



Oct/Nov 2017

OCT/NOV

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



AIRCORPS AVIATION



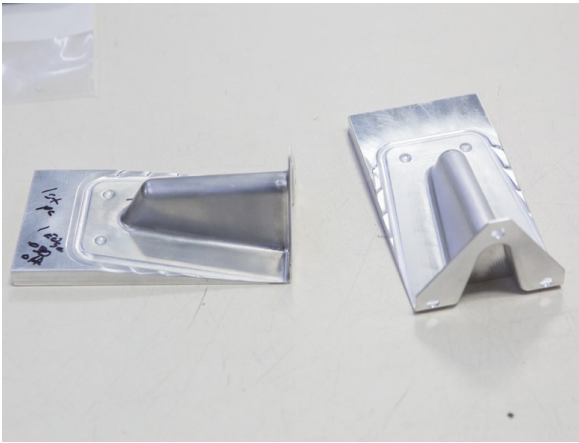
The first joined large assemblies on the bench.



Update

In October and November, for the first time we began some assembly of the major components of the airframe. Other work on the P-47 this month centered on parts fabrication, disassembling the veteran fuselage, beginning the new fuselage, and assembling the fixed tail surfaces.

Parts Fabrication



These two are fume seal pulley brackets, tail wheel uplock part number 89M42212. That means they cover the tail wheel uplock pulley bracket to seal off fumes from reaching the cockpit.

In a Thunderbolt, exhaust gas fumes in the ducts back to the turbo supercharger and fuel fumes in the high pressure induction duct running back to the engine can present a problem not common in other fighters. A great deal of engineering went into keeping those fumes where they belong and safely away from the pilot.



Here are a few parts that are ready. The packaged parts are cowl flap rod guides. Parts fabrication continues as assembly goes on.



Some control system related parts both new and patterns are visible on this shelf. A few of them are the aileron differential fork assembly, elevator rod assembly, and right elevator control lever assembly.



Steve and the CNC mill where many of the parts are fabricated.



Machined plastic forms for some of the fuselage components will be used as the aluminum is press formed over them to create the part.

The forms with the two visible part numbers are for a fume-proof baffle and a diaphragm in the fuselage. Both are part of the design that is intended to prevent fuel fumes from reaching the pilot.



Fuselage Disassembly

The fuselage was further disassembled in order to use the parts as patterns as we begin assembling the new fuselage in the fixture. Parts that appeared usable were inspected. With the fuselage in sections, various parts and assemblies can be accessed easily while apart or the sections can be set back together for a more overall look.



The fuselage frame sits on a rolling stand.



The upper forward section from the rear of the cockpit to the firewall is shown here.



Here is a closer shot of the upper forward fuselage at the firewall end.

