



Sept/Oct 2019

SEPT/OCT

Dakota Territory Air Museum's P-47 Update

by Chuck Cravens



AIRCORPS AVIATION



The fuselage has been moved out of the main restoration shop while the wings are built.



www.dakotaterritoryairmuseum.com



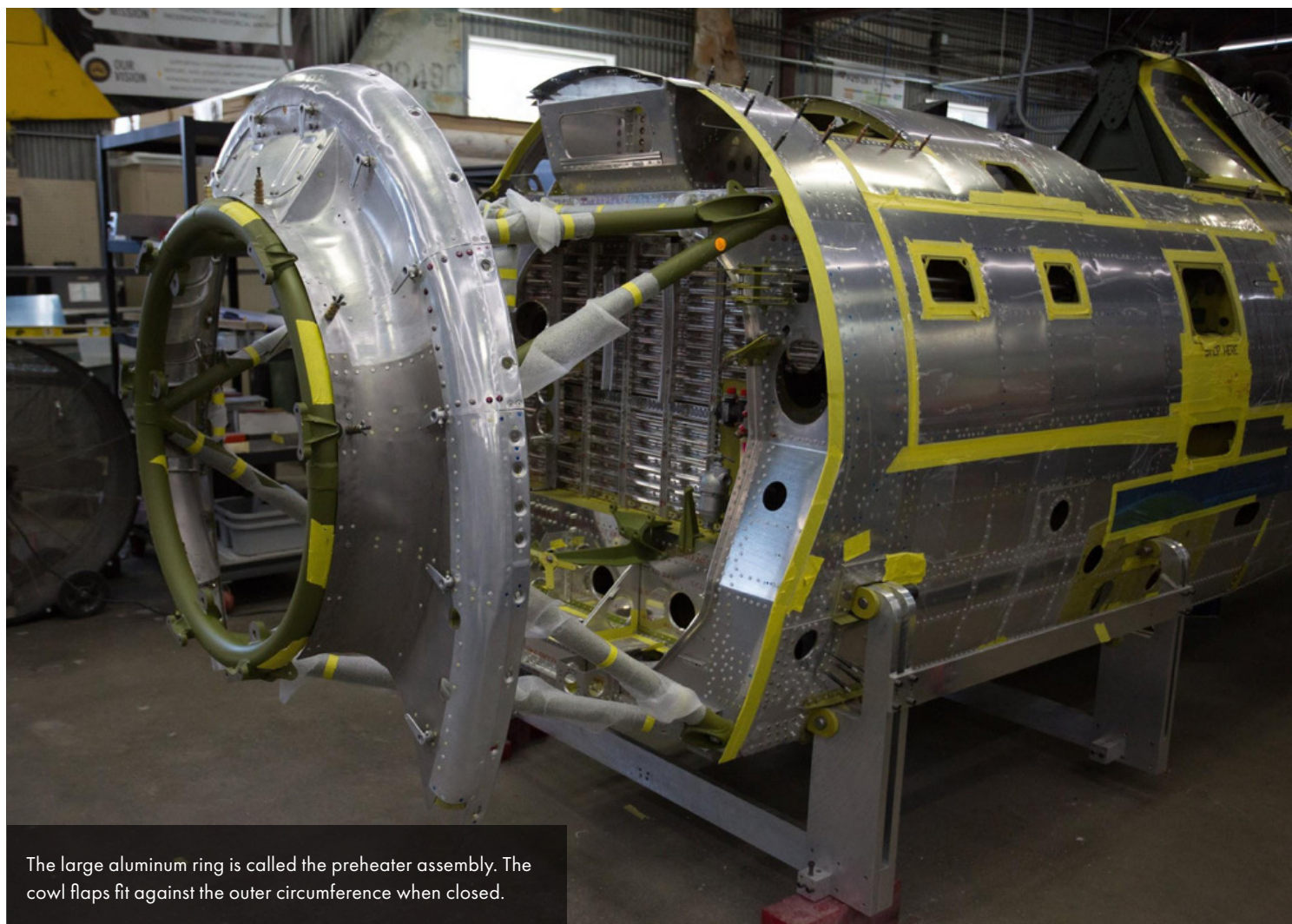
Update

Rivet work on the fuselage was essentially finished this month. The team can now focus on the last large remaining components, the wings. Another interesting bit of progress is the elevator control pushrod.

As always, parts inspection, restoration, and fabrication continue.

Fuselage: Control Surface and Engine Control Systems

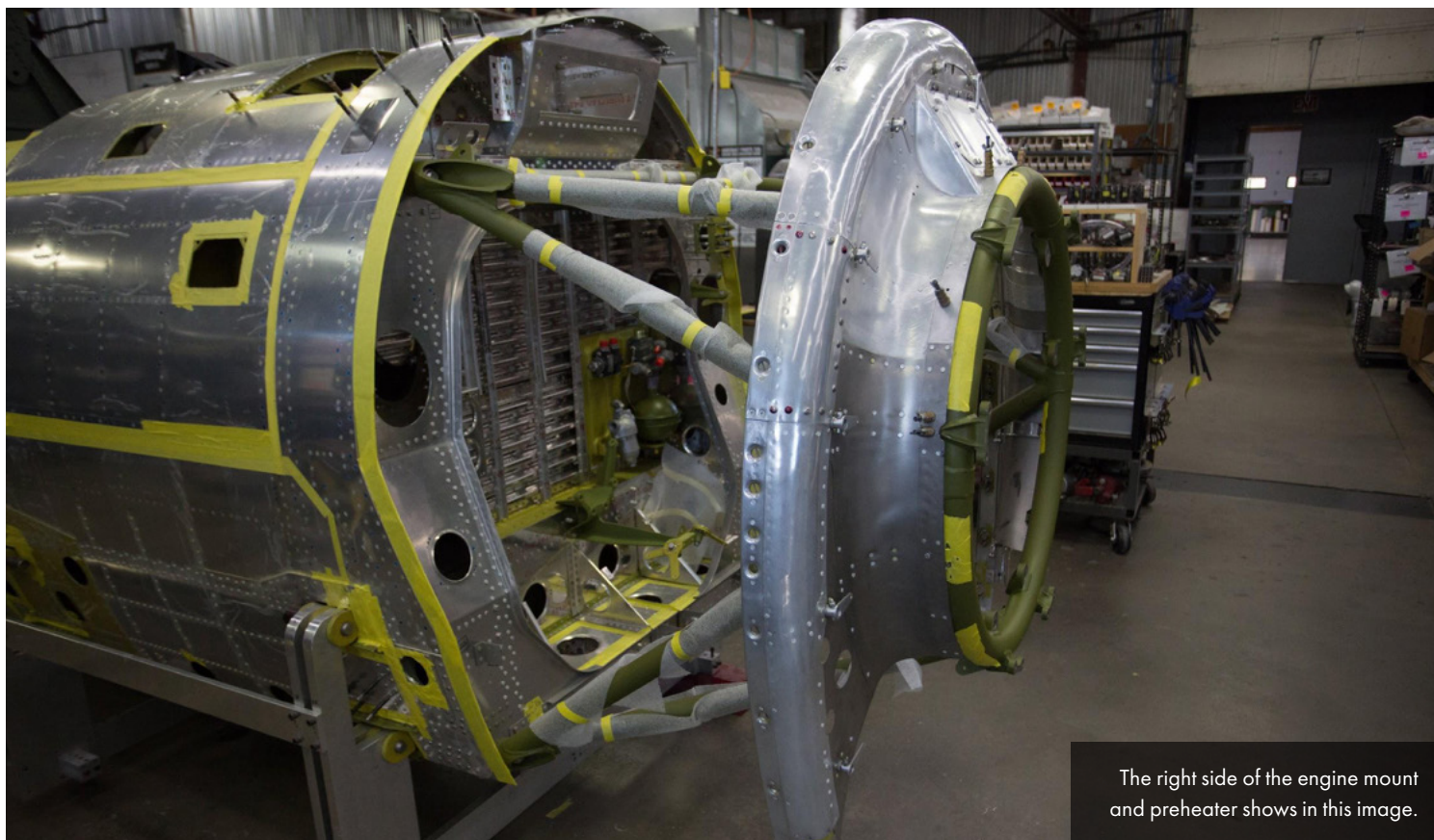
Much of this month's restoration focused on engine control systems and linkages to the elevators and rudder.



