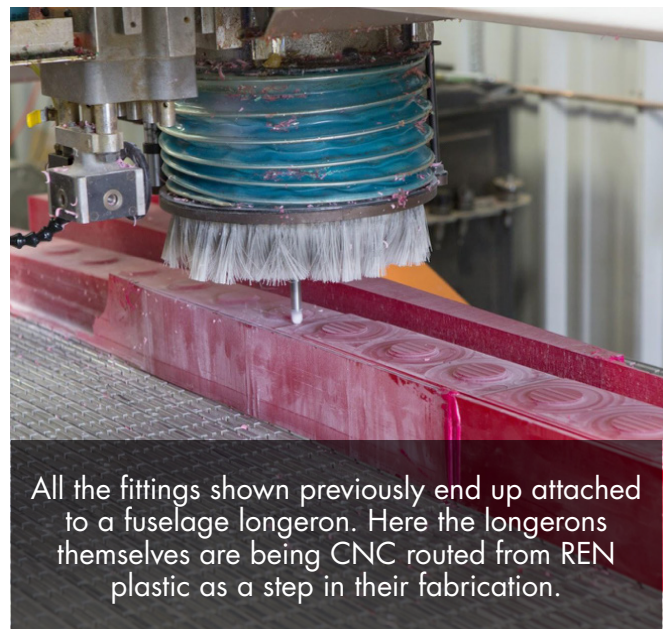
As the new parts are produced, the originals are used as patterns and they help to visualize the relationship between parts that must be accurately duplicated.



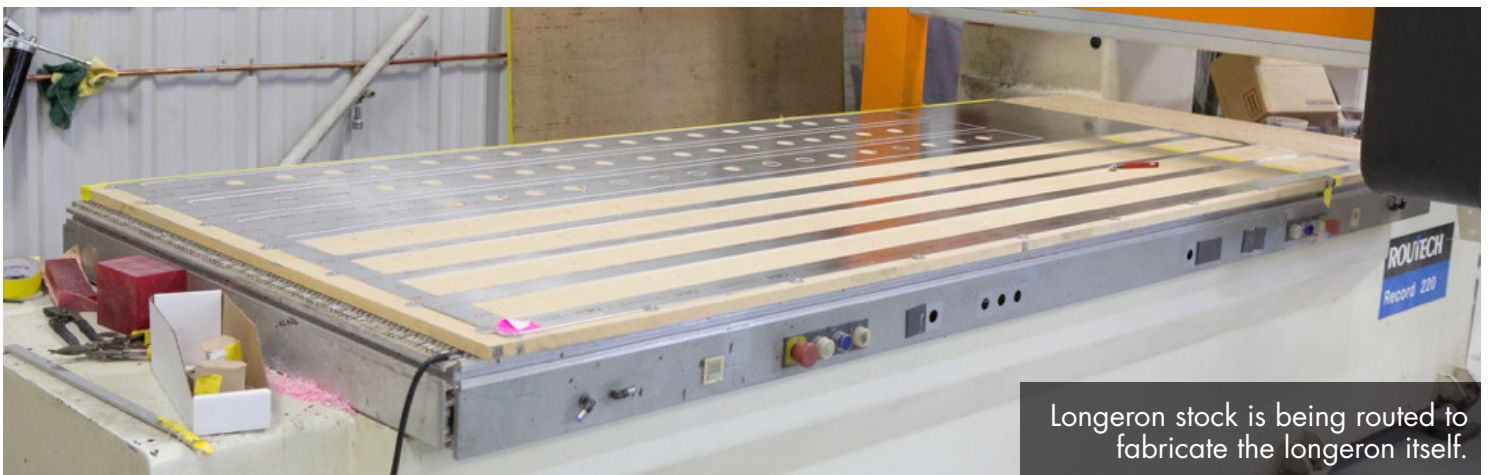
Another angle; this would be looking at the cross ties from the rear.



Here we see the placement of the six different parts that were made from the same forging. Left, right, forward, middle, and aft locations dictate the way the parts differ. All are part of the fuselage longeron assembly.



All the fittings shown previously end up attached to a fuselage longeron. Here the longerons themselves are being CNC routed from REN plastic as a step in their fabrication.



Longeron stock is being routed to fabricate the longeron itself.

