



P-51C THUNDERBIRD PART 4

Dakota Territory Air Museum's P-51 C Thunderbird
by Chuck Cravens



AIRCORPS AVIATION

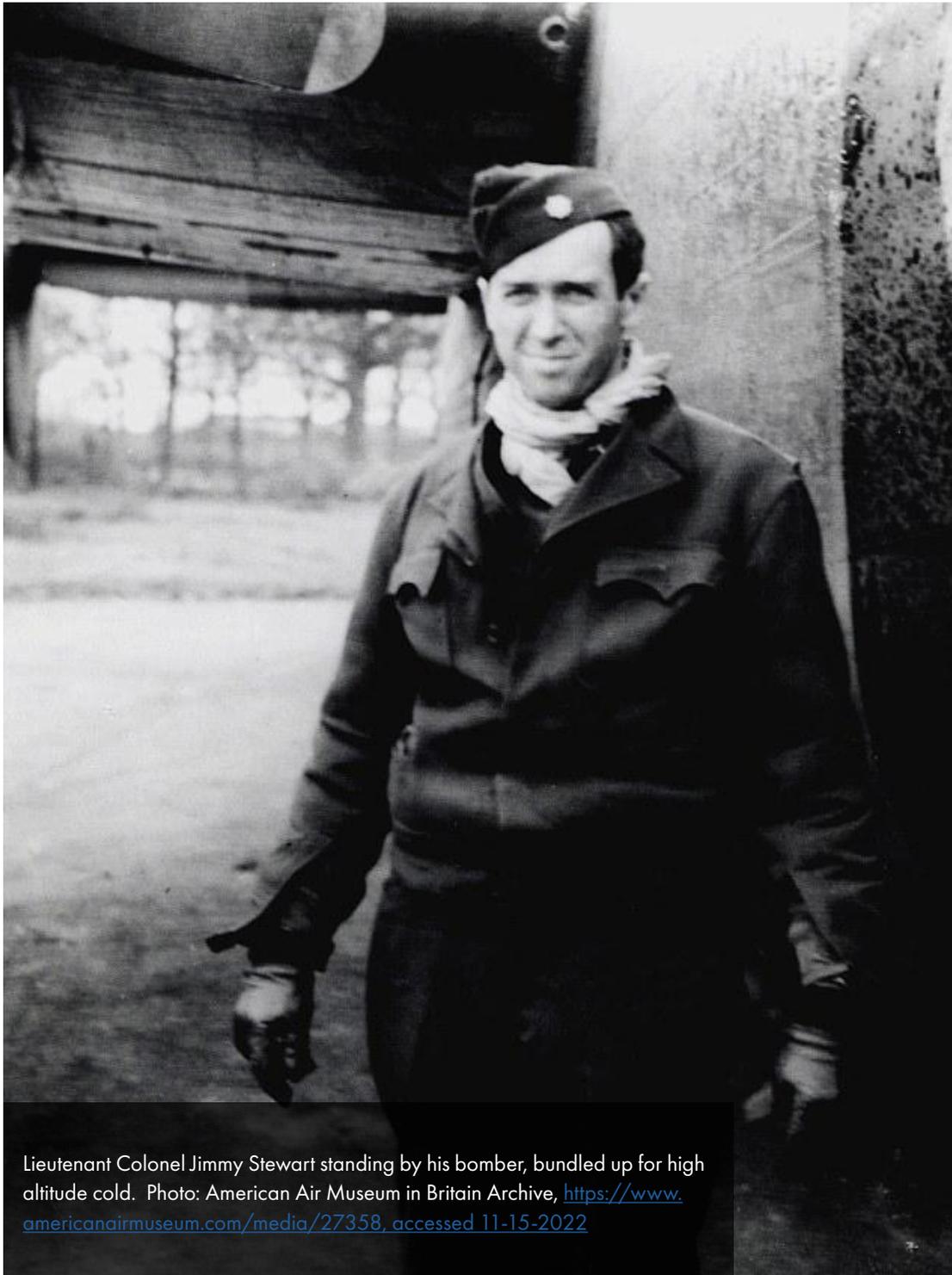


P-51C Thunderbird holds a place of honor in the restoration shop during the AirCorps Aviation Veteran's Day Open House.





Thunderbird Owner Jimmy Stewart's Distinguished Military Career



Lieutenant Colonel Jimmy Stewart standing by his bomber, bundled up for high altitude cold. Photo: American Air Museum in Britain Archive, <https://www.americanairmuseum.com/media/27358>, accessed 11-15-2022



The original owner of Thunderbird, James Maitland Stewart (May 20, 1908 – July 2, 1997) is, of course, famous for his career as a movie star and leading man in films from the 1930's all the way through to the 1970s. Bart Barnes, a Washington Post staff writer, perhaps characterized Jimmy Stewart best in an article commemorating Stewart's death when he said "Stewart was the cinematic epitome of common sense and decency."¹

In addition to his time in Hollywood, James "Jimmy" Stewart also led a distinguished military career that spanned 27 years.

As a young man, a film career wasn't his original plan. Instead, James dreamed of becoming a naval aviator and hoped to attend the United States Naval Academy. However, his father's wishes prevailed over his own, and James enrolled at Princeton University.

While at Princeton, Stewart's interest in acting was kindled and he met a new friend, Henry Fonda when they both participated in an intercollegiate drama team.² Though Fonda wasn't a Princeton student, both men shared an interest in theater as budding actors, and they also happened to share an interest in model airplanes.



Jimmy Stewart and Henry Fonda with a stick and tissue model typical of the nineteen forties. Photo: "Thank You Mr. Fonda" website <http://clementine-lagranpantalla.blogspot.com/2011/07/hank-y-jimmy-fonda-y-stewart.html>, accessed 11-23-2022

¹Bart Barnes *Film Hero Jimmy Stewart Dies at 89*, *Washington Post*, Thursday, July 3, 1997; Page A01

²McGowan, Sam, *War Hero*, Jimmy Stewart, WWII History July 2012, <https://warfarehistorynetwork.com/article/jimmy-stewarts-rise-from-private-to-colonel/>



After college, Jimmy and Henry headed to Hollywood and shared an apartment as they sought to make their mark in cinema. Theirs was a lifelong friendship despite diametrically opposed political views. Jimmy was always a strong supporter of conservatism and the Republican party, while Fonda was a liberal Democrat. Stewart once said "There were certain subjects we just didn't talk about,"

Shortly after his arrival in California, Jimmy began taking flying lessons, and by early 1941, he owned a Stinson 105, had recorded 300 flying hours, and held a commercial pilot rating as well as his private pilot license.



James Stewart and the glamorous movie star, Margaret Sullivan, about to fly in his Stinson 105 Voyager, 1939. Photo CinemaMonAmour website, <https://cinemamonamour.tumblr.com/post/662585888933560320/oldhollywoodpage-james-stewart-and-margaret>

As it became clearer that the United States would have difficulty avoiding involvement in World War II, Stewart joined other stars including singer-actor Hoagy Carmichael, Cary Grant, Henry Fonda, Robert Taylor, and Margaret Sullivan, who invested to support the construction of a pilot training airfield. The project was initiated by Hollywood agent and producer Leland Hayward, former Air Service pilot John H. "Jack" Connelly, and Life magazine photographer John Swop. Leland, Jack, and John were convinced that a pilot training facility would be critical should America become actively involved in WWII.



Thunderbird Field emblem, photo by Marine 69-71 - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=60820640>

The training field was constructed about 25 miles from Phoenix. The buildings, landscaping, and runways were arranged to approximate a mythical Anasazi Thunderbird from the air, with the control tower forming the bird's head. The project began in 1939, with the construction of the pilot training facility beginning on January 2, 1941. The training facility was completed in a remarkably short period of 3 months.



Thunderbird Field No. 1. (2022, October 2) photo By Tony the Marine, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=26218087>

The name of this project, Thunderbird Field, undoubtedly influenced the name choice for Stewart and DeBona's P-51 racer after the war.

Thunderbird Field was eventually incorporated into the Army Air Forces training establishment and trained more than 10,000 pilots during World War II.³

A movie was shot on location at Thunderbird field in 1942 entitled Thunder Birds: Soldiers of the Air. It is a typical wartime enlistment motivational film, with the normal Hollywood inaccuracies, (like taking off in a Stearman and the plane magically becoming a Boeing P-12 in the air). But it is filmed in color and shows what Thunderbird Field looked like in its training heyday.

<https://www.youtube.com/watch?v=90Zxvfnrhog>

³https://military-history.fandom.com/wiki/James_Stewart#:~:text=Stewart%2C%20along%20with,II.%5B33%5D



During the pre-war time period, Stewart found work in numerous films from 1936 to 1941. By the time US involvement in WWII was on the horizon, he had played the lead in Capra's "Mr. Smith Goes to Washington" (1939). He was nominated for an Academy Award for Mr. Smith and actually won his first Oscar the following year for "Philadelphia Story".⁴

His firmly established fame as an actor would later become a point of contention when the Army assigned him to non-combat duties.

