



March/April-2018

MAR/APRIL

Texas Flying Legends' P-47 Update
by Chuck Cravens



AIRCORPS AVIATION

Escort Carrier USS Prince William

P-47 Thunderbolt ready to be
unloaded in Townsville 7-8 May 1944

Breakwater

USS Prince William



The USS Prince William moored at Platypus Channel Eastern breakwater pier, Townsville, Australia.
Photo courtesy of Peter Dunn, Australia @ War" www.ozatwar.com"



This photo shows the carrier USS Prince William on the very day 42-27609 arrived at Townsville. It is exciting to have an image that relates to the Texas Flying Legends Museum's restoration project so specifically. Our Thunderbolt was on that deck somewhere when the photo was taken! The P-47 pictured could even be our project covered in cosmoline, but without a clear view of the tail number it is impossible to know.

Aircraft Erection

Name of ship unknown



NARA Photo via Ray Holyoak

P-38G Lightning minus wings and propellers towed down Boundary Rd past National Hotel, then across Sandy Crossing to the TAD on 8 Jan 1943. P-38G #43-2196 of 9FS, 49FG crashed on engine failure after takeoff in New Guinea on 10 Oct 1943

Peter Dunn

"Australia @ War" www.ozatwar.com

Here is an example of how planes were towed through Townsville from the harbor to the Air Erection Depot. Photo courtesy of Peter Dunn, Australia @ War "www.ozatwar.com"

As the caption notes, Peter Dunn, of Brisbane, Australia provided these photos. He described how the incoming fighters were transported to the Air Erection Depot for the task of making them airworthy and ready for combat in his e-book, Townsville Air Depot.



The "Aircraft that could be towed by Jeeps from the Townsville Harbour to the Aircraft Erection Depot were towed along Boundary Road, past the National Hotel and then across the Causeway.

Typically when partially assembled aircraft arrived at the Aircraft Erection Depot, engines were cleaned of cosmoline, a brown coloured wax-like rust inhibitor, wings and propellers were attached where needed, guns and radios were installed, landing gear and engines were checked and the aircraft was fuelled and test flown. The aircraft were then lined up and eventually assigned to an operational squadron.

The Aircraft Erection Depot, which was built as Project 1, was later absorbed into Depot No. 2 when it became operational. Construction of Depot No. 2 started in October 1942.¹

1. Peter Dunn, *Townsville Air Depot*

First edition. June 10, 2017.