The large aluminum ring is called the preheater assembly. The cowl flaps fit against the outer circumference when closed.



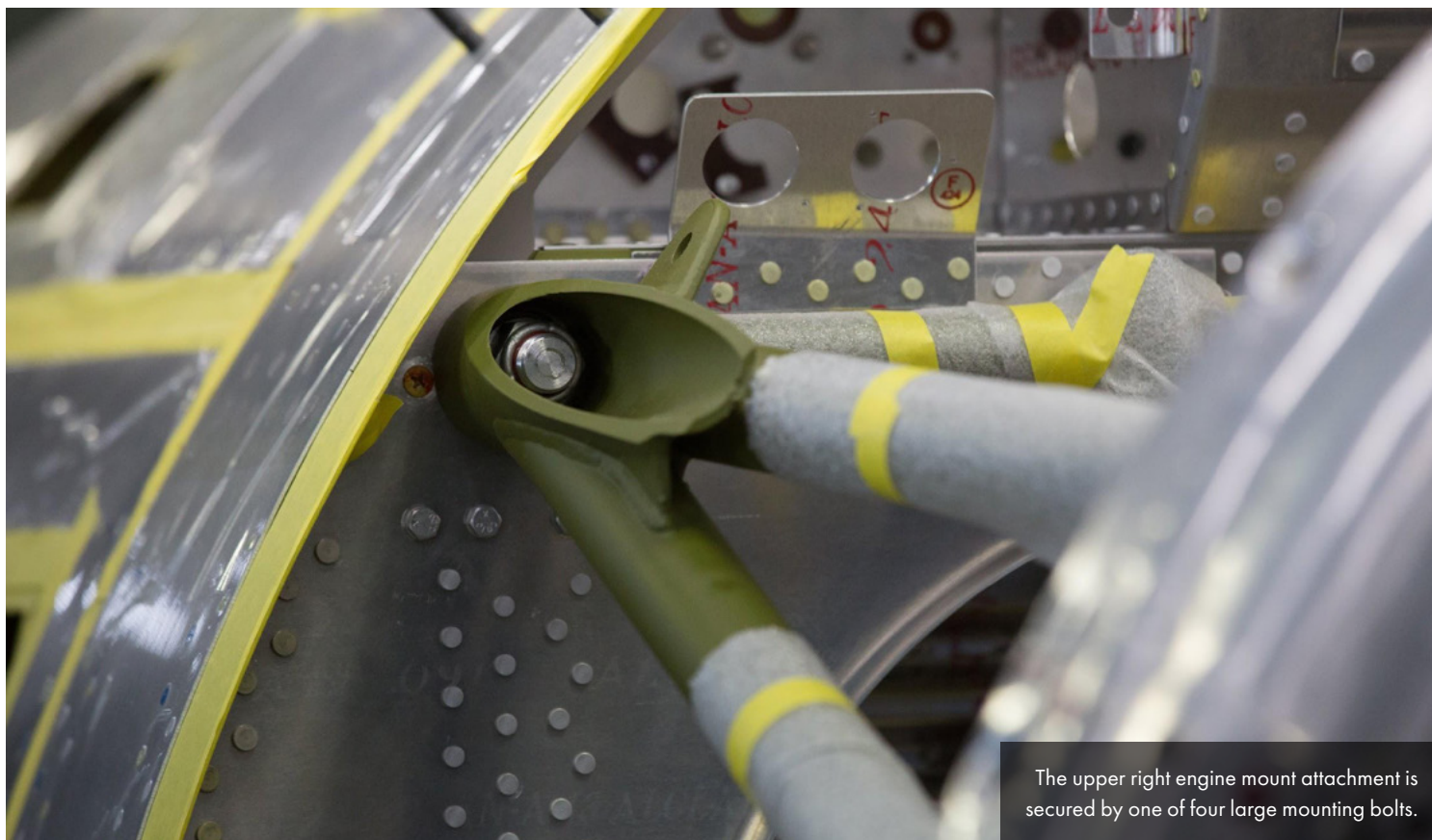
The engine mount protrudes through the front of the preheater assembly.



The right side of the engine mount and preheater shows in this image.



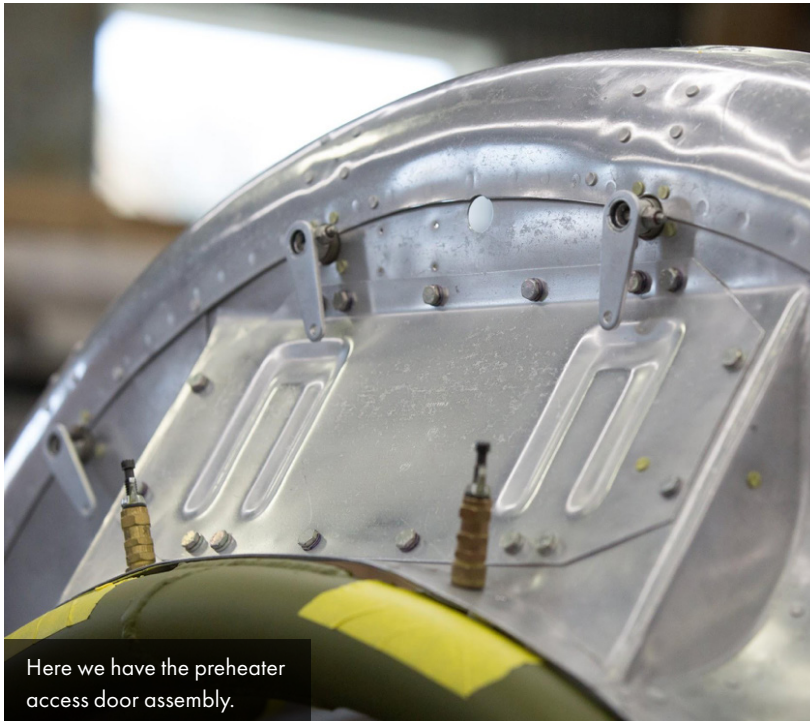
This left side rear view demonstrates how tightly the preheater fits around the mount.



The upper right engine mount attachment is secured by one of four large mounting bolts.



Several accessories are visible here. On the right is the Vickers unloading valve and accumulator, on the top left is the pressure relief valve, and below that on the bottom left is the hydraulic system filter.



Here we have the preheater access door assembly.