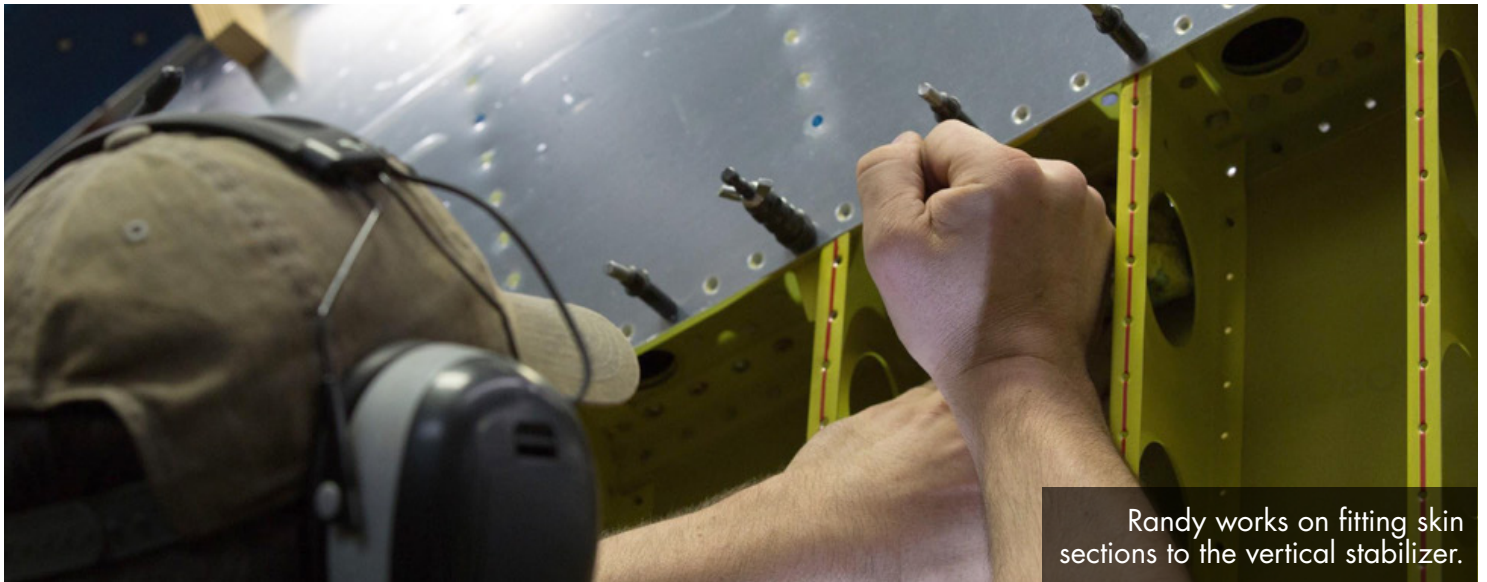


The war veteran fuselage serves as a reference beside the fuselage fixture.



Empennage

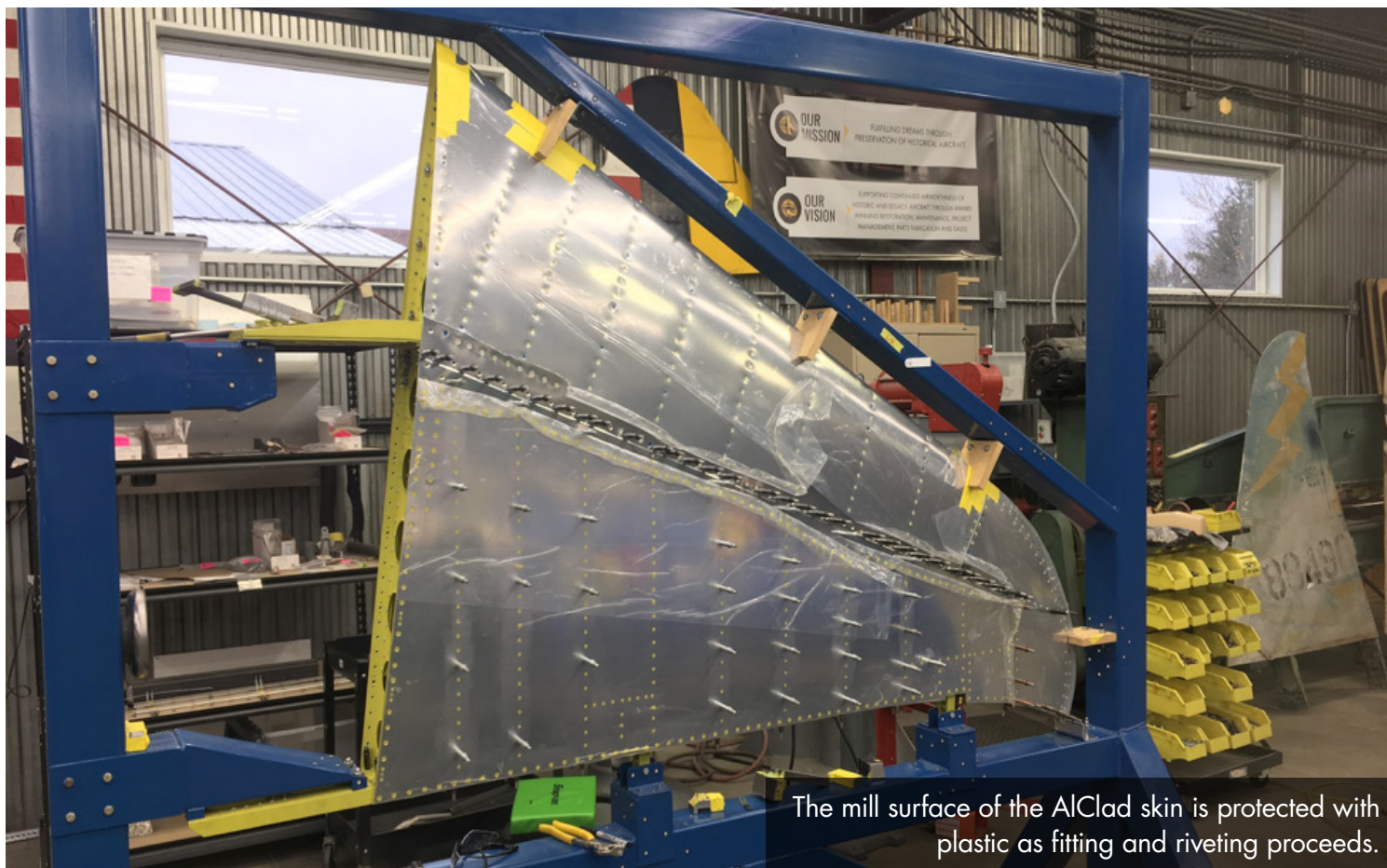
The vertical stabilizer skins were riveted on permanently this month. The horizontal skins have been permanently installed for a while now. Once both were skinned, they were assembled -the first large, identifiable Thunderbolt parts to be put together!