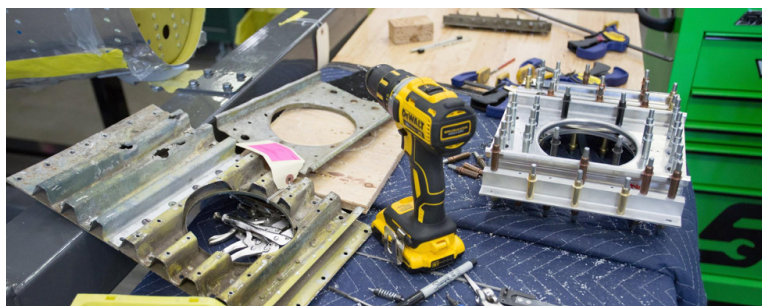
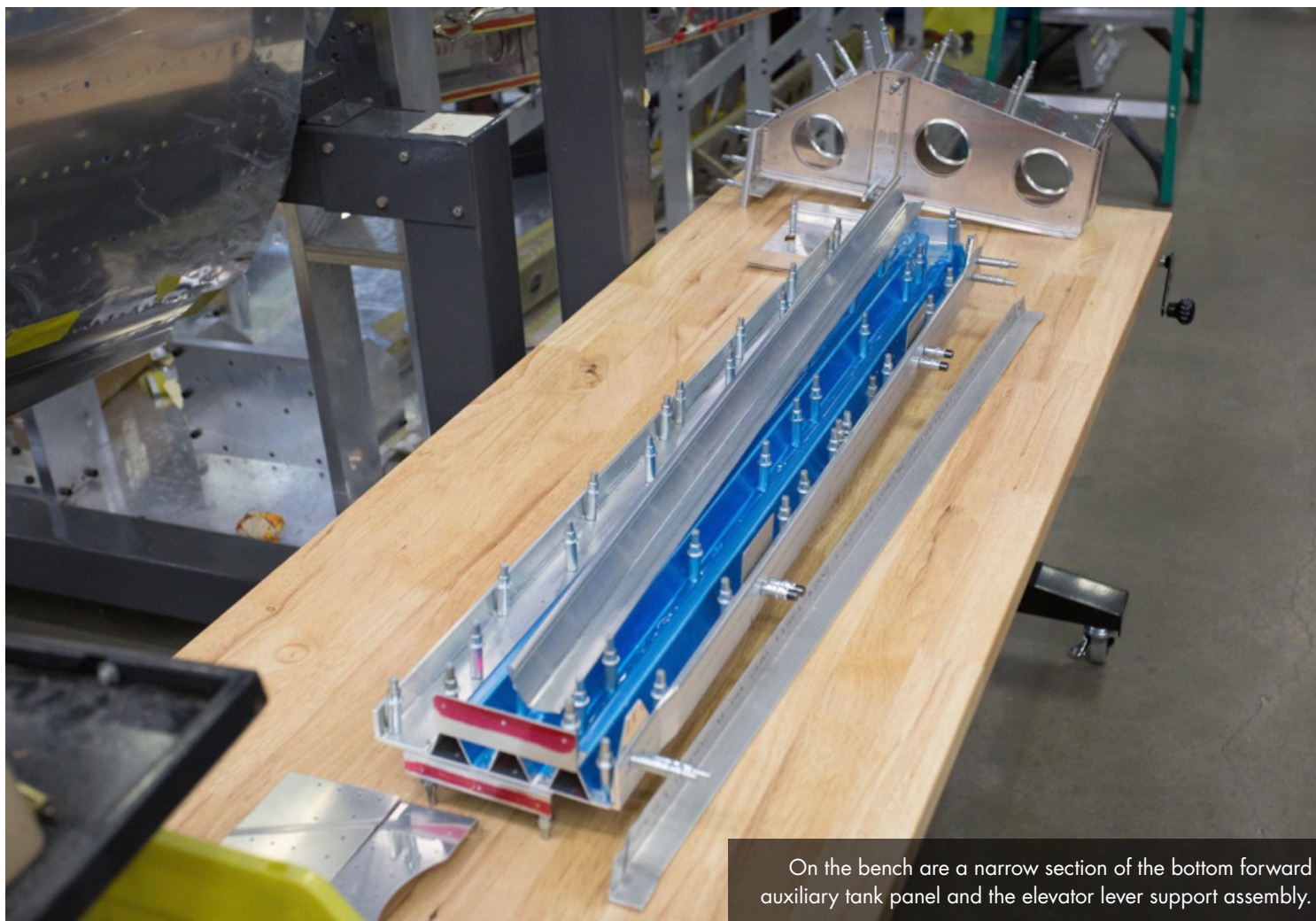
Copyright © 2017 Peter Dunn. available at: <https://www.ozatwar.com/books/tad.htm>

Update

It was great to receive the wartime photos related to our P-47. Meanwhile back on the restoration floor at AirCorps, the fuselage continued to take shape. This month we will show some of the work on the pilot's floor and the fuel tank bay structure that it mounts on.

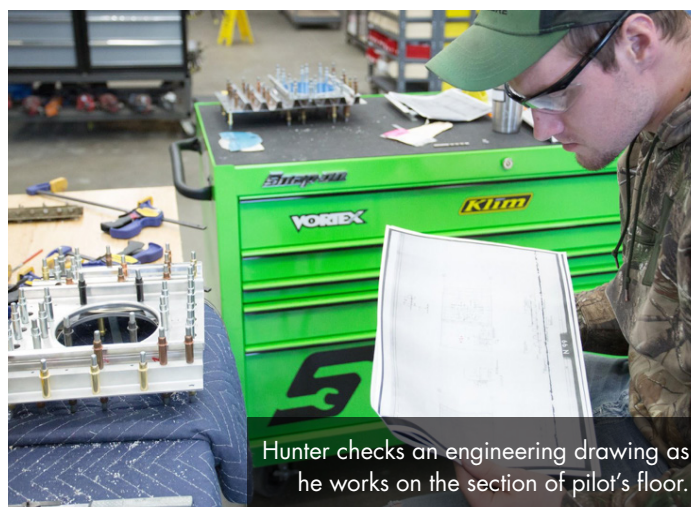


Pilot's Floor



This is a good example of using original assemblies as patterns, salvaging what can be reused, and producing a new assembly that is airworthy.