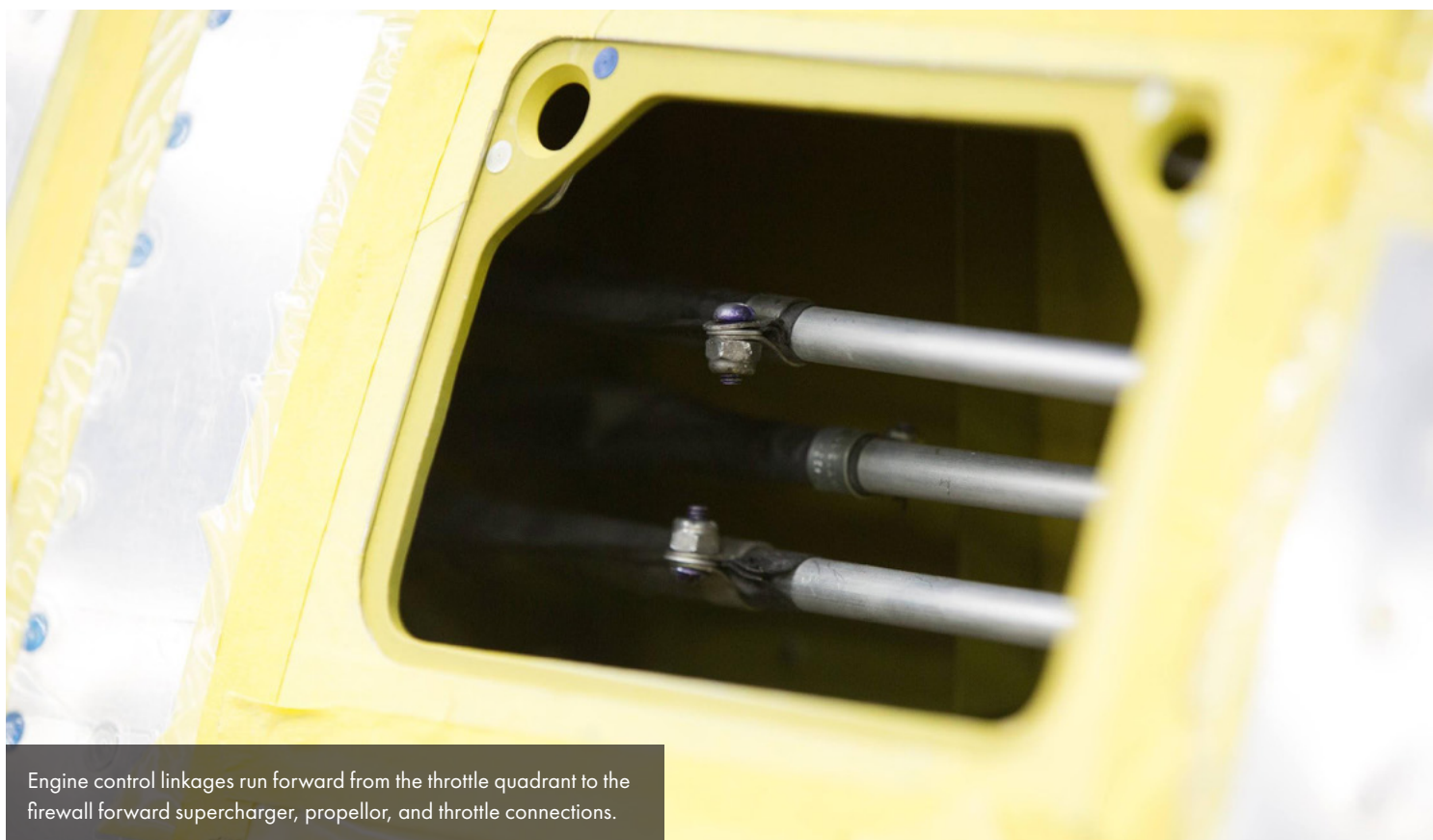
The small bead chain allows ground crewman to let the access door hang open once it was unbolted, without fear of it dropping to the ground or being misplaced.



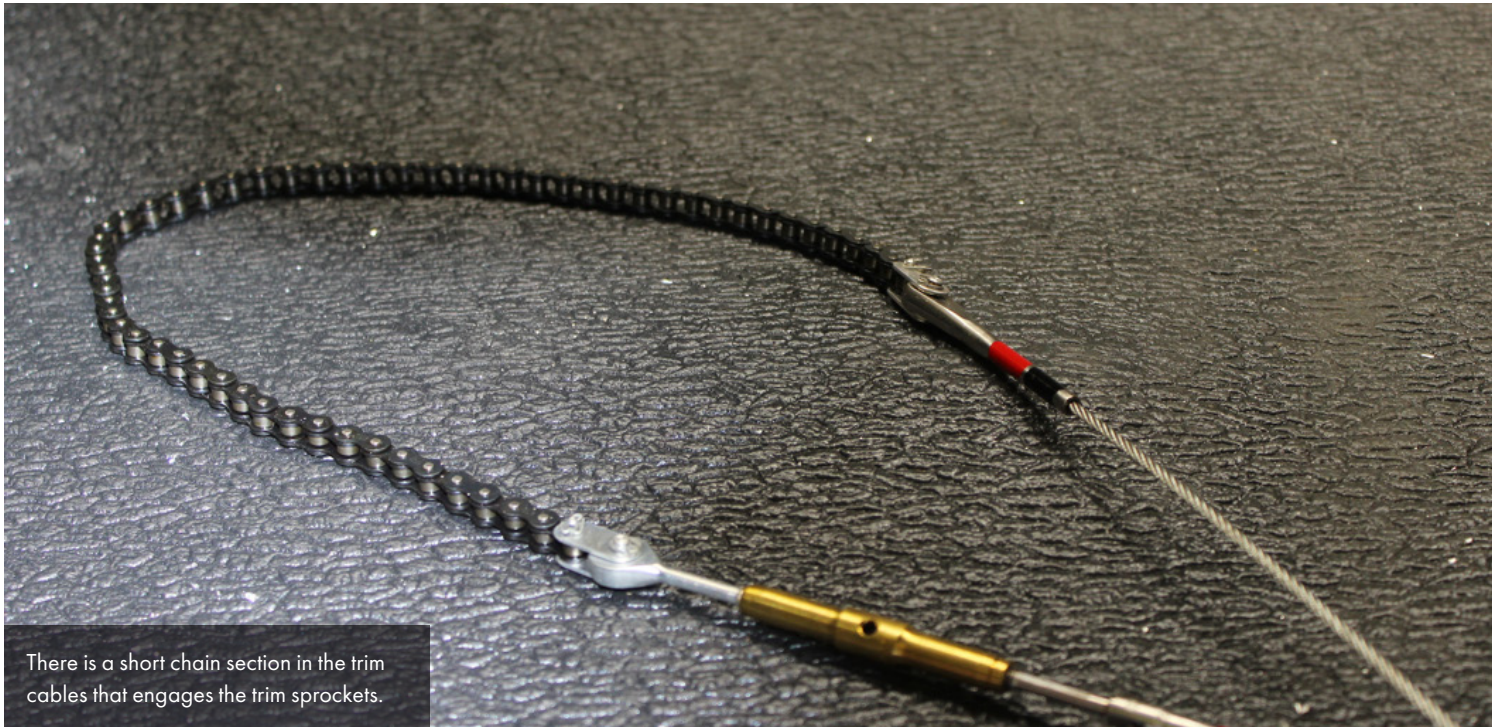
Situated around the inner circumference of the preheater and shown here above the back side of the access door, this linkage connects the cowl flap control levers together.