Just before the United States' entry into World War II, Stewart became the first major American movie star to enlist in the United States Army. However, at the age of 32, he was too old to qualify for aviation cadet training, which would have been his first choice.⁵ In 1941, after winning the "Best Actor" Oscar for *The Philadelphia Story*, Stewart's reported Hollywood income was \$12,000 a month. The joke in the industry was that, as a private in the military, he got paid \$21 a month, thus taking a huge pay cut of \$11,979.⁶ While the movie industry may have made a joke of the change of pay, the fact that Jimmy Stewart was willing to leave his movie star income for a private's salary, demonstrates the sacrifice he was willing to make for his country.

That Jimmy enlisted was no surprise to his family, whose tradition of military service went back to Fergus Moorhead, a 3rd great grandfather, who served in the Revolutionary War. Jimmy's maternal grandfather was a general for the Union in the Civil War, and his father Alex, served in both the Spanish-American War and World War I.

Stewart's first attempt at enlistment in November of 1940 was rejected because, at 138 pounds, he weighed 5 pounds less than required for his 6'3" height. Three months later, in February of 1941, Jimmy successfully enlisted and reported for induction on March 22, 1941. Various accounts exist of how he passed the weight requirement, from having a friend man the scales, to loading up on bananas before the weigh-in, but in any case, James Maitland Stewart was now a private in the U.S. Army Air Corps.

⁴Together We Served website, <https://blog.togetherweserved.com/2021/12/01/jimmy-stewart/> accessed 11-23-2022

⁵Resch, John Phillips (2005). *Americans at war: Society, culture, and the homefront*. Detroit: Macmillan Reference. ISBN 002865806X. Retrieved July 15, 2019.

⁶Emmanuel Levy, *Oscar Actors: Stewart, Jimmy—Making of a Star; Pay Before and After Military Service*, <https://emanuellevy.com/profile/stewart-jimmy-how-much-he-got-paid-before-and-after-military-service/> accessed 11-29-2022



Academy Award-winning actor Jimmy Stewart, salutes at Fort MacArthur, Calif. in March 1941, after his induction into the Army Air Corp in Los Angeles. Photo Associated Press



Stewart's first station was Moffett Field in the San Francisco area. As a college graduate, he was eligible to apply for a commission as an officer. During his 9-month assignment at Moffett Field, now Corporal Stewart completed courses with the goal of obtaining a flying commission, which required 400 logged flying hours. Jimmy was 40 hours short in the 200+ hp aircraft required for a second lieutenant commission. To rectify that deficiency, Stewart logged flight time in high-performance aircraft at his own expense on weekends.

As Corporal Stewart awaited news of his commission, the infamous attack on Pearl Harbor occurred. "A month later he received his commission, and because he had logged over 400 hours as a civilian, he was permitted to take basic flight training at Moffett and received his pilot wings. During the next nine months, he instructed in AT-6, AT-9, and B-17 aircraft, and flew bombardiers in the training school at Albuquerque, N.M."⁷

Though Jimmy's first flying assignment was as a flight instructor, the Army was determined to use Stewart as a recruiting tool. There was little doubt that a star of his stature, wearing a USAAF uniform and pilot's wings, would be an effective inducement to prospective enlistees. While he did participate in some early war publicity tours in Washington D.C., Jimmy's interests were to contribute to the war effort as a combat pilot rather than as a recruitment encouragement. With that goal in mind, Lieutenant Stewart enrolled in multi-engine and instrument training upon his return to Moffett Field.

When he completed his multi-engine rating, Stewart was assigned to Mather Field for multi-engine instructor pilot training. Now a qualified multi-engine instructor, Stewart went to Kirkland Field near Albuquerque, New Mexico where he flew Beechcraft AT-11s on bombardier cadet training flights. Later, at Mather Field again, he served as a four-engine instructor in both the B-17 and B-24 heavy bombers. Much to his dismay, Stewart stayed stateside for almost two years working as a flight instructor.

Finally in the fall of 1943, now Captain Stewart was selected to be the operations officer of the 703rd Bomb Squadron, 445th Bomb Group destined for England.

⁷National Museum of the United States Air Force, <https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196679/brig-gen-james-m-stewart/> accessed 11-23/2022



"Lt. Col. James M. Stewart, Group Operations Officers, interrogates crew of the 453rd Bomb Group after returning to their English base from a mission over enemy territory. American Air Museum in Britain Archive" <https://www.americanairmuseum.com/media/27258>

Stewart began flying combat missions and on March 31, 1944, was appointed Operations Officer of the 453rd Bomb Group and, subsequently, Chief of Staff of the 2nd Combat wing, 2nd Air Division of the 8th Air Force⁸.

⁸National Museum of the United States Air Force, <https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196679/brig-gen-james-m-stewart/> accessed 11-23/2022



453rd Bomb Group Insignia



Three B-24 Liberators of the 453rd Bomb Group fly in formation during a mission. B-24 (J+, serial number 42-51114) nicknamed "Whiskey Jingles" is visible in the foreground. Photo: American Air Museum in Britain Archive, Roger Freeman Collection <https://www.americanairmuseum.com/media/27358> accessed 11-15-2022

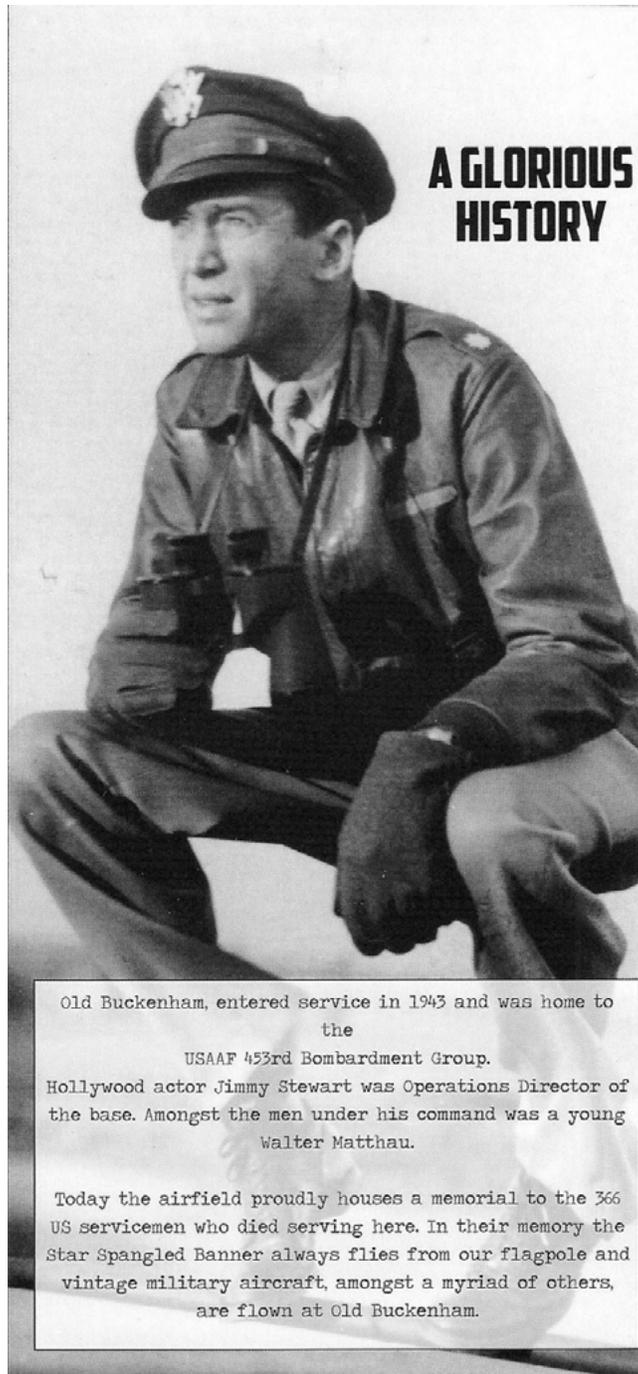
Stewart ended WWII as a colonel in the Army Air Corps, fully decorated as the result of the 20 combat missions he flew over Germany as leader of a B-24 squadron. Among the medals he was awarded were two Distinguished Flying Crosses and the Croix de Guerre.

On one mission in February of 1944, Stewart had perhaps his closest call of the war when, on a nine-hour round trip to Furth, Germany, Jimmy's B-24 encountered very accurate radar-directed German flak. After the bombers hit the target, a flak shell impacted Stewart's Liberator in the belly, directly behind the nose wheel.

Despite the damage, the Liberator and crew managed to limp home. The damage was severe enough that, upon landing, the fuselage cracked open in front of the wing and buckled.