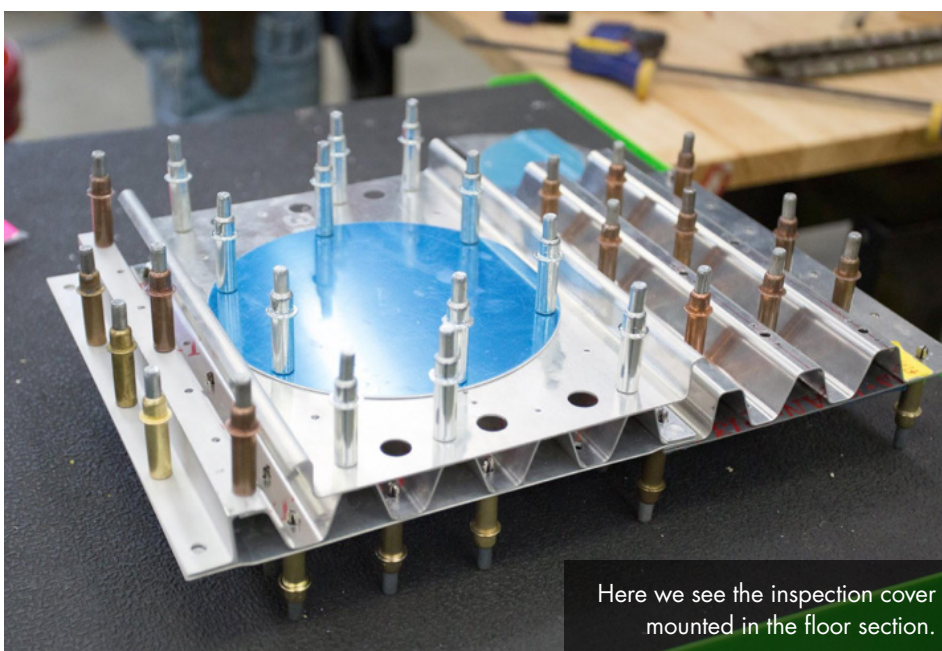
The clecoed assembly with the large hole is one of two. They are part of the pilot's floor and are located on each side of the control stick assembly. One of them has the drop tank fuel selector mounted in the hole; the other an inspection cover.