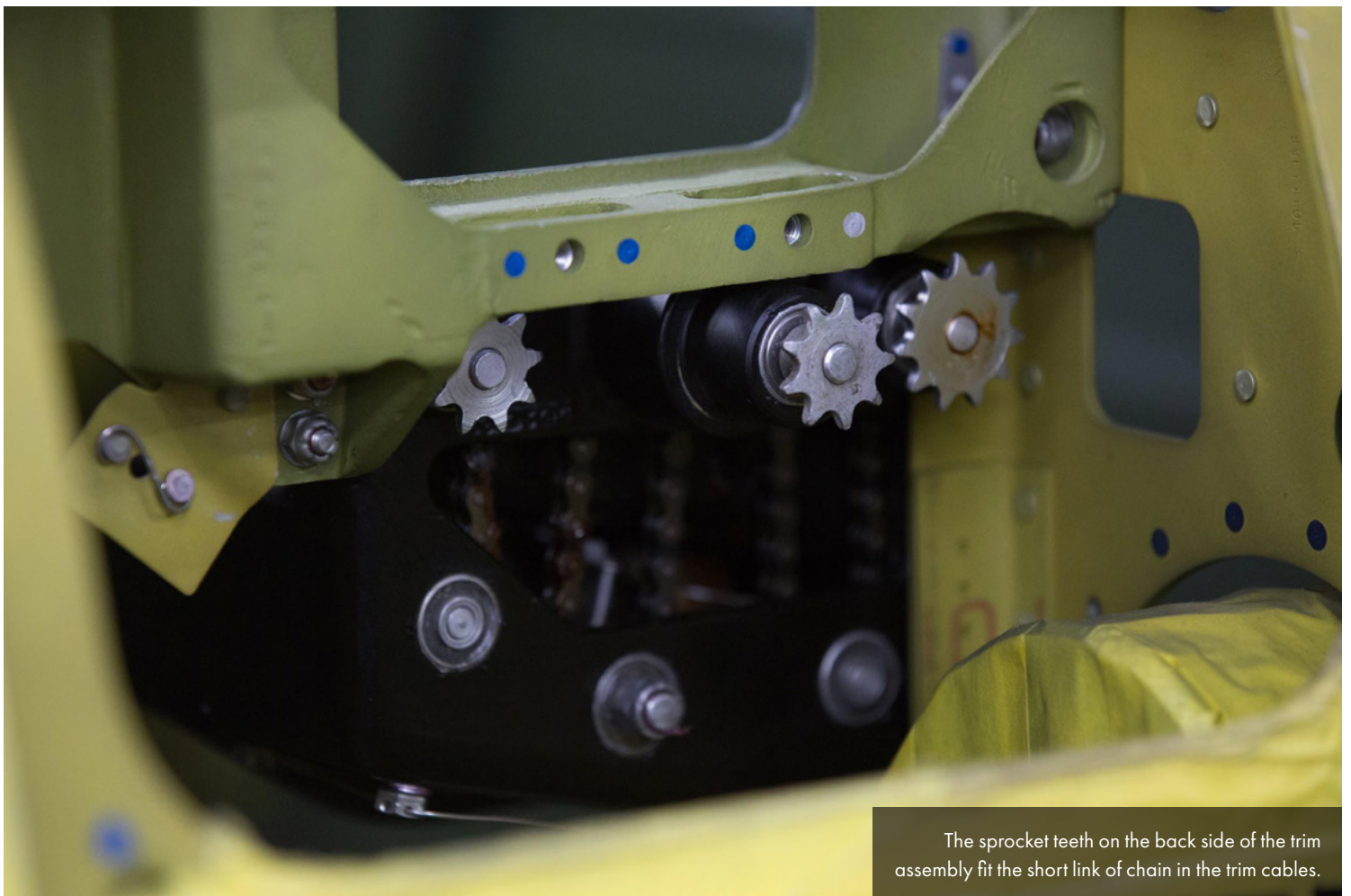
This is one of twelve levers that actuate the cowl flaps.



Engine control linkages run forward from the throttle quadrant to the firewall forward supercharger, propellor, and throttle connections.



There is a short chain section in the trim cables that engages the trim sprockets.



The sprocket teeth on the back side of the trim assembly fit the short link of chain in the trim cables.



Elevator Pushrod

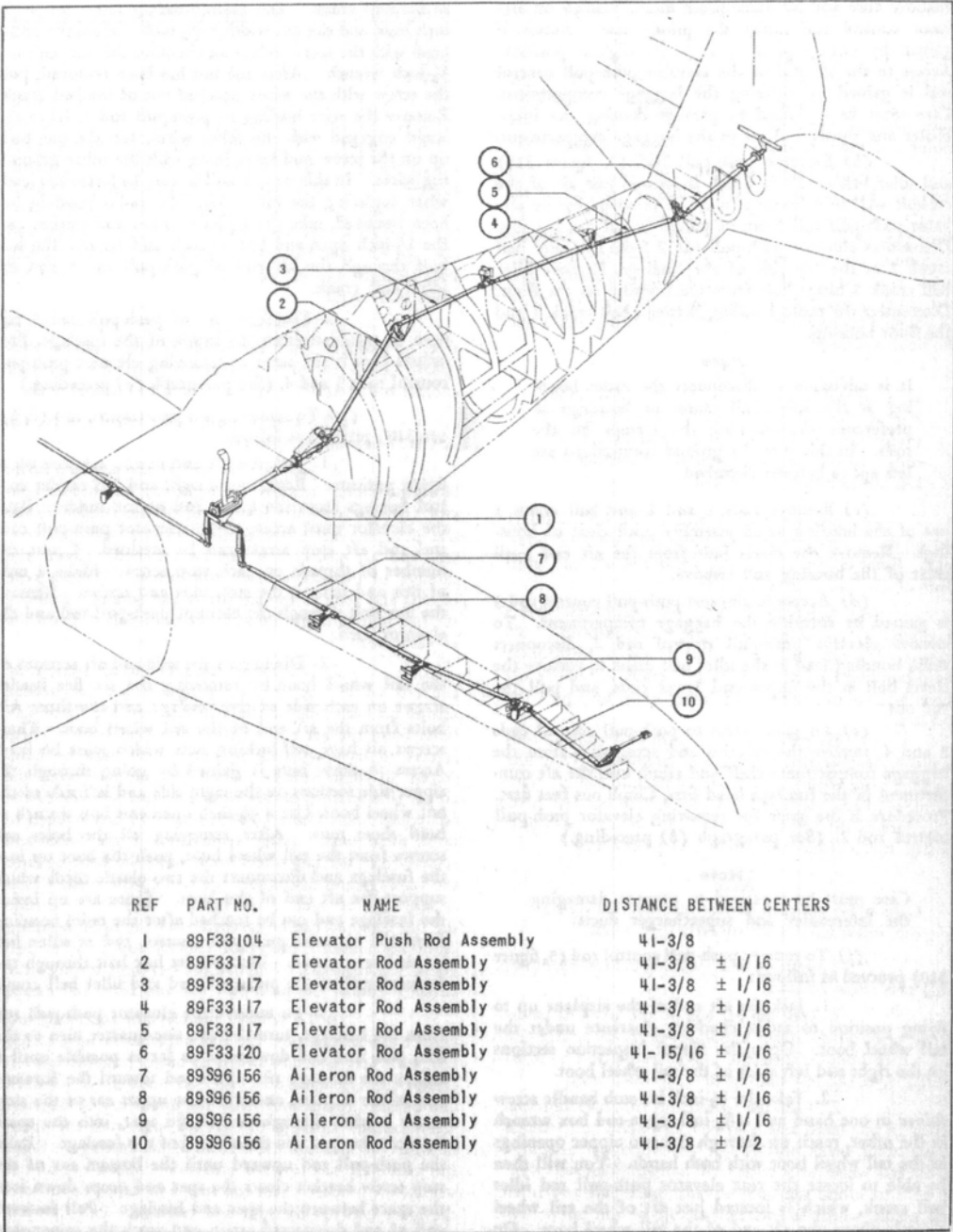
The Thunderbolt is a complicated airframe. A good example of this is the circuitous route the elevator pushrod takes from the control stick to the elevator itself. It needs to run above all the ducting, the supercharger, and the intercooler; all of which take up most of the space in the lower aft fuselage. The linkage passes through 5 different levers that change the direction of motion.

