

AUG/SEPT

Dakota Territory Air Museum's P-47 Update

AIRCORPS AVIATION

by Chuck Cravens





www.dakotaterritoryairmuseum.com



Update

The P-47 is progressing nicely. This month we will look at some fabrication shop work, fuselage and cockpit restoration progress, and several details of the wing restoration.

Fab Shop

It has been a while since we highlighted fabrication shop work, but parts are constantly being created as they are required by the restoration shop.





The P-47 has many extrusions and quite a few need joggles formed in them. These are dies made to form joggles in wing extrusions.



Steve made the double hook spring latch arm and pin assembly to replace the original rusted one on this ammunition feed chute.







Jacob uses the 1940's 1500 ton Dominion press to form a shroud for the turbo supercharger ducting.



Here is the part after being formed in the press. It is part no. 89F11924, former assembly shroud, station 232 1/2. That station is just ahead of the turbo supercharger and the two turbo air ducts join just aft of this shroud; then feed exhaust gas into the turbo supercharger to drive the turbine wheel.





Fuselage and Cockpit

Aaron continued working on cockpit installations this month. One of the major items was the main switch box.



















The back side of the main switch box has many terminal points for the wires coming in and out of the box.

Here is a closer view that shows the graphic lettering well. The indicator lights, ammeter, switches, and knobs have all been installed.

Inside the propellor control box are the relays for controlling the prop.

(left) The switch with the red safety cover is the arming switch for the guns and gun camera. As the label says, it can be set for camera only or both guns and camera.

(above) The area of the cockpit holding the gun and camera arming switch, throttle quadrant, landing gear control, and trim box assembly is nearly complete. Installation of the main switch box (lower right) still needs to be completed.

I he message bag strap has been installed. In WWII these were a bit of a holdover from earlier days before reliable air to ground radio was perfected. The message bag was a weighted bag used to drop messages to troops on the ground or to airfields.

There are three mounting spots on the armor plate for pilot seat attachment. This is the upper mount.

DO NOT EXCEED 450 POUNDS PRESSURE CAUTION KEEP CLEAN, DRY AND FREE OF ALL OILS

The oxygen filler compartment pan assembly connection has a clip that would hold an adapter to enable using British charging equipment.

Wings

Creating a new set of wings is a complicated task that has been ongoing for months now. But progress is made every day.

The black rubber grommets will protect a variety of lines and wires. Starting at the top and moving clockwise, The top grommet will house a flap hydraulic line, the smaller oval grommet to the right will hold the aileron trim tab controls, the lowest oval grommet is for another flap hydraulic line, and finally, the bottom left round grommet will hold electrical wiring.

The large rectangular openings in this reinforcing plate are where the ejection chutes for the empty cartridge casings will attach.

Southwest Pacific Radio Research

One of the interesting facets of the restoration of P-47 42-27609 is the radio equipment, because the mounting had to be changed to accommodate the Christmas tree tank. The tank was placed where the radios originally mounted.

42-27609 had 3, SCR 274 high frequency transmitters in the fuselage when it was recovered.

Despite being reequipped with SCR 274 comm radios, the airplane contained a terminal strip for an SCR-522, which wasn't used for SCR 274 installations. It also had a BC 966 IFF (Identification Friend or Foe) unit.

The BC 966 was normally used with an SCR 522 comm radio, so it seems that 42-27609 left the Evansville factory with the very high frequency SCR 522. At the time it arrived in Townsville, Australia, the Fifth Air Force was using the high frequency SCR 274.

Since the P-47 had SCR 274s installed, they were undoubtedly installed upon its May arrival in the SW Pacific theater.

On the back side of the original terminal strip, an Evansville factory worker named Stone signed the part. His signature has been duplicated on the replacement.

The new terminal strip as installed in the field modified mount in the fuselage.

During the time span of 42-27609's service, a June 16, 1944 Fifth Air Force order came out, requiring the squadrons to remove the Christmas tree tanks. There were three primary reasons for the order. One was because of the fire hazard they presented, the second was to facilitate the installation of VHF radios, which would be SCR-522s. The final and perhaps

most important reason, documented in James Curran and Terry Poprovaks' fine book, Check Six, was "Aside from the supposedly better communication thus afforded, such a change was essential in order to communicate with naval aircraft."¹ This modification is also documented in the squadron histories of several 5th Air Force squadrons.

This conversion back to the SCR 522 VHF radio was never done to 42-27609, nor was the Christmas tree tank removed. Because that is true, it is unlikely that 42-27609 saw actual combat after July of 1944 when those changes were implemented at squadron level.

¹ James C. Curran and Terrrence G. Popravak, Jr., Check Six, (Casemate Publishers, Pghiledelphia and Oxford, 2015) 141

BC 966 rack in foreground, the rusty one on the far end is an SCR 274 transmitter rack. Mid left, SCR 274 receiver rack.