Stewart mused to a bystander, "Sergeant, somebody sure could get hurt in one of those damned things."⁹

⁹Richard Hayes, Mr. Stewart Goes to War, <https://www.historynet.com/mr-stewart-goes-to-war/accessed> 12/1/2022



Old Buckenham, entered service in 1943 and was home to the
the
USAAF 453rd Bombardment Group.
Hollywood actor Jimmy Stewart was Operations Director of the base. Amongst the men under his command was a young
Walter Matthau.

Today the airfield proudly houses a memorial to the 366
US servicemen who died serving here. In their memory the
Star Spangled Banner always flies from our flagpole and
vintage military aircraft, amongst a myriad of others,
are flown at Old Buckenham.

Leaflet for Old Buckenham, photo from Airfield American Air Museum in Britain Archive, <https://www.americanairmuseum.com/media/13165>, accessed 11-15-2022

Stewart continued his military career after WWII in the USAF Reserve and was promoted to Brigadier General on July 23, 1959.



Brigadier General James M. Stewart, United States Air Force Reserve, 1968. (Bettmann/CORBIS)

On 20 February 1966: Brigadier General James M. Stewart, United States Air Force Reserve, flew the last combat mission of his military career, a 12 hour, 50 minutes "Arc Light" bombing mission over Vietnam, aboard Boeing B-52 Stratofortress of the 736th Bombardment Squadron, 454th Bombardment Wing. His bomber was a B-52F-65-BW, serial number 57-0149, call sign GREEN TWO. It was the number two aircraft in a 30-airplane bomber stream.¹⁰

¹⁰This Day in Aviation website <https://www.thisdayinaviation.com/tag/736th-bombardment-squadron-heavy/>



A Boeing B-52F-65-BW Stratofortress, 57-0144, drops bombs during an Arc Light strike. (U.S. Air Force)
James Maitland Stewart retired from the United States Air Force on May 31, 1968.



Restoration Work

Fuselage

The rudder, elevator, and dorsal fin were fitted or installed this month. The windshield assembly and cowl formers and stringer were also fitted.



This is the fuselage on a fixture with the engine mount installed.







The fabric-covered rudder has been installed.



The details of the trim tab and light are visible in this closer view of the rudder.



The fitting of the dorsal fin is a part of the vertical stabilizer installation work.



The fabric-covered rudder and elevators on the P-51C have trim tabs of other material. In the case of the rudder the trim tab is phenolic. The phenolic used is a hard, dense material made by applying heat and pressure to layers of fabric, impregnated with a synthetic resin. The elevator trim tabs are aluminum.



Work continues on the radiator scoop section of the fuselage.



Mike Izzi works on fitting the upper cowling formers.



Mike probably finds the Mustang cowling to be less challenging than his last cowling work on the P-47 because he has to fabricate and fit fewer parts.

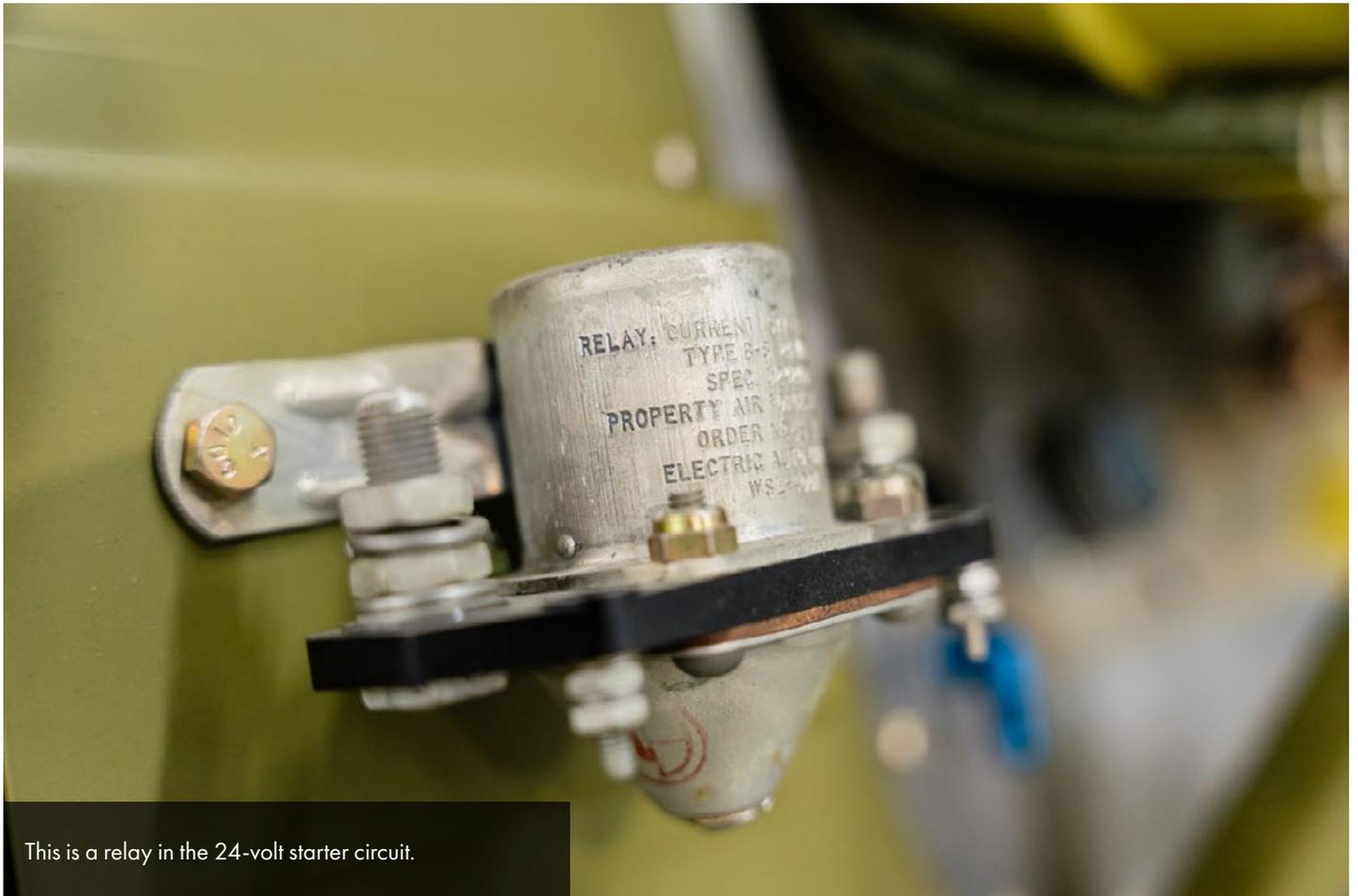


The upper cowling longeron has been fitted.