In comparison, a Mustang has a simple set of cables to control the elevator.

This drawing from the Erection and Maintenance Handbook for the P-47 shows the route the elevator pushrod takes from the stick to the elevators.

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Section IV



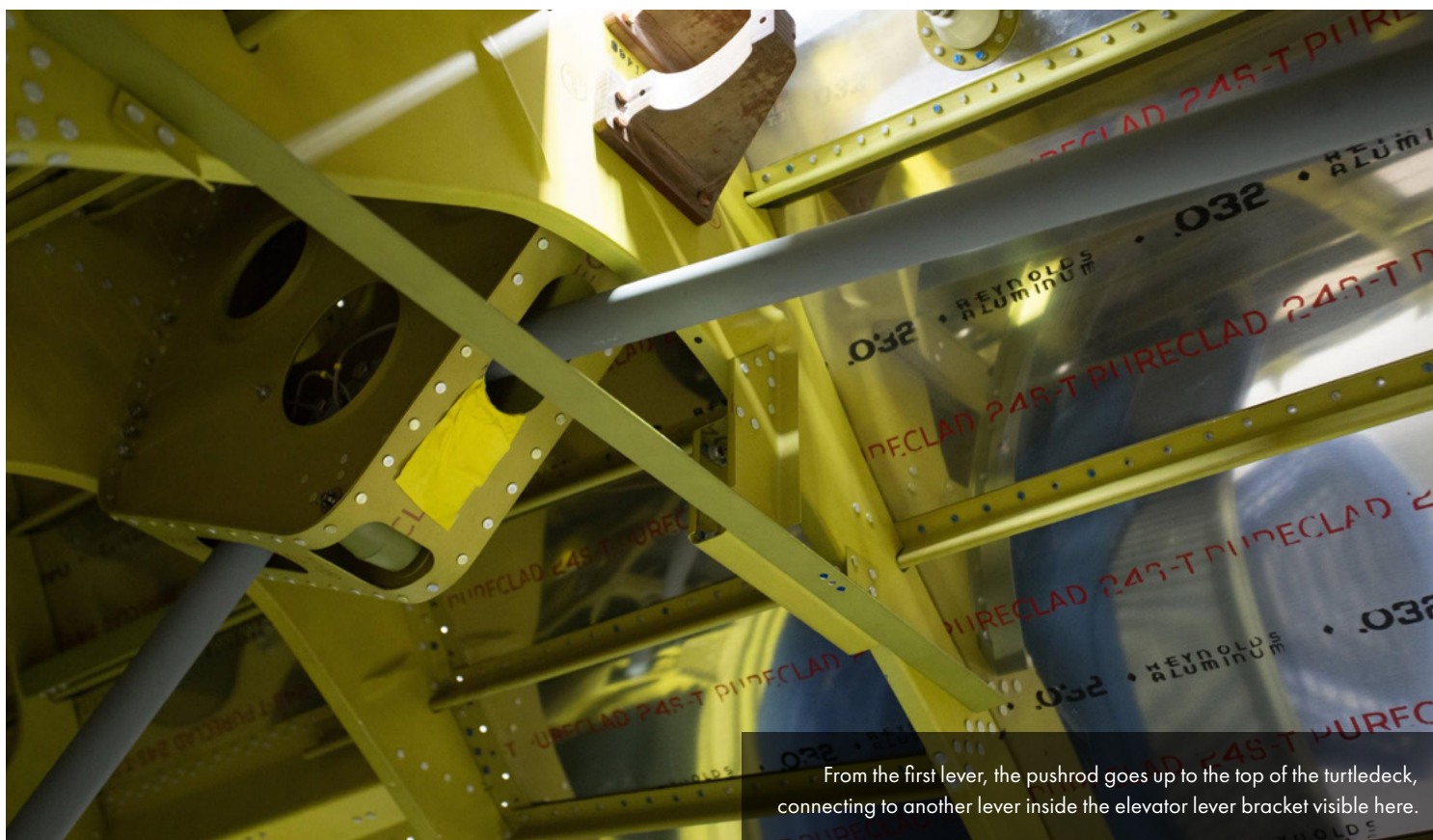
Revised 20 March 1945

Figure 310—Control Rod Diagram

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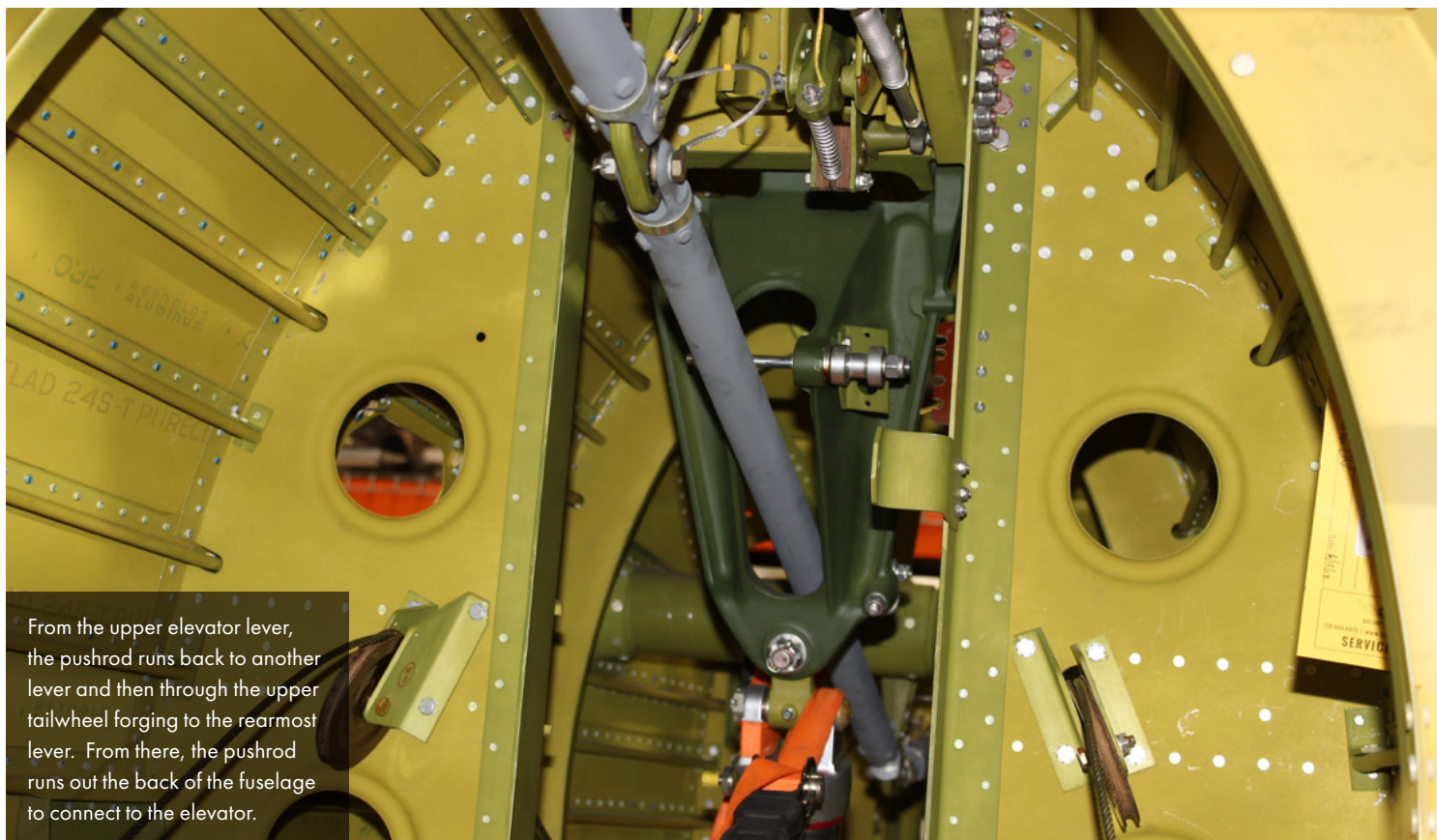
The elevator pushrod runs from the cockpit floor to the first elevator control lever. It connects to the control stick, which would be to the right in this photo. Just the rear end of the lever is visible.



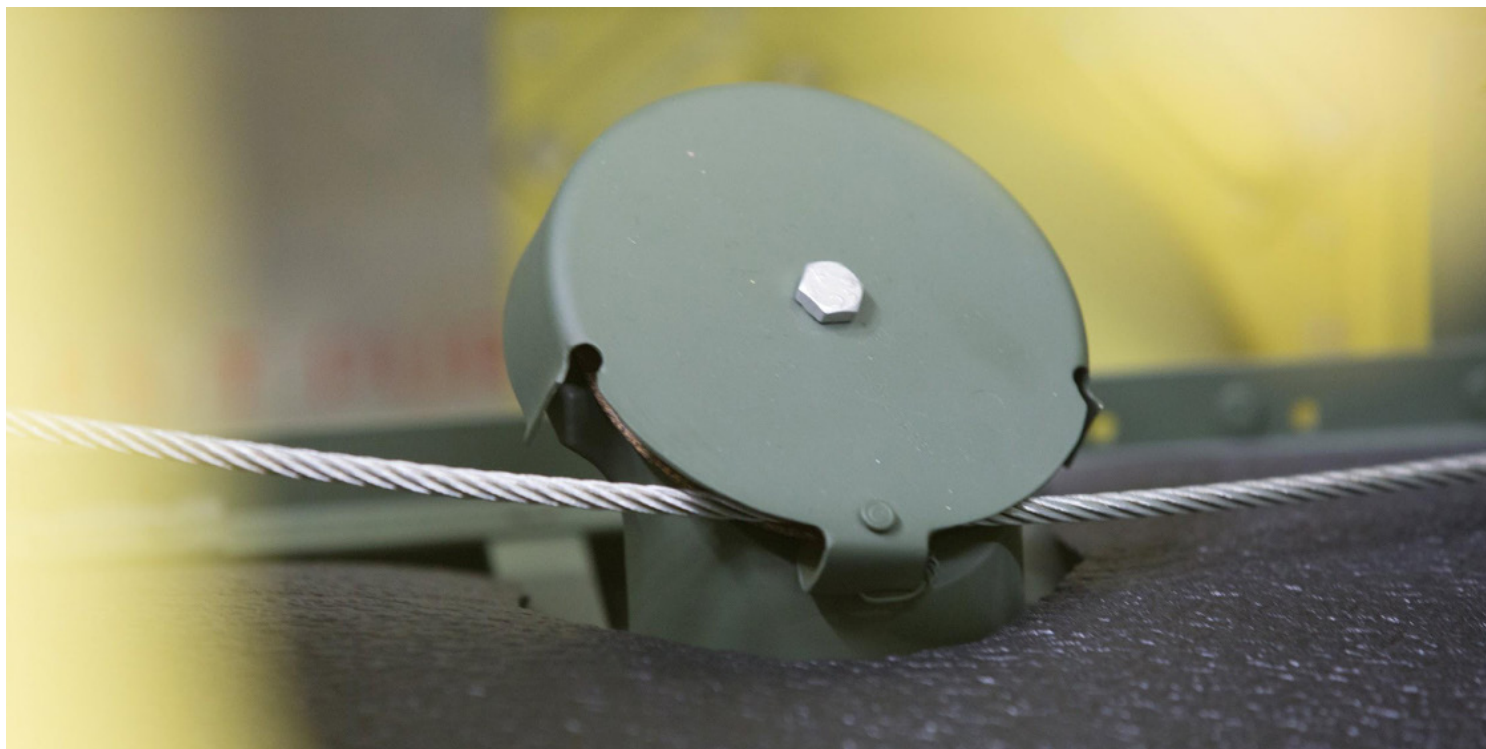
From the first lever, the pushrod goes up to the top of the turtledeck, connecting to another lever inside the elevator lever bracket visible here.



The pushrod continues rearward to the upper fuselage elevator lever. This assembly suspends the elevator pushrod above the ducting, intercooler, and turbo supercharger that occupy the lower fuselage.



From the upper elevator lever, the pushrod runs back to another lever and then through the upper tailwheel forging to the rearmost lever. From there, the pushrod runs out the back of the fuselage to connect to the elevator.



This rudder cable pulley is mounted to the cockpit floor. The rudder control system is all cable, and clears the aft fuselage equipment by routing closely to the lower fuselage sides.