Randy works on fitting skin sections to the vertical stabilizer.



Much of the riveting on the leading edge skin has been completed here.



The mill surface of the AlClad skin is protected with plastic as fitting and riveting proceeds.



Hunter sets a rivet in the vertical stabilizer.

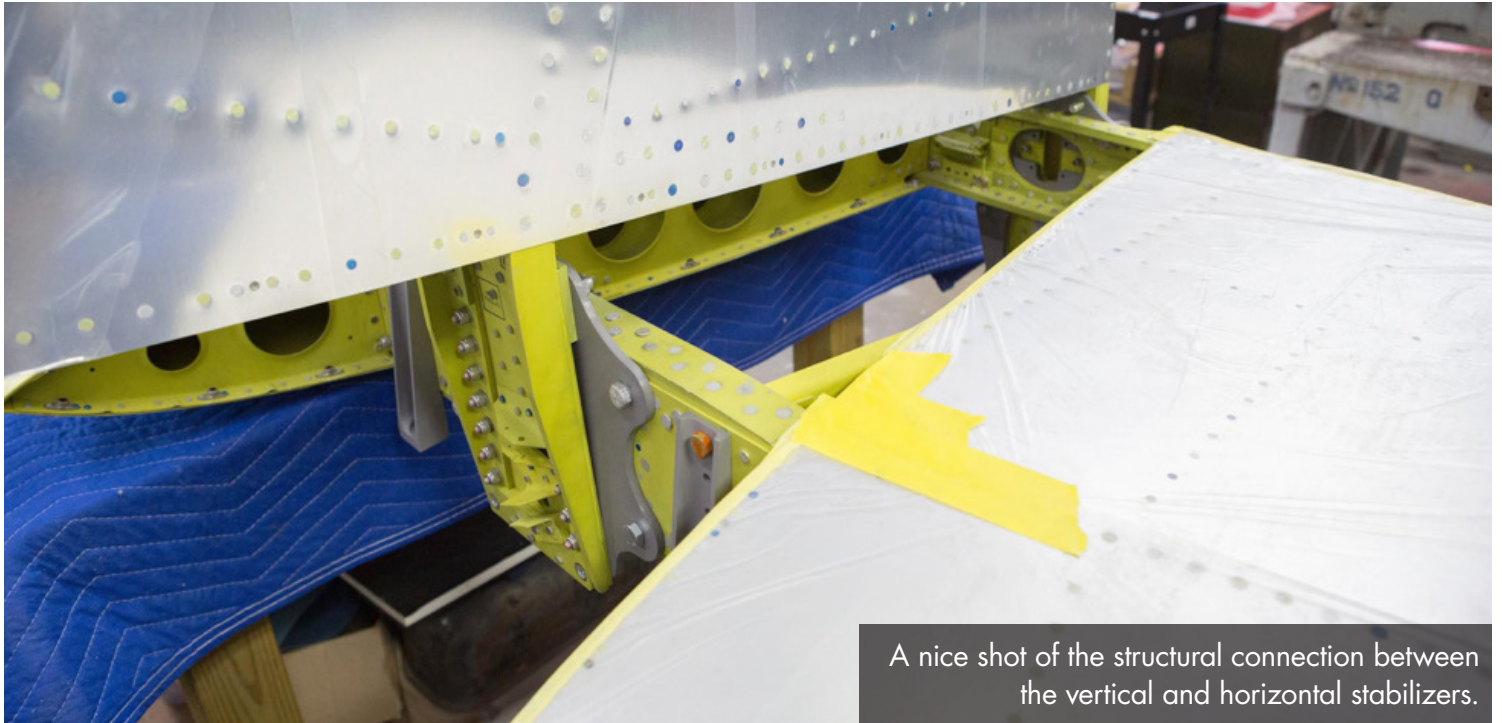


The wing fixtures have been brought onto the restoration floor..