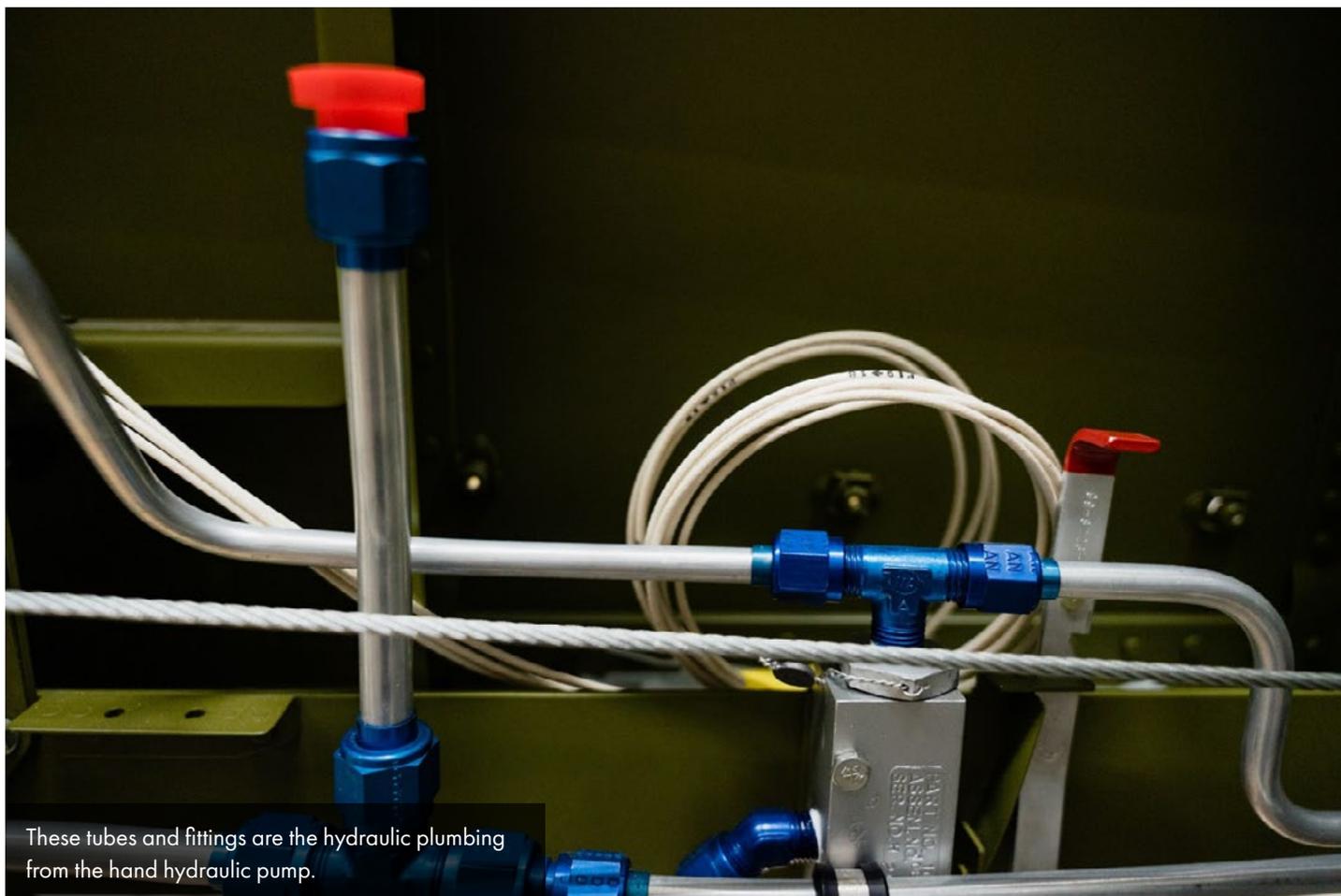


Electrical System

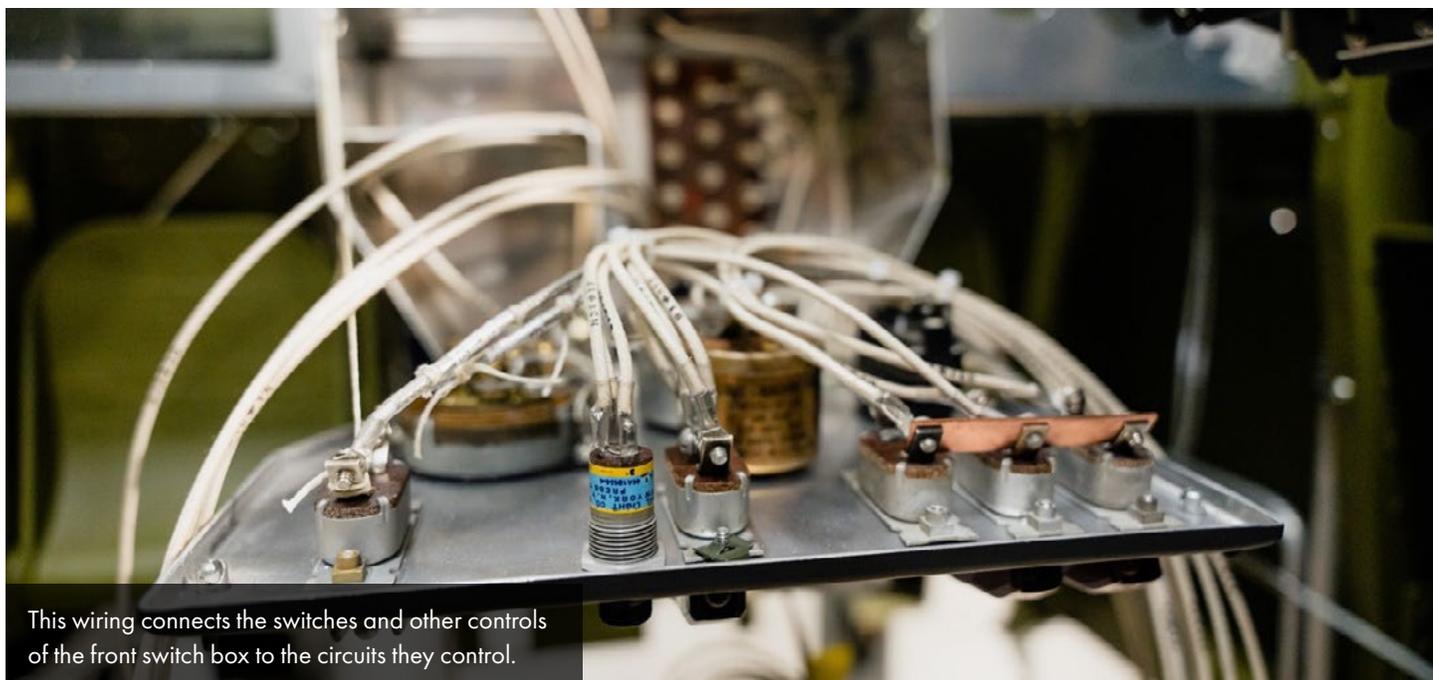
Much of the wiring was completed this month.



This is a relay in the 24-volt starter circuit.



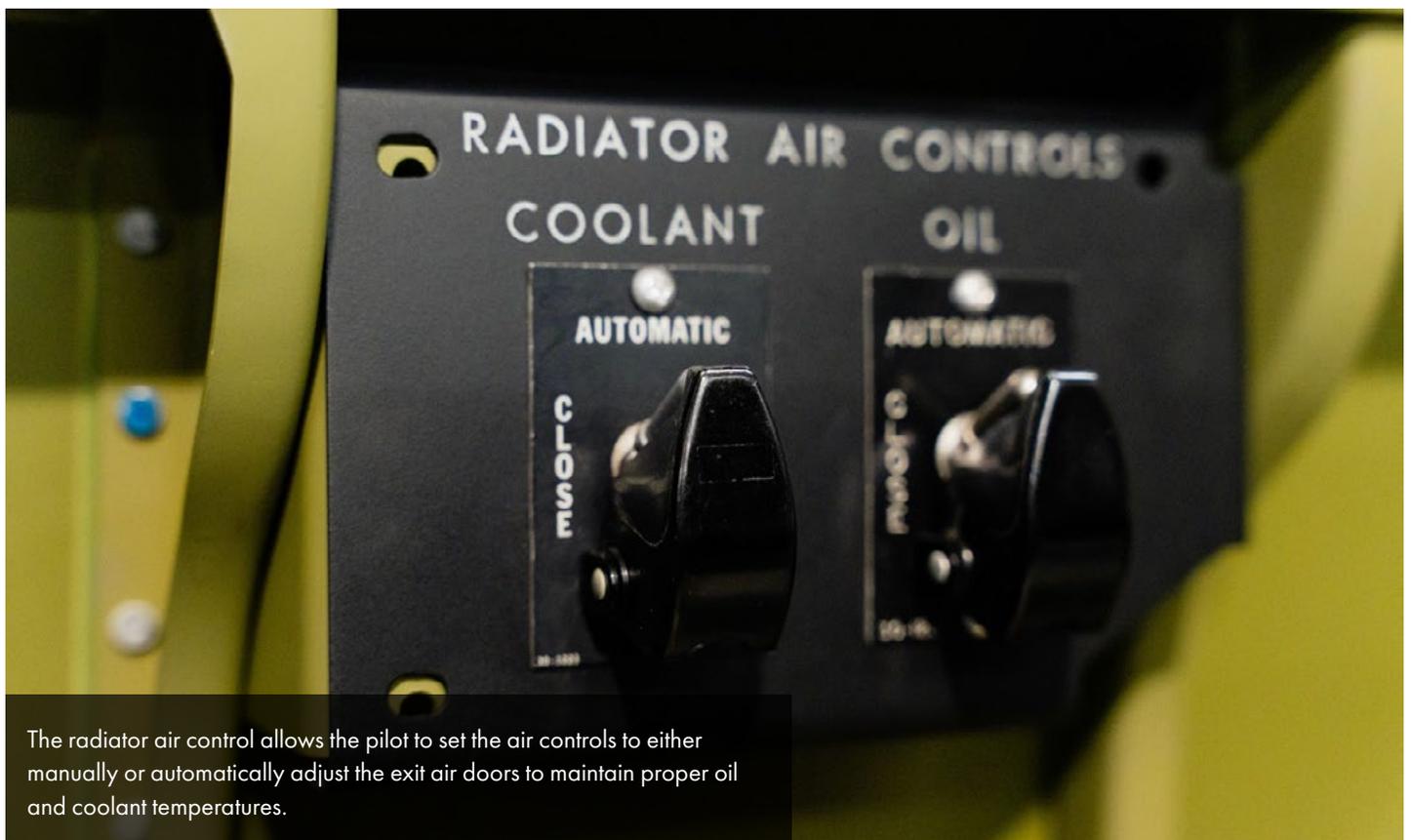
These tubes and fittings are the hydraulic plumbing from the hand hydraulic pump.