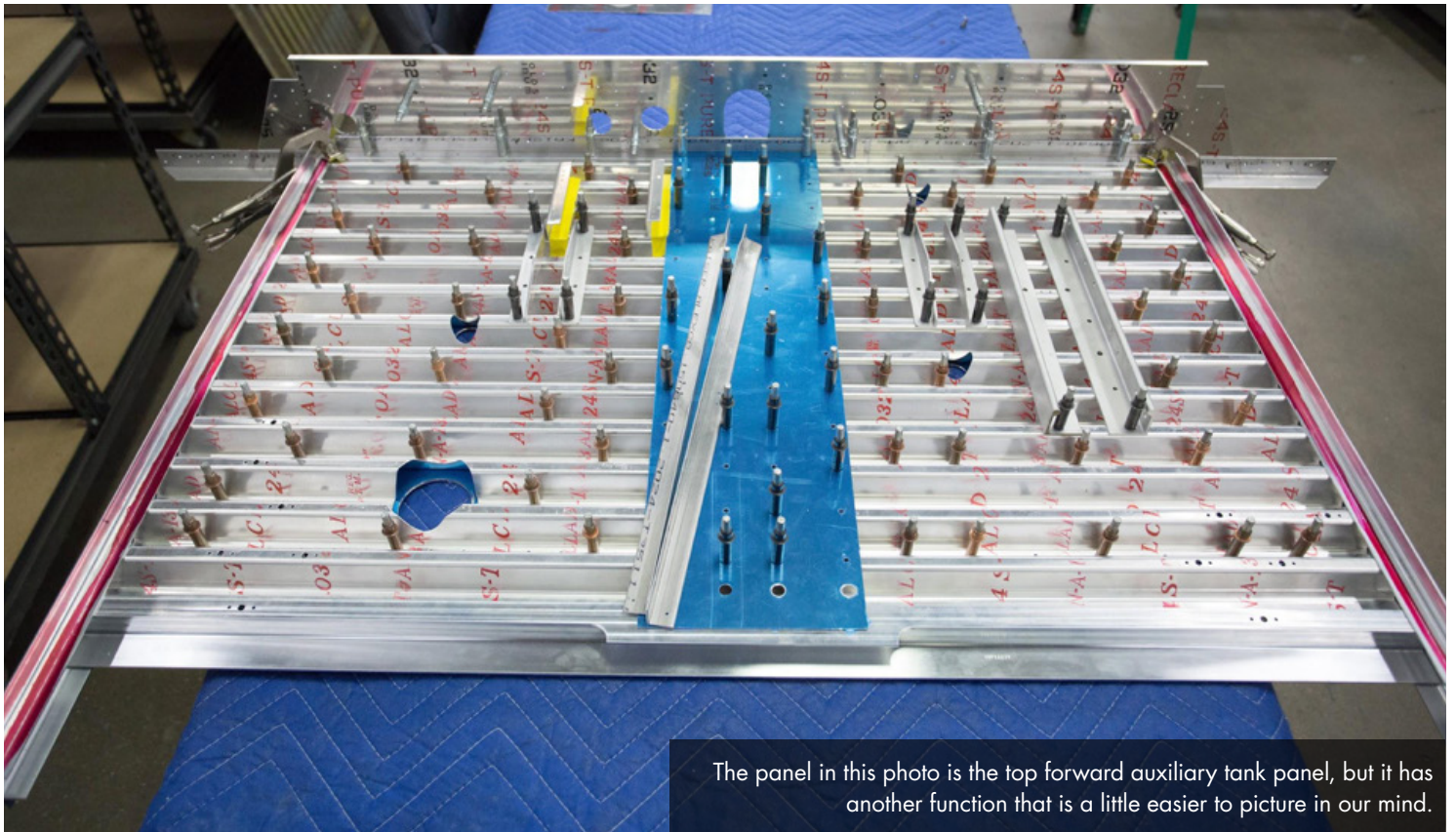


Satisfied with how the next step goes, Hunter fits the inspection cover.

This section is installed to the right side of the stick assembly, the one with the fuel selector goes on the left side. The "Z" channel extrusion on the far left of the assembly is one of the original parts of 42-27609 that passed inspection and has been reused in the restoration. After 70 years in a wet tropical climate, there aren't a great many usable parts, but every one that can be used will be.



Here we see the inspection cover mounted in the floor section.



The panel in this photo is the top forward auxiliary tank panel, but it has another function that is a little easier to picture in our mind.