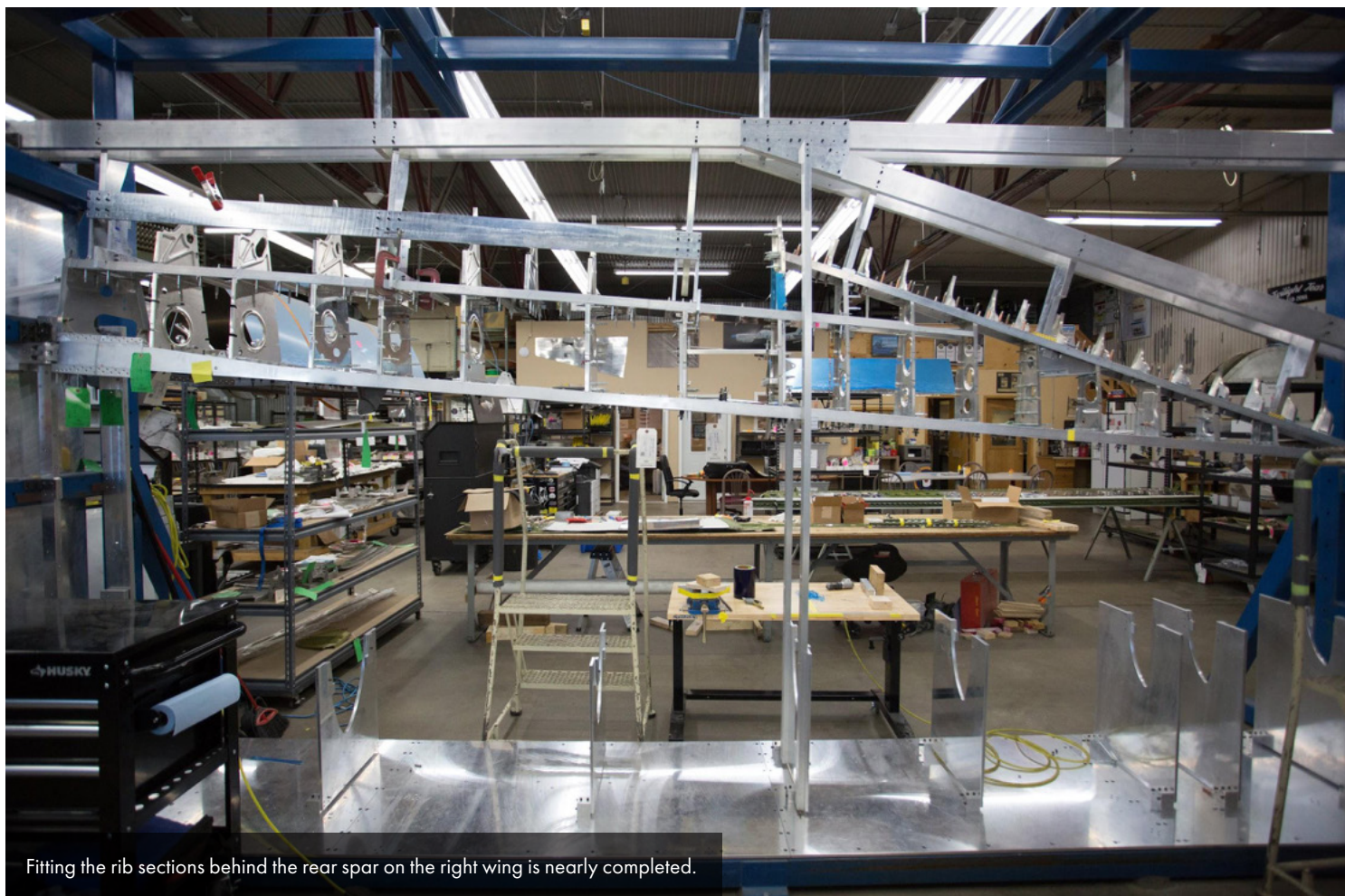


On the upper fuselage there is an access door that opens to the phenolic mounting base for the SCR 274 comm radio antenna.



Wing Progress

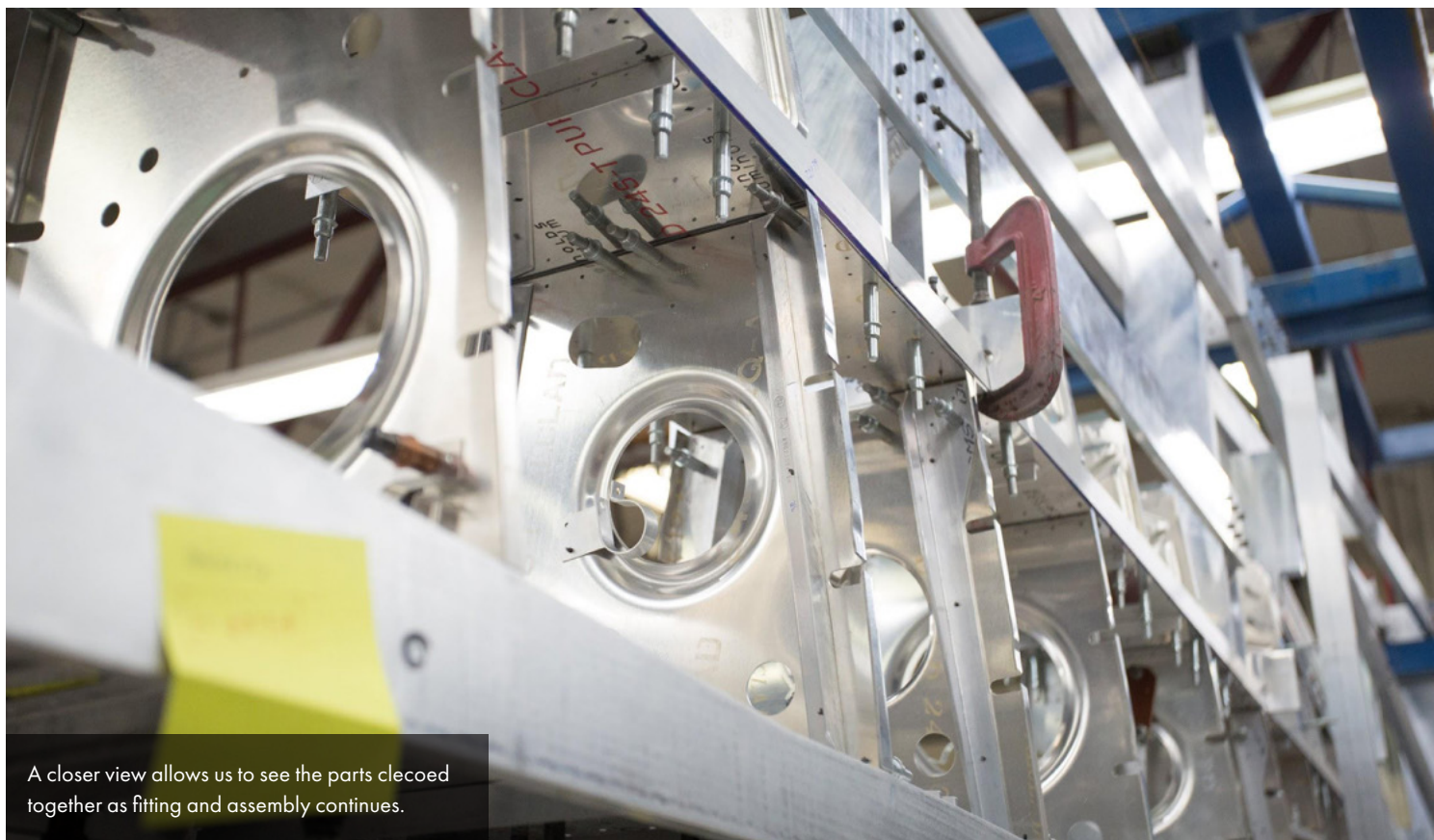
As the last remaining very large component assemblies for the P-47, the wings are getting priority this month. Because there are so many parts in these wings, visual progress isn't as obvious as it would be with a simpler structure.