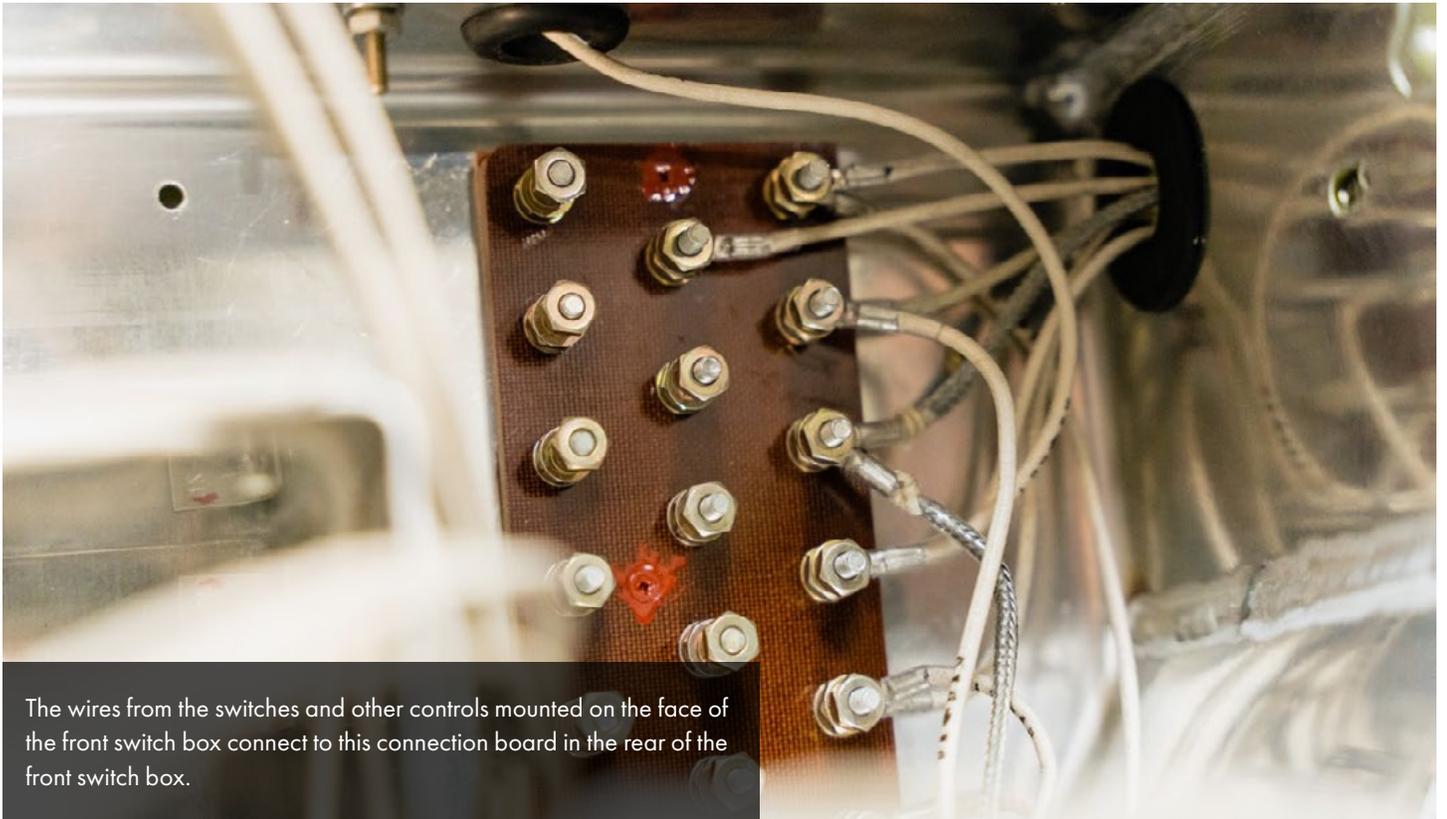
This wiring connects the switches and other controls of the front switch box to the circuits they control.



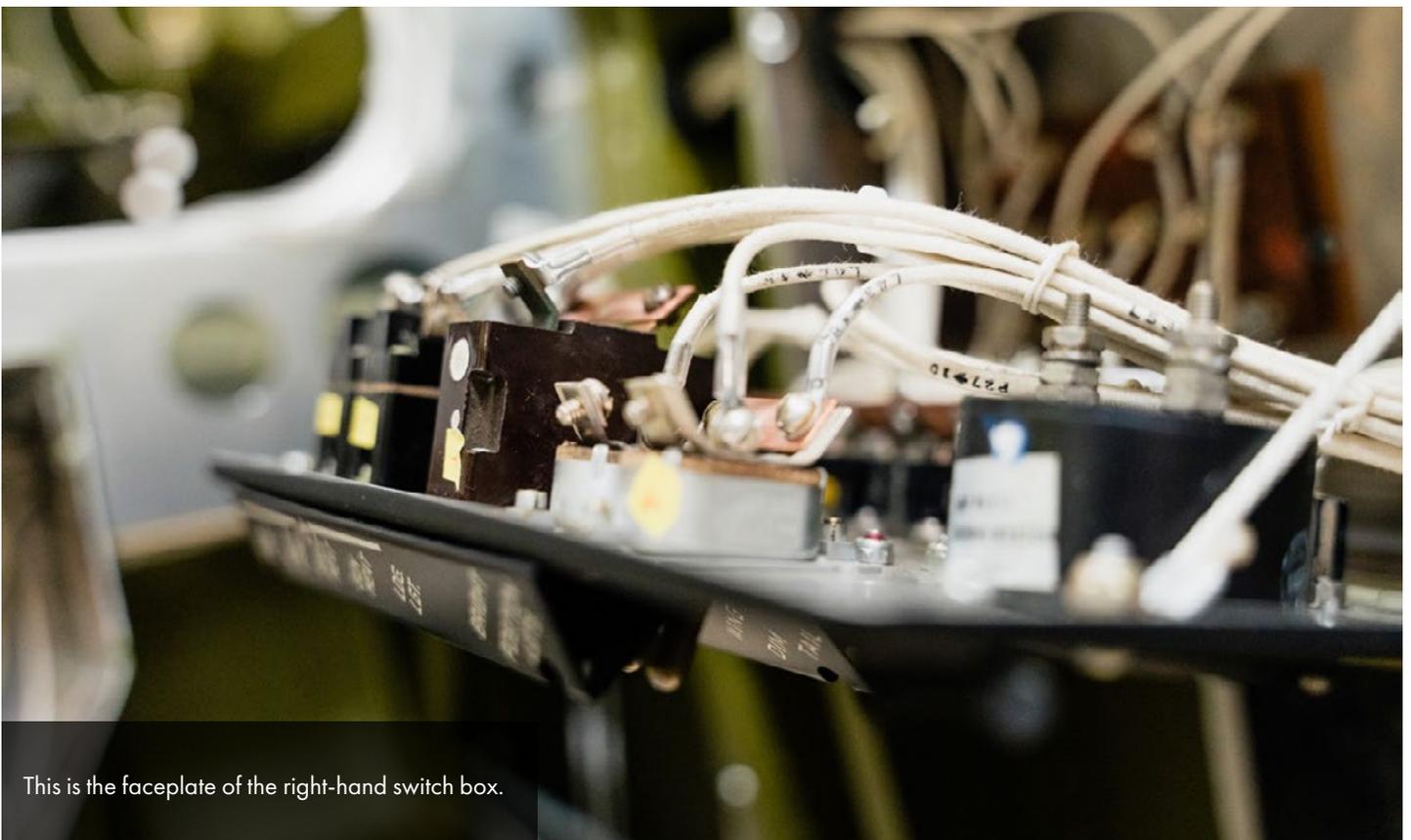
A closer view shows the care that was taken in this installation.