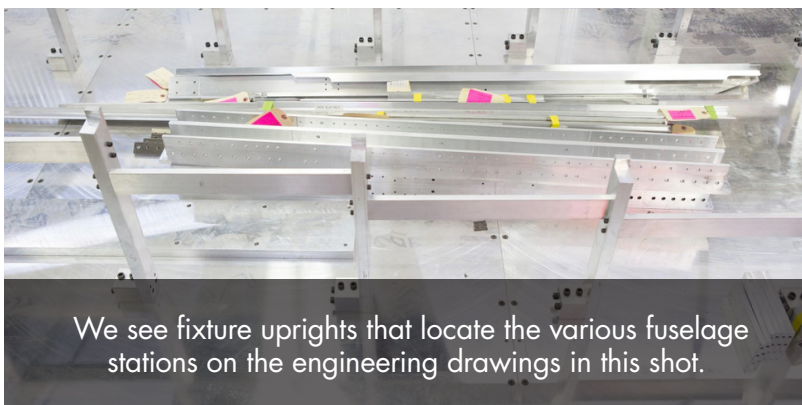
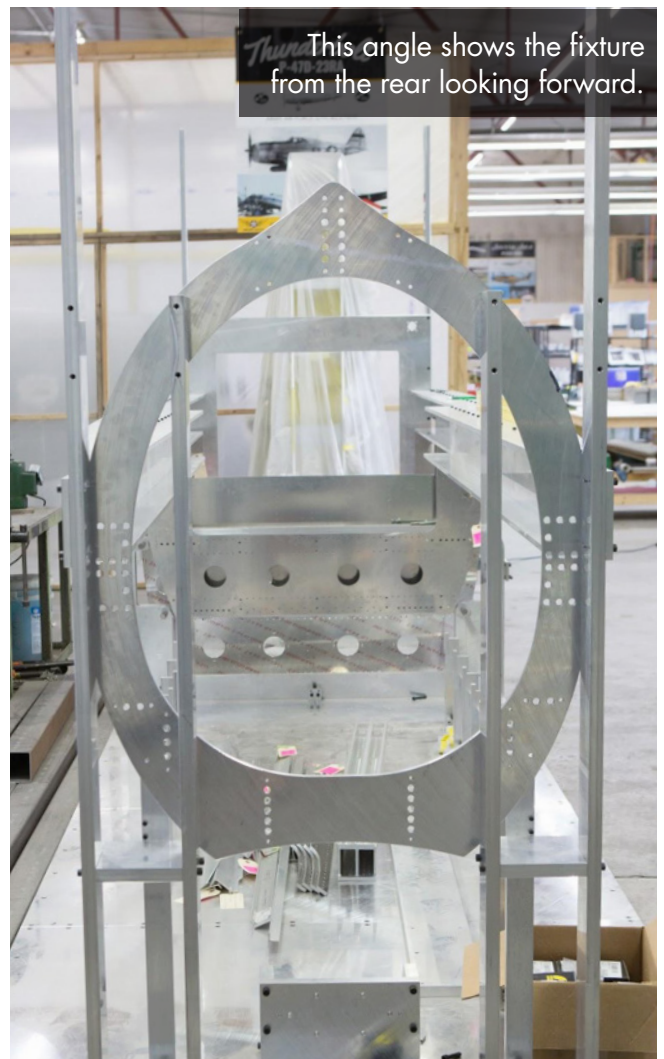