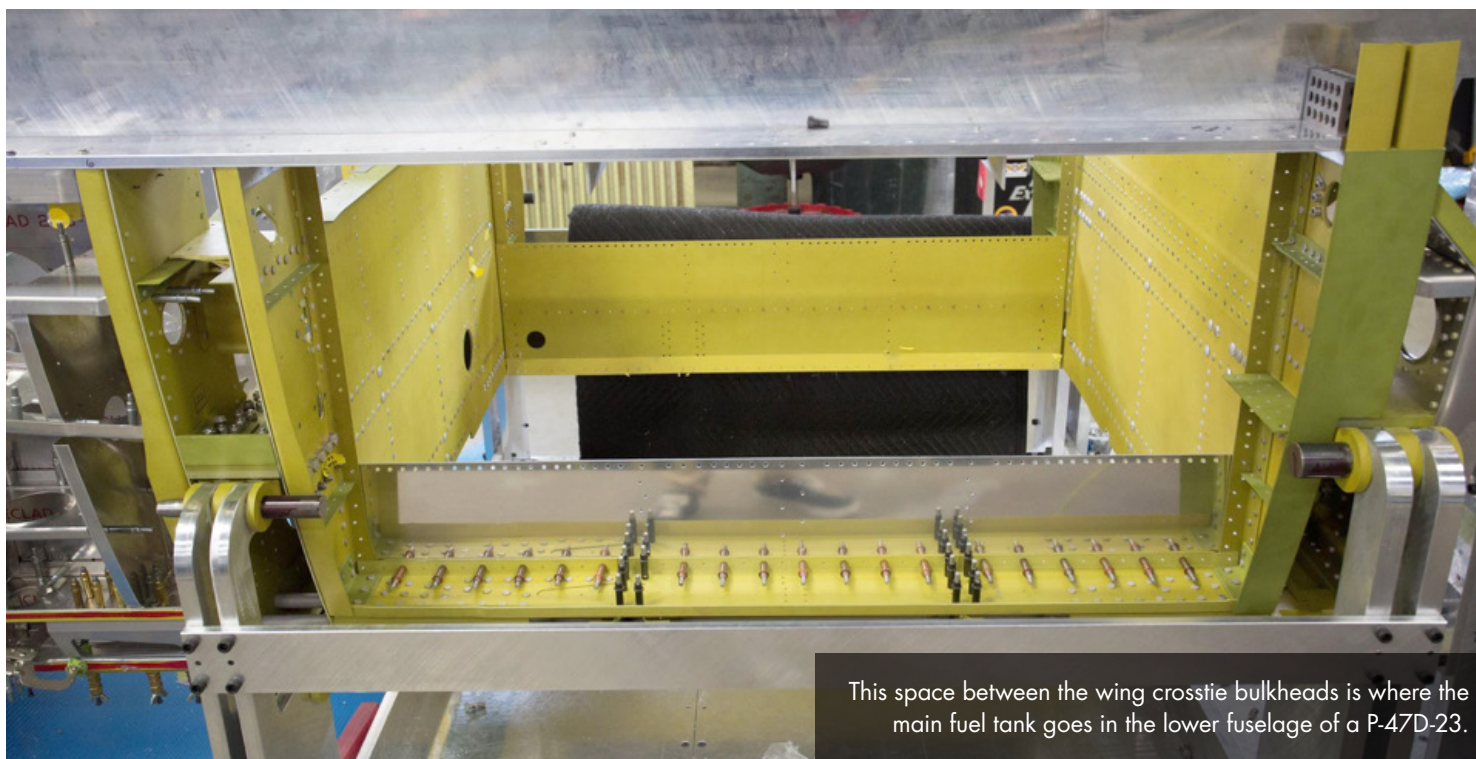
It is the floor under the pilot seat and the shorter brackets visible in this shot are lower pilot's seat tube supports. The longer aluminum angle brackets are for the emergency hydraulic hand pump.



Here is a little more detail on the seat tube and hydraulic hand pump brackets.



The aluminum sides of the auxiliary fuel tank bay are in place in this image. The auxiliary internal fuel tank on P-47D-23 has a capacity of 100 U.S. gallons.



This space between the wing cross-tie bulkheads is where the main fuel tank goes in the lower fuselage of a P-47D-23.