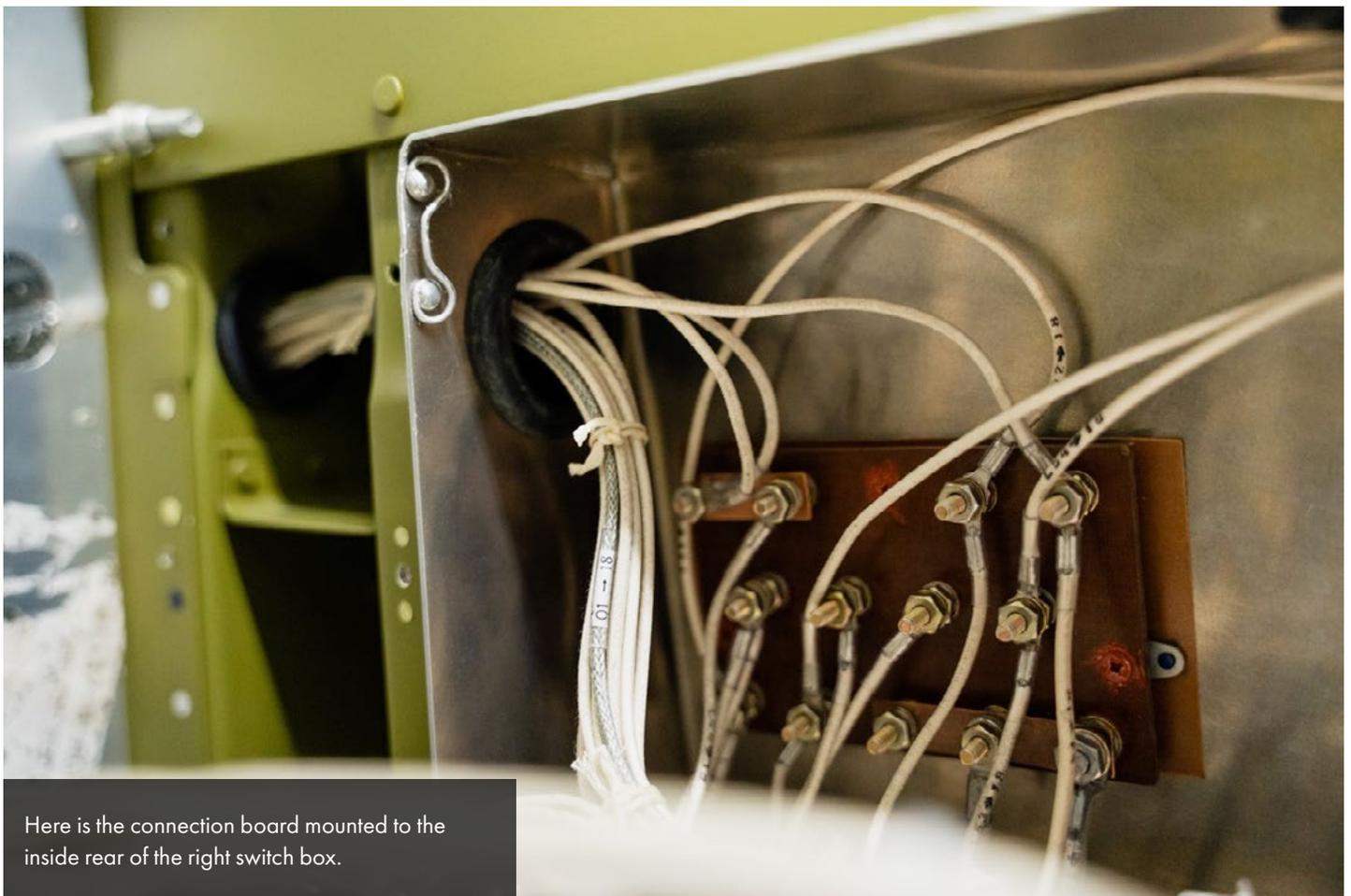
The radiator air control allows the pilot to set the air controls to either manually or automatically adjust the exit air doors to maintain proper oil and coolant temperatures.



The wires from the switches and other controls mounted on the face of the front switch box connect to this connection board in the rear of the front switch box.



This is the faceplate of the right-hand switch box.



Here is the connection board mounted to the inside rear of the right switch box.

Wings

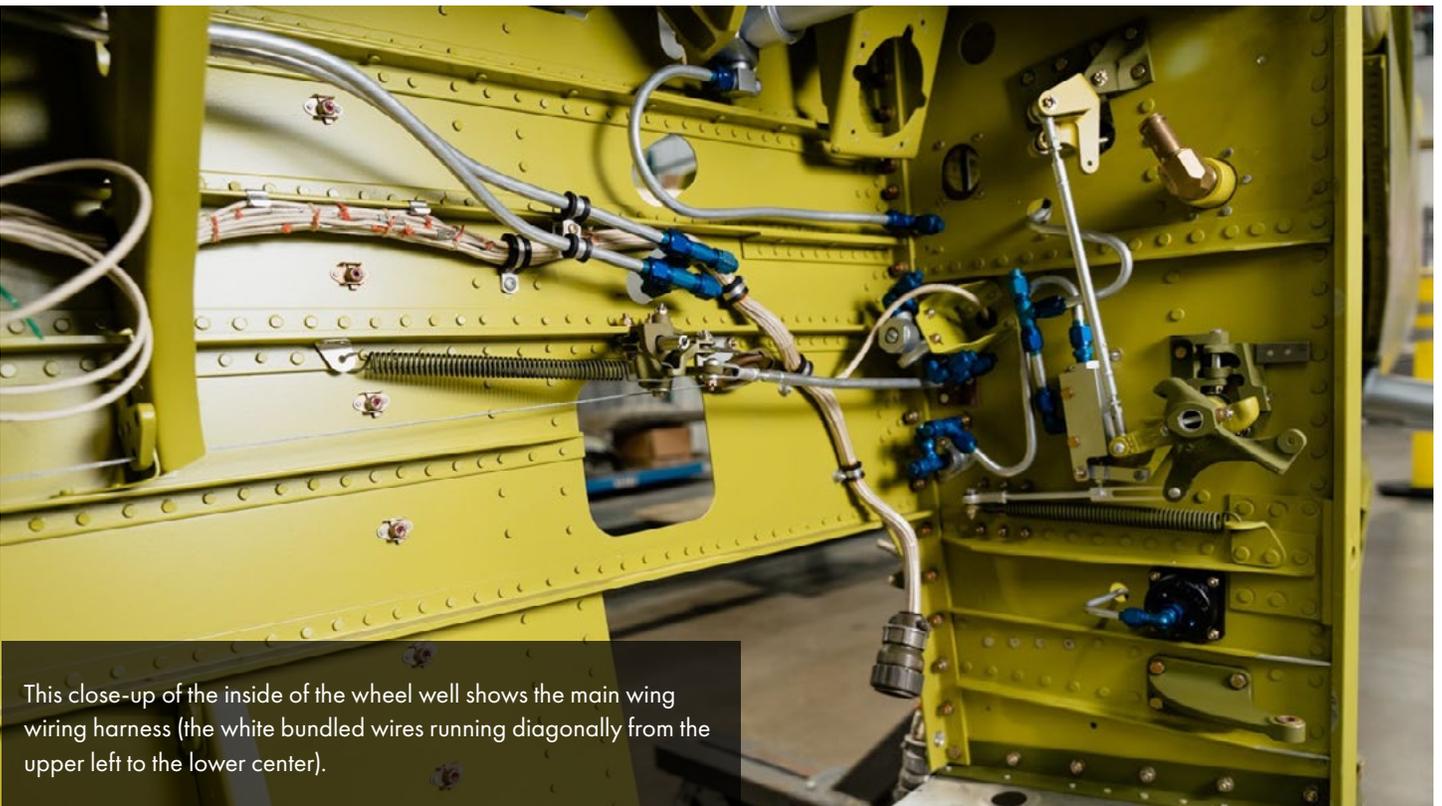
Hydraulic plumbing, wiring, and installation of the fuel tank bladders were the major focus of work on the wings this month.