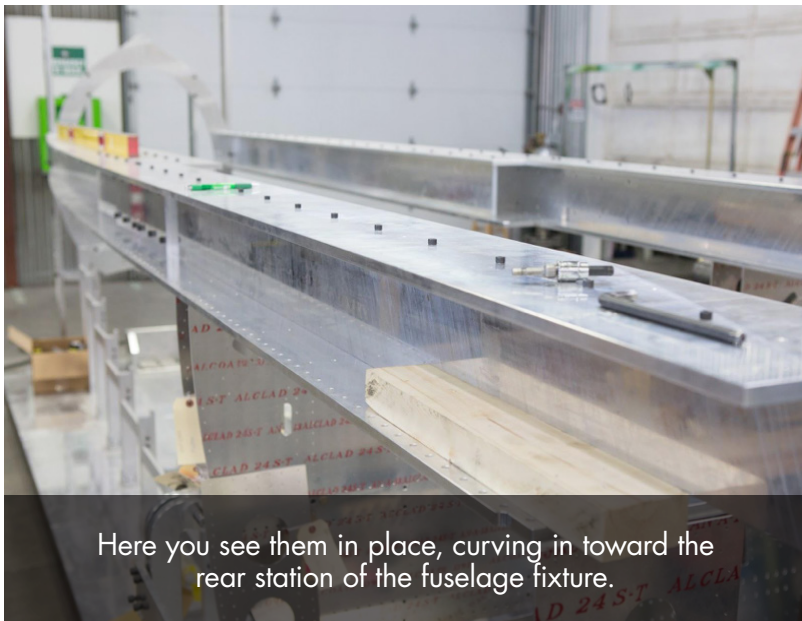
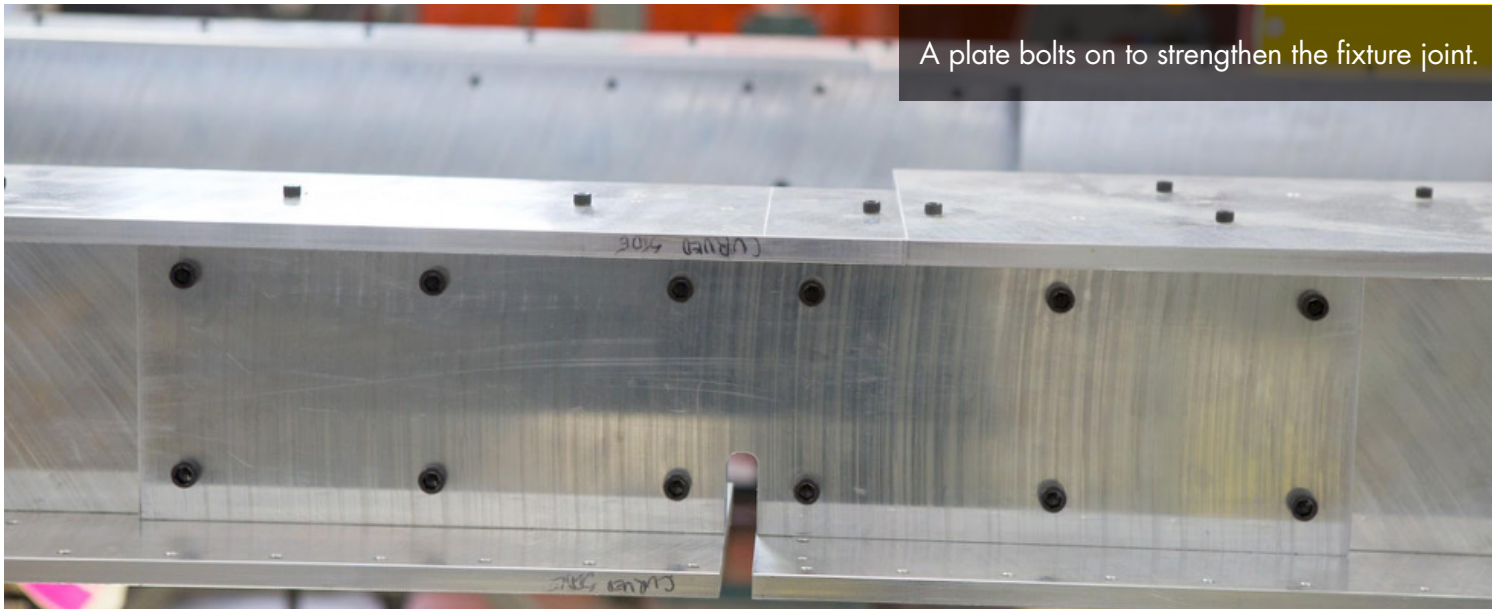