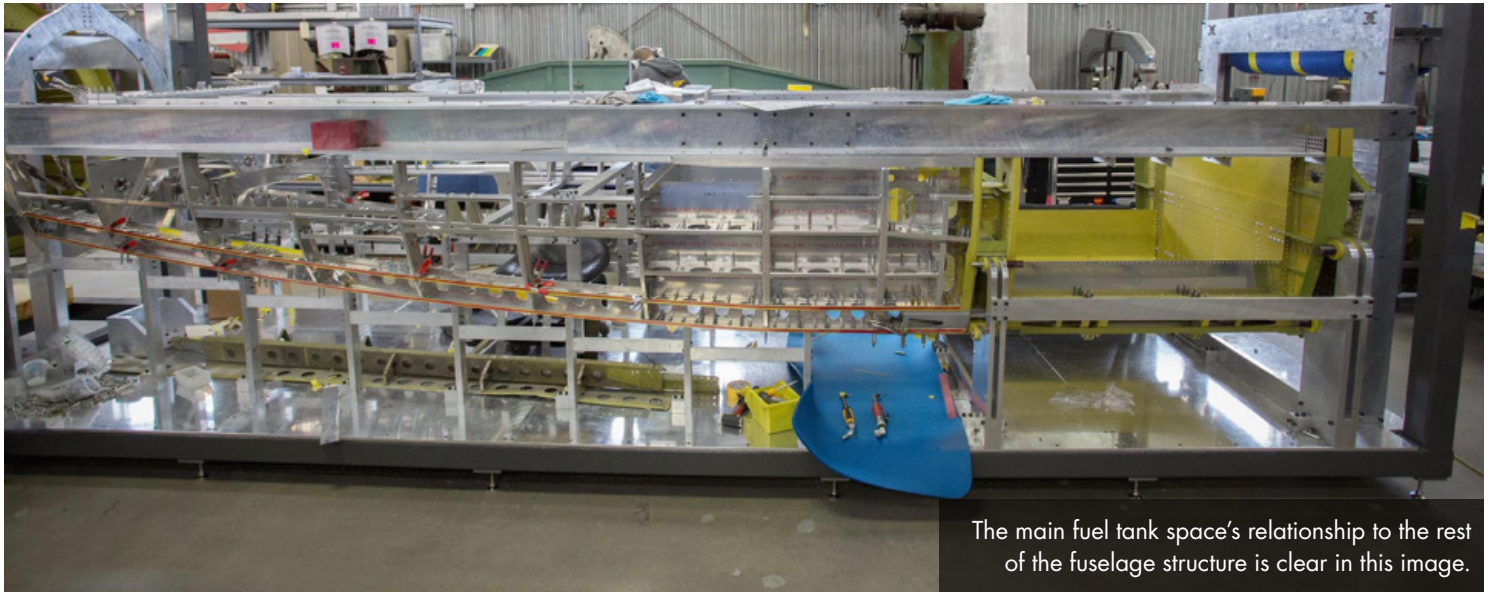
The main internal fuel tank on a P-47D-23 had a capacity of 205 US gallons. That makes the total internal fuel capacity 305 gallons (without drop tanks).

In the Southwest Pacific, some were fitted with a tank behind the cockpit. That field installation was commonly called a "Christmas tree tank" because of its shape. Ours was one of those and the fuel cell is labeled "capacity 42 US Gallons" so, in total, it could have flown with 347 gallons internally.

In a phone interview he graciously granted, Southwest Pacific P-47 pilot Major General DeWitt R. Searles commented on the Christmas tree tank:

"Yes, I remember the in-theater installation of the fuel tanks behind the pilot to give us a little better range. We were warned to avoid high G maneuvers until the tank was completely empty as the weight of a full tank would upset the aerodynamic balance which could lead to a loss of control. The P-47 was the sturdiest and most stable propeller driven aircraft that I have ever flown. It had an almost unlimited diving speed. I don't recall a single incident of one breaking up in flight because of aerodynamic stress. And it could absorb more hits by enemy fighters or ground fire, and keep flying, than any other fighter plane that I know of. It's versatility was not fully exploited until late in the war, in Europe and the Pacific, after enemy fighter strength had been severely reduced or eliminated. Then we found out that we had the most rugged and effective fighter bomber ever built. With eight fifty caliber machine guns and a 2000 pound bomb loads it was unmatched as an air to ground fighter aircraft."