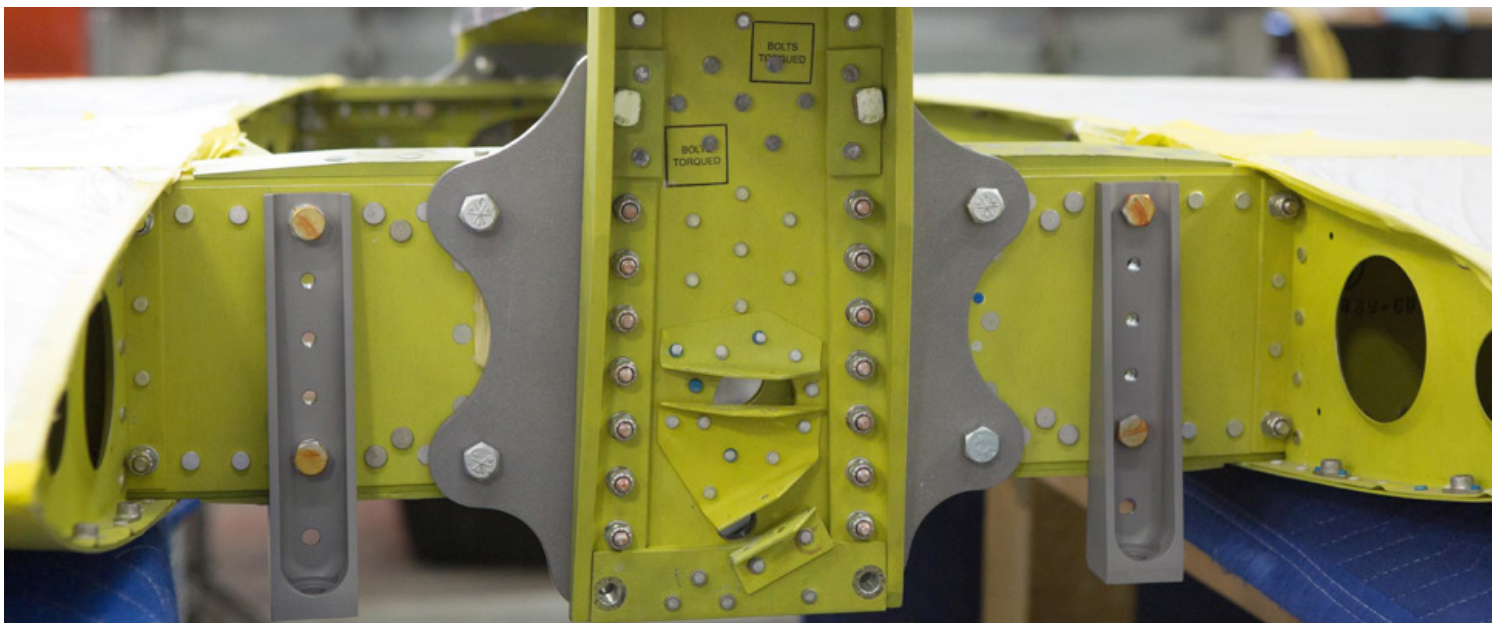


Assembled Horizontal and Vertical Stabilizers

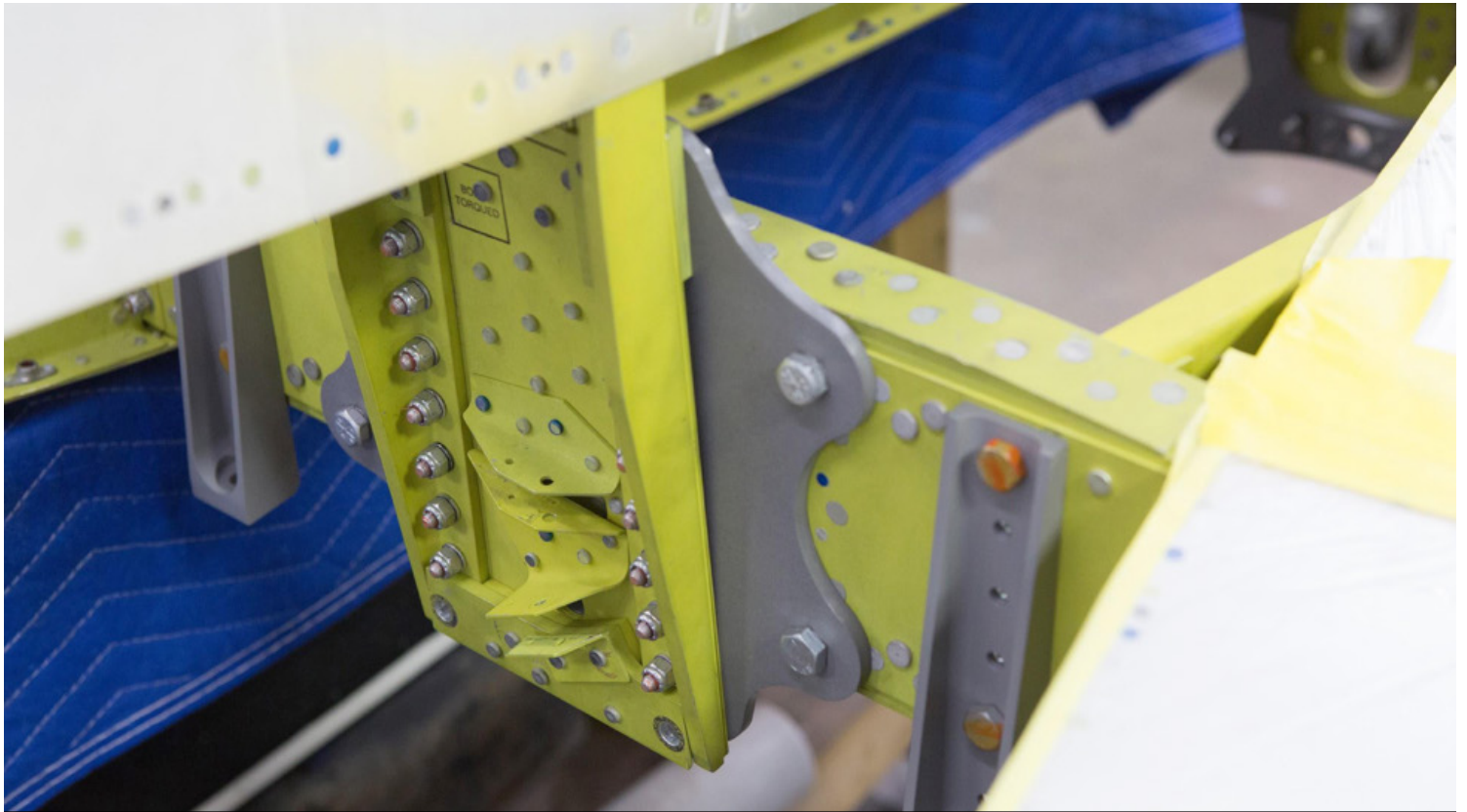
It is always great to see major, identifiable airplane components come together as a project progresses. This time we have the tail surfaces joined together.



A nice shot of the structural connection between the vertical and horizontal stabilizers.



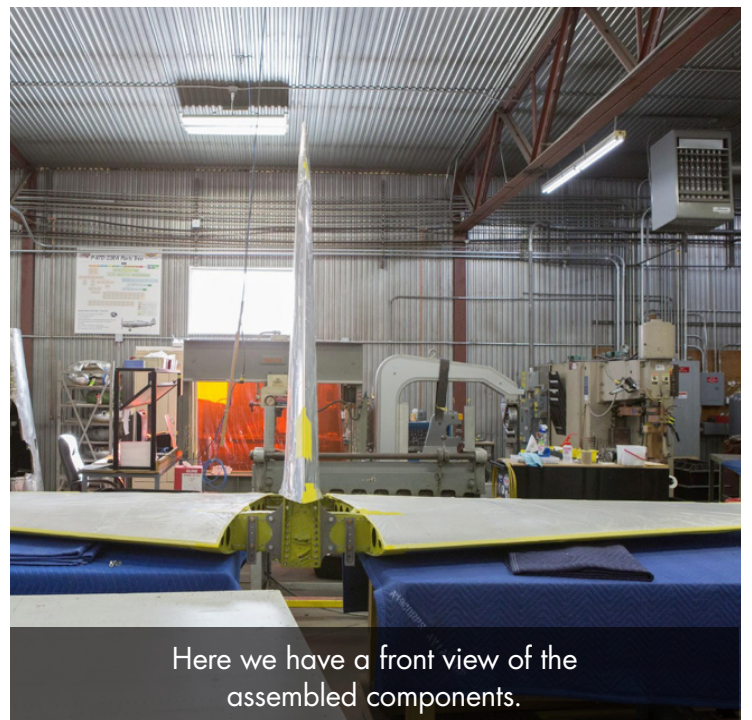
A closer image lets us see the bolts and rivets used to affix the spars together. The gray forgings that protrude beneath the stabilizer are the forward fittings that are used to attach the empennage to the fuselage.



The drilled brackets riveted to the spar will hold pulleys that are part of the trim tab control cable system. The majority of the horizontal spar is one of the original usable parts from 42-27609.



The horizontal and vertical stabilizers assembled on the bench



Here we have a front view of the assembled components.