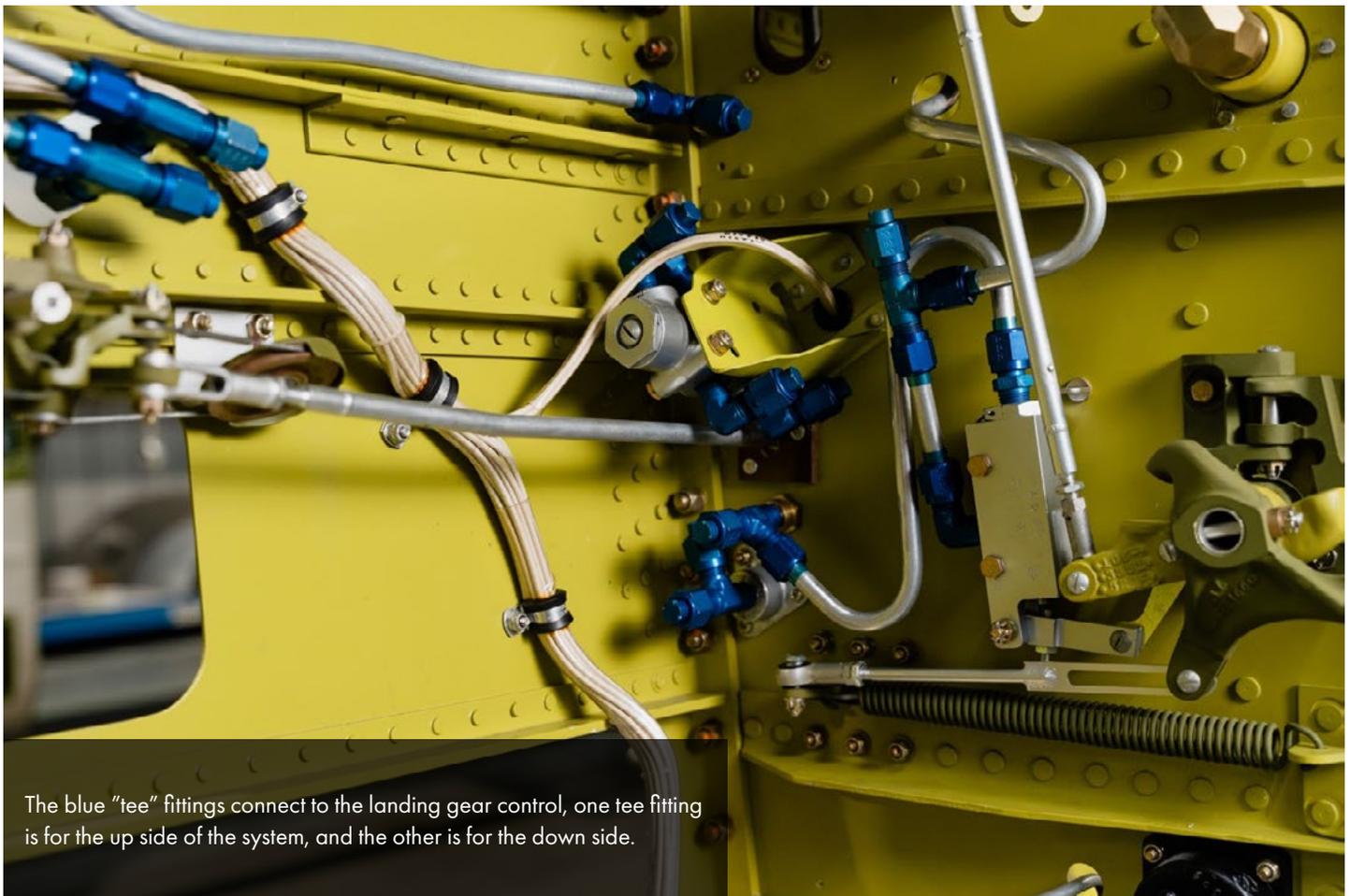
The wing is mounted on a wheeled fixture for ease of access.



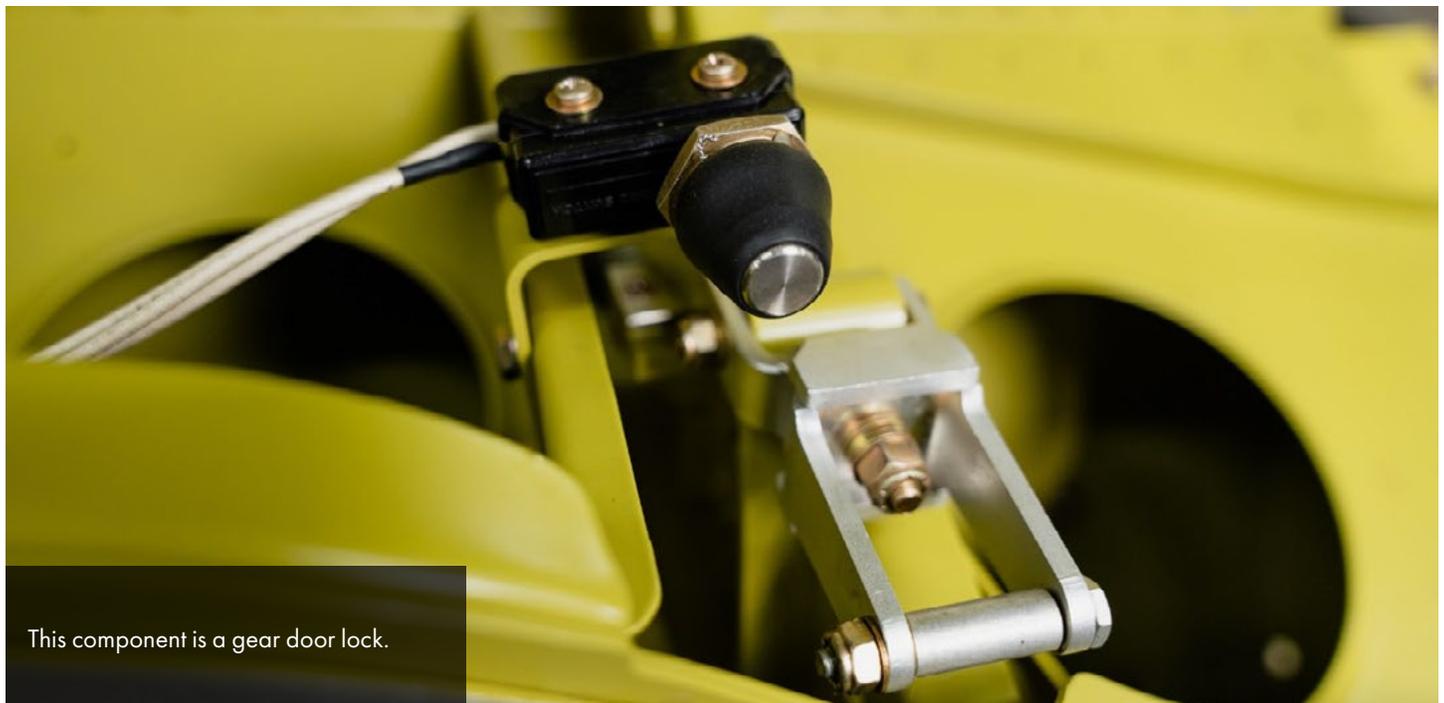
The wheel wells show some of the plumbing and mechanical installations done recently.



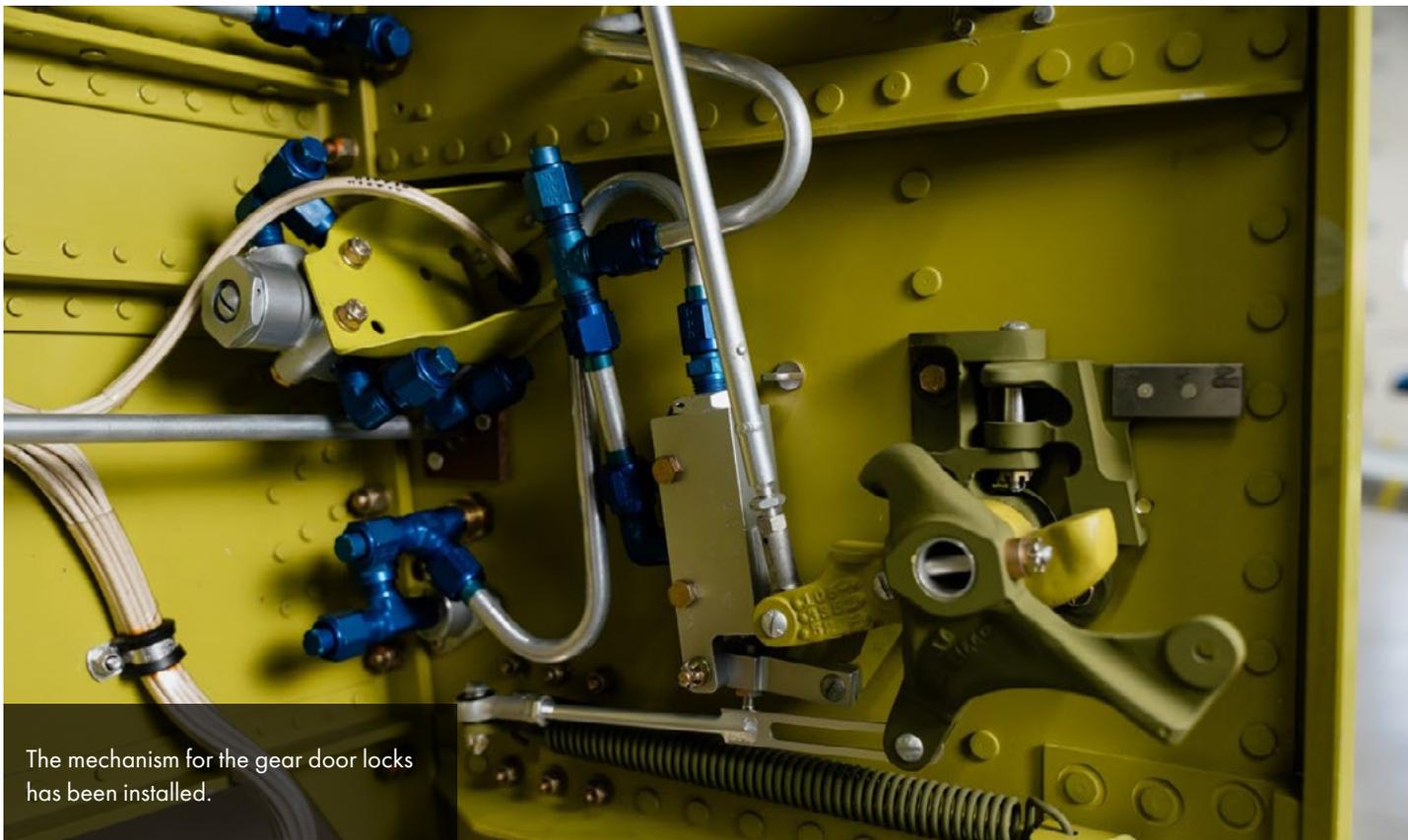
This close-up of the inside of the wheel well shows the main wing wiring harness (the white bundled wires running diagonally from the upper left to the lower center).