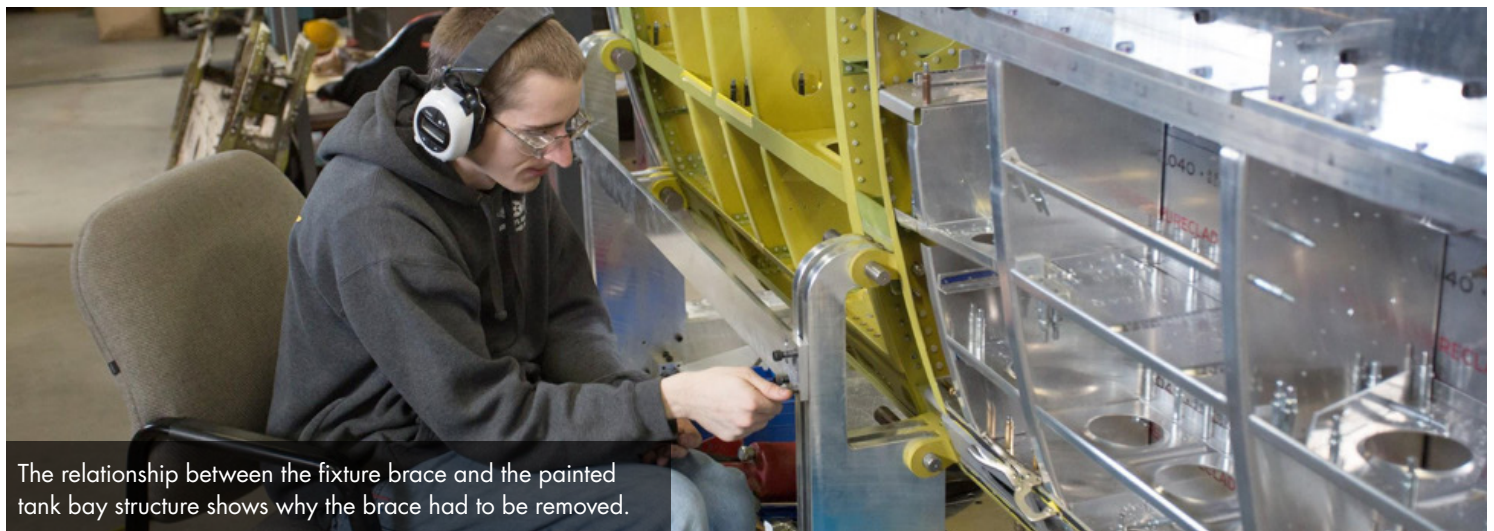
The next model of the P-47, the D-25, not only had a bubble canopy, but also had additional fuselage fuel tank capacity that brought its internal fuel load up to 370 gallons.



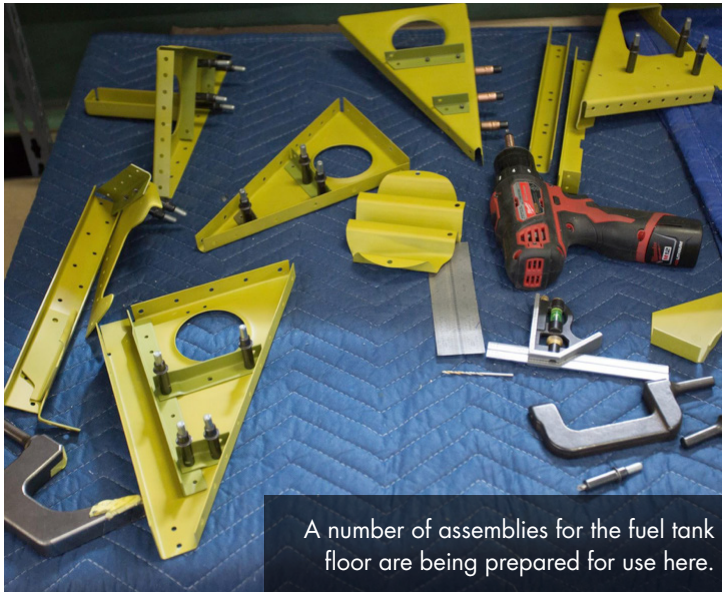
The main fuel tank space's relationship to the rest of the fuselage structure is clear in this image.



After riveting on structural members to the side of the main fuel tank bay, Aaron is replacing a fixture brace that had to be removed to install that structure.



The relationship between the fixture brace and the painted tank bay structure shows why the brace had to be removed.



A number of assemblies for the fuel tank floor are being prepared for use here.