Some finished longeron parts await assembly.

## Fixture Creation

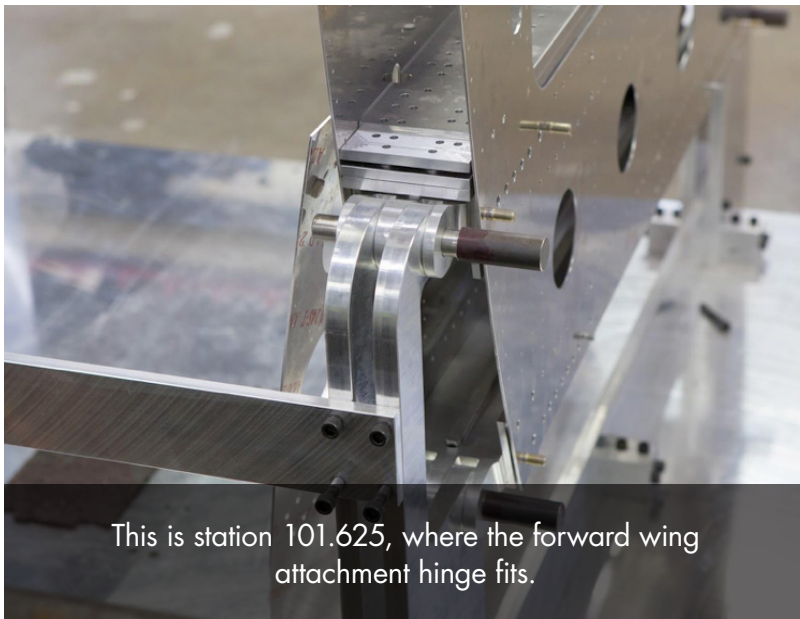


Assemblies that will be used to form the fuselage fixture sit on a workbench. These are positioned lengthwise at the parting line between the upper and lower fuselage and form the rear inward curve of the fuselage just ahead of the tail cone.

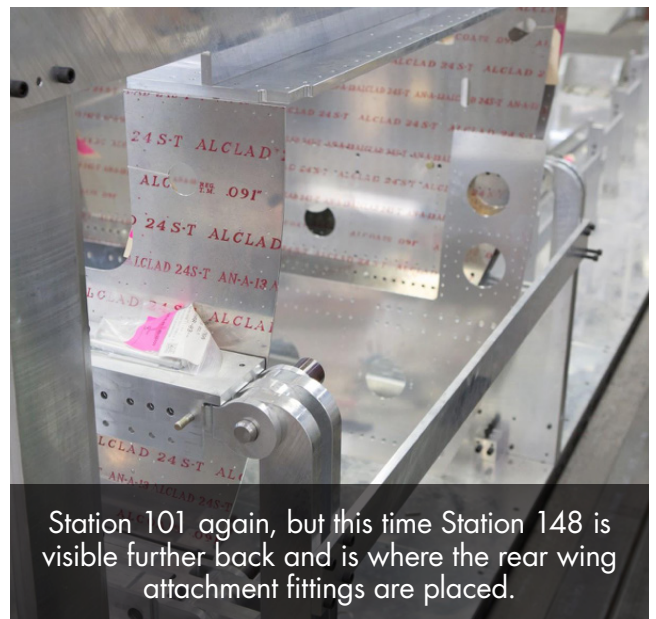




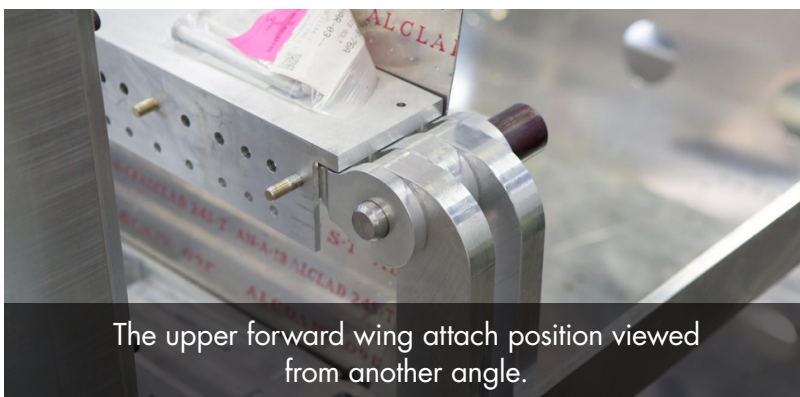
We have more of a side angle of the rear aspect of the fixture in this image.



This is station 101.625, where the forward wing attachment hinge fits.



Station 101 again, but this time Station 148 is visible further back and is where the rear wing attachment fittings are placed.



The upper forward wing attach position viewed from another angle.



The entire forward fuselage fixture is well illustrated in this shot.