The blue "tee" fittings connect to the landing gear control, one tee fitting is for the up side of the system, and the other is for the down side.



This component is a gear door lock.



The mechanism for the gear door locks has been installed.



The main landing gear is installed.



This image shows the landing gear scissors. They keep the tire aligned as the gear compresses and extends as it absorbs ground shocks. The zinc chromate-painted components connect the gear to the gear doors.



Here are the fuel tank bays before the tanks are installed.



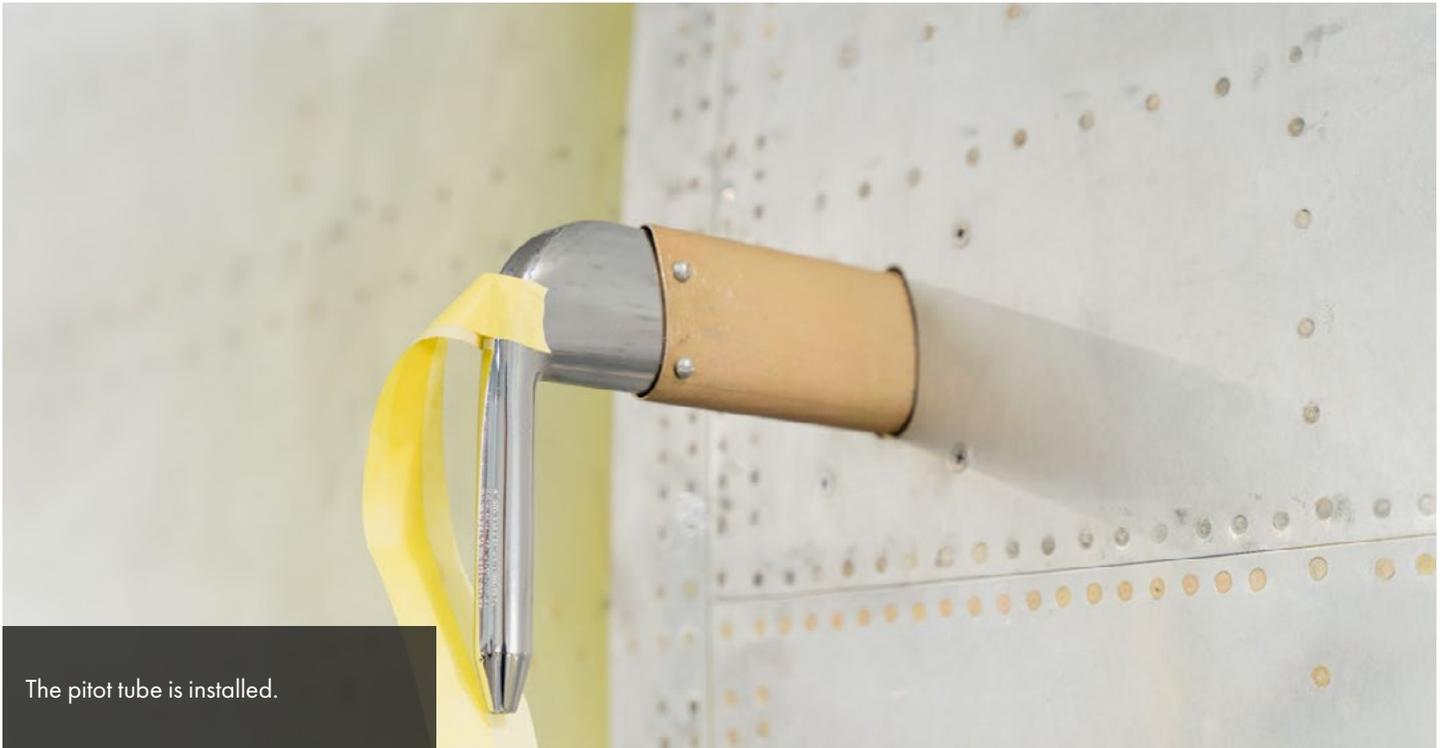
The rubber bladder fuel tanks have been installed.



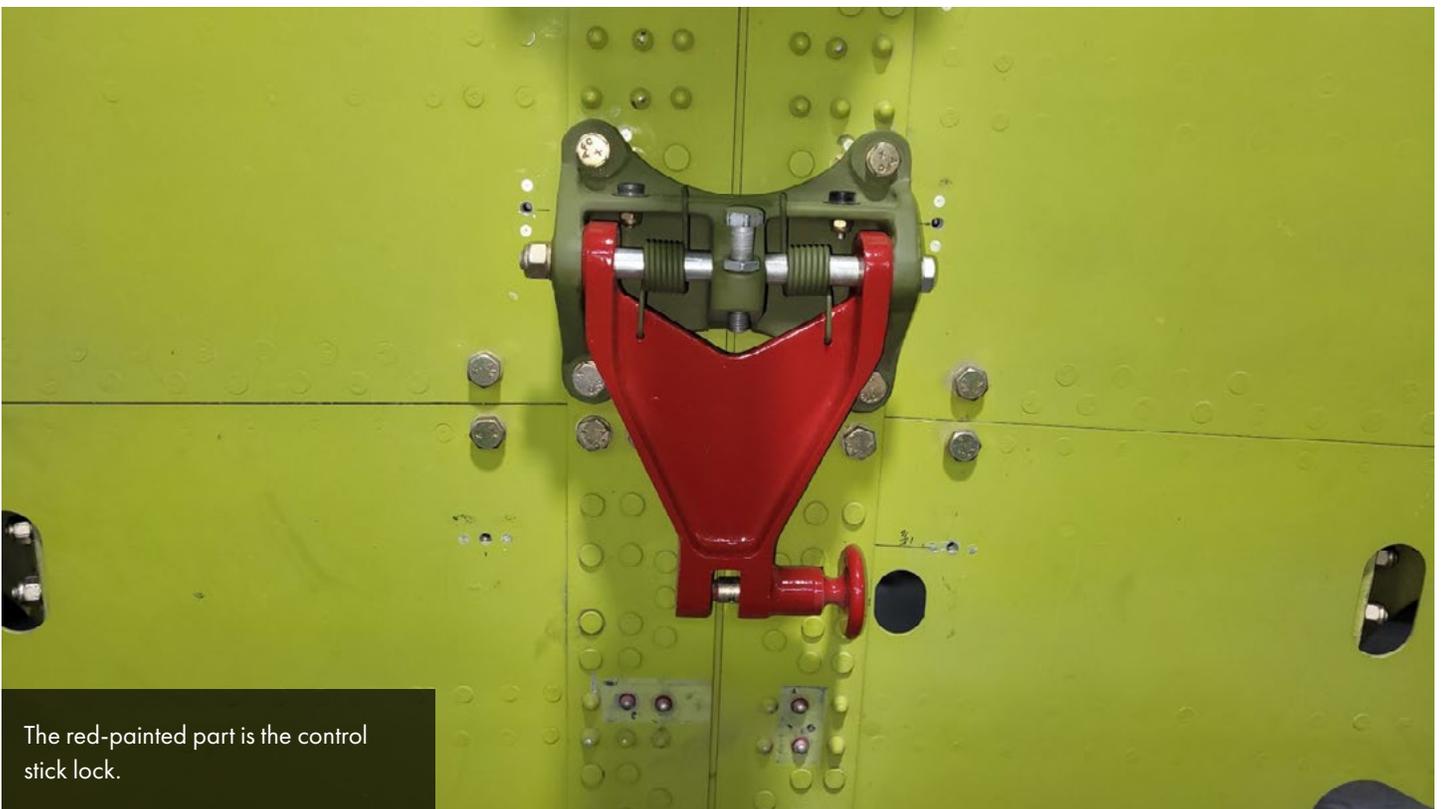
The recognition lights are located under the right wing near the tip.



On the P-51, the three colored lights could be used in combination and could be switched to burn steadily or flash code signals with them. When the switches were in the "DOWN" position, the lights burned steadily. When in the center position they were in the "OFF" position. When in the "UP" position the lights were operated intermittently, as coded signals by means of the "KEY" switch.



The pitot tube is installed.



The red-painted part is the control stick lock.