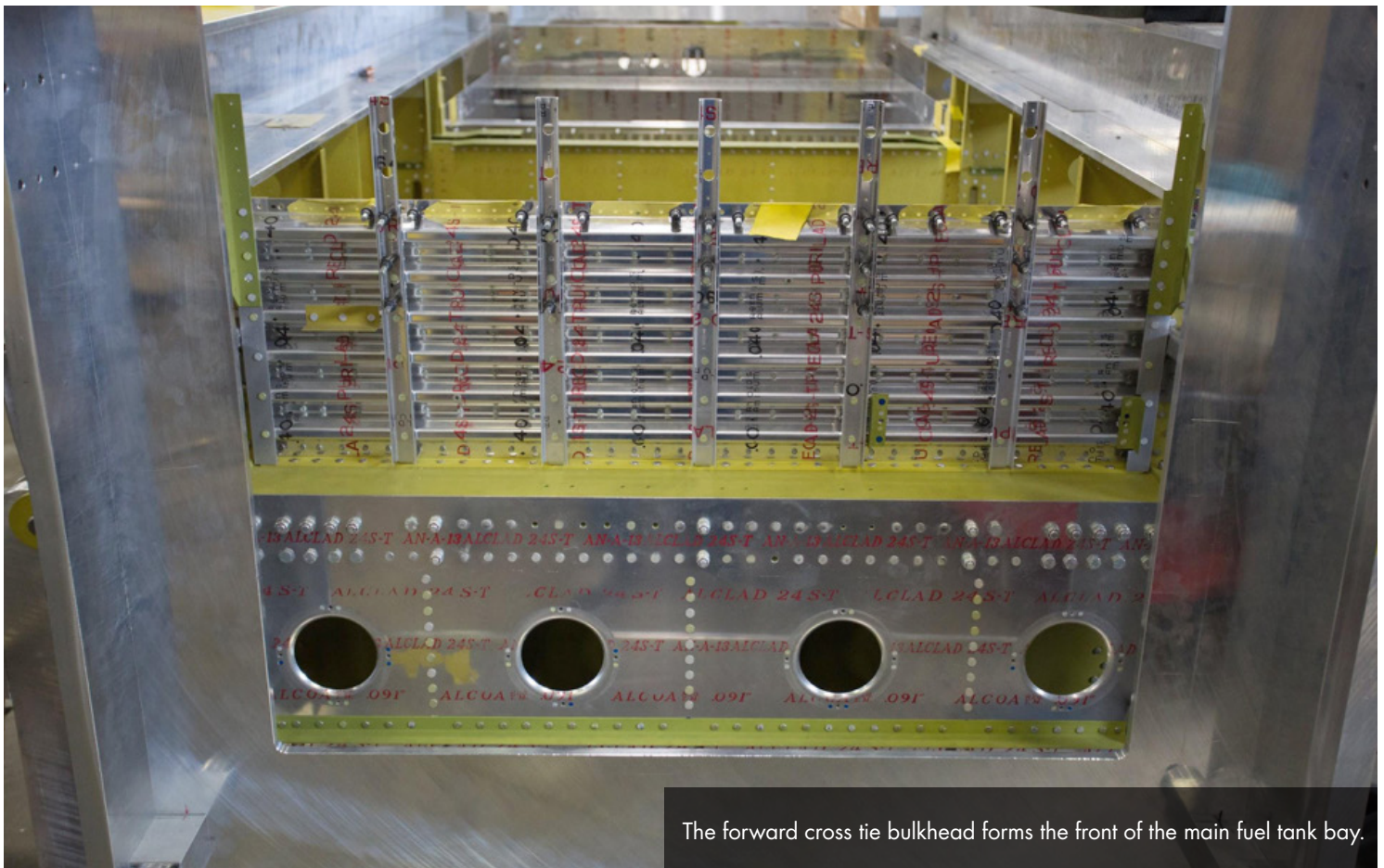
Aaron works on the bottom side of the main fuel tank floor.



This is the bottom skin of the main tank floor. After fitting, it was removed and painted.



Robb works on the top side of the main fuel tank compartment floor.



The forward cross tie bulkhead forms the front of the main fuel tank bay.



Restoration Specialist Randy Kraft



Randy when he was assembling the horizontal stabilizer framework back in 2016.

I mention the guys working on our projects in photo captions all the time, so I thought it would be a good thing to occasionally include a little more about them. I think Randy has been in more update photos than anyone, so he was a easy choice for the first shop spotlight.

Randy was born in Bemidji and has spent most of his life here. He has four kids and worked as a carpenter for the twelve years before joining AirCorps Aviation.

Randy's proven craftsmanship made him a perfect fit for AirCorps. When he started in 2014, the company was expanding and Randy adapted his skills quickly to the aircraft restoration arena.

Randy says his favorite warbird is the P-51, but the P-47 is growing on him!