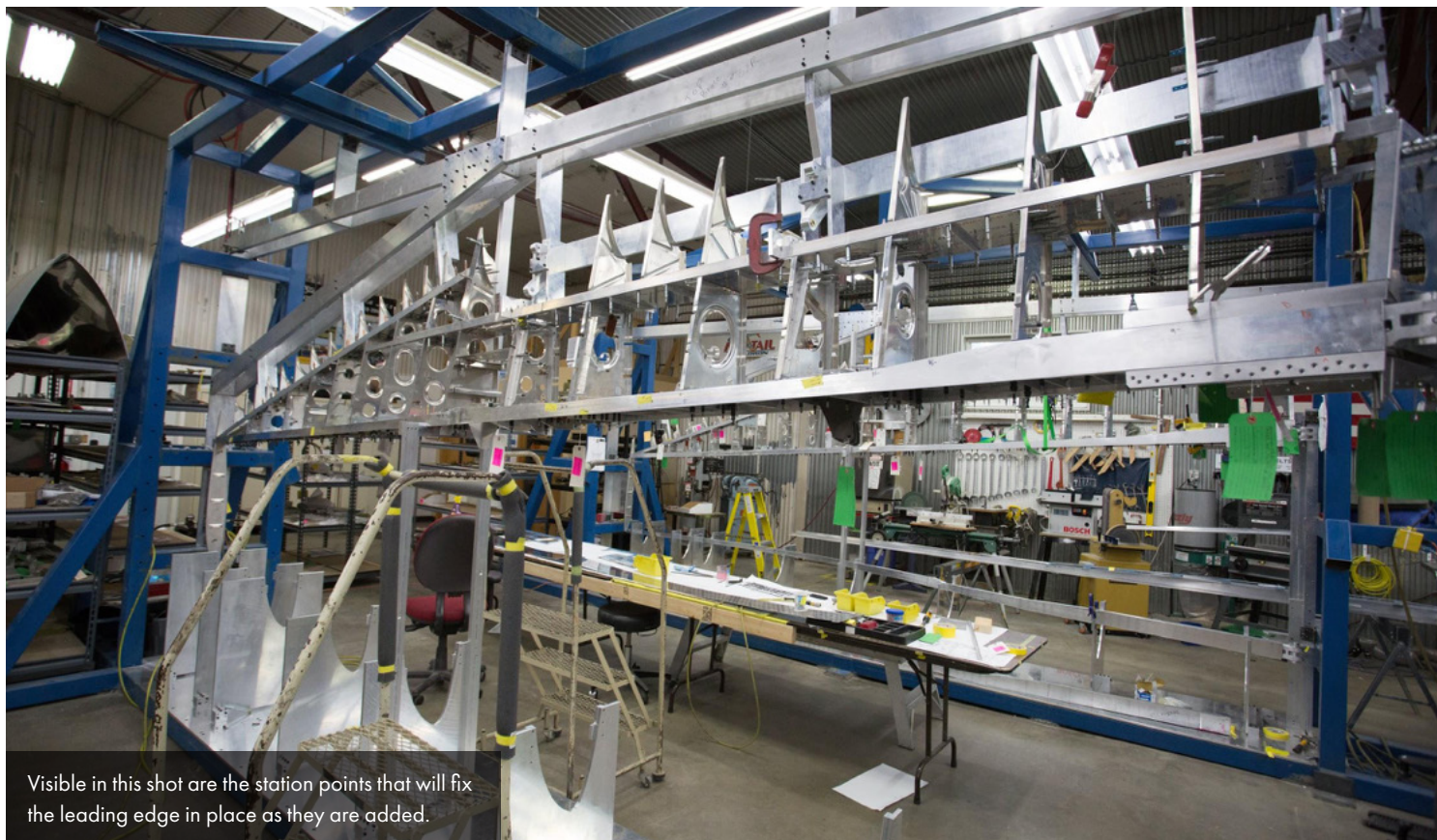
Fitting the rib sections behind the rear spar on the right wing is nearly completed.



The left wing is at the same stage of assembly.



A closer view allows us to see the parts clecoed together as fitting and assembly continues.



Visible in this shot are the station points that will fix the leading edge in place as they are added.

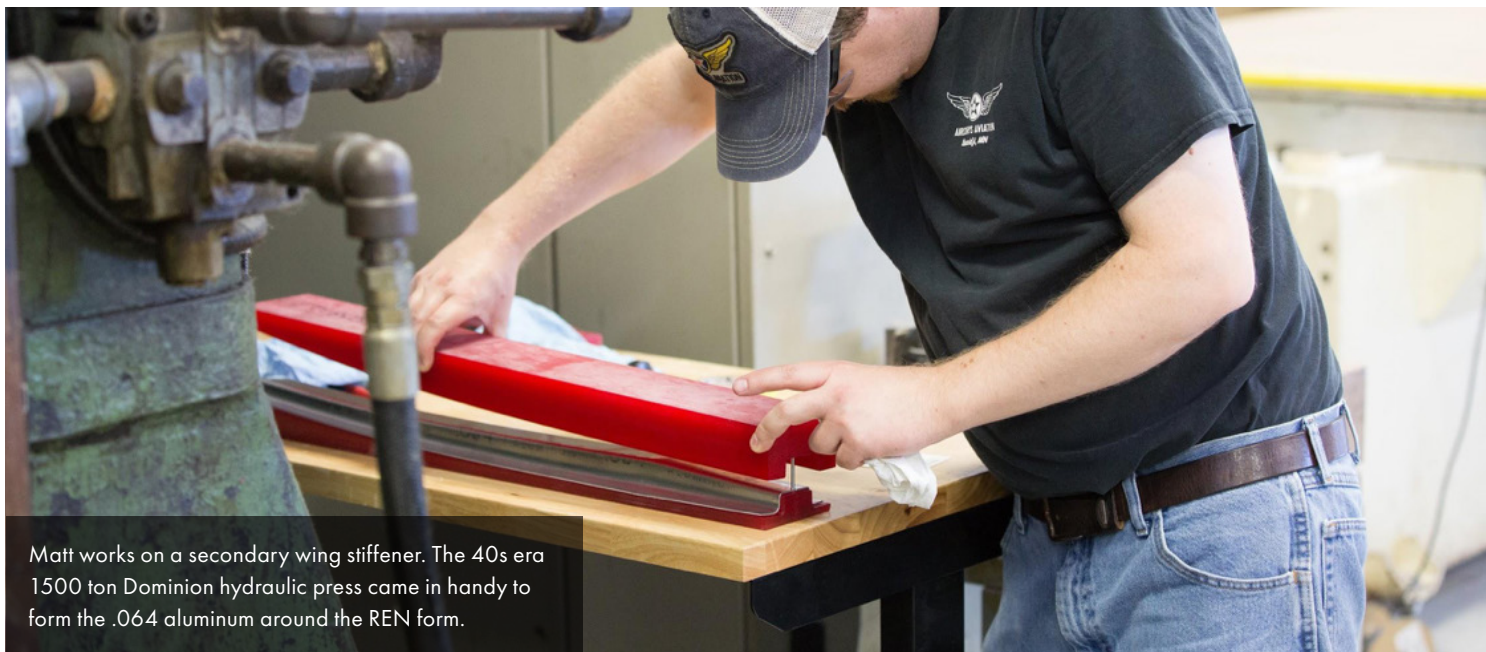


Clamps, straps, and clecoes hold the spar to the rib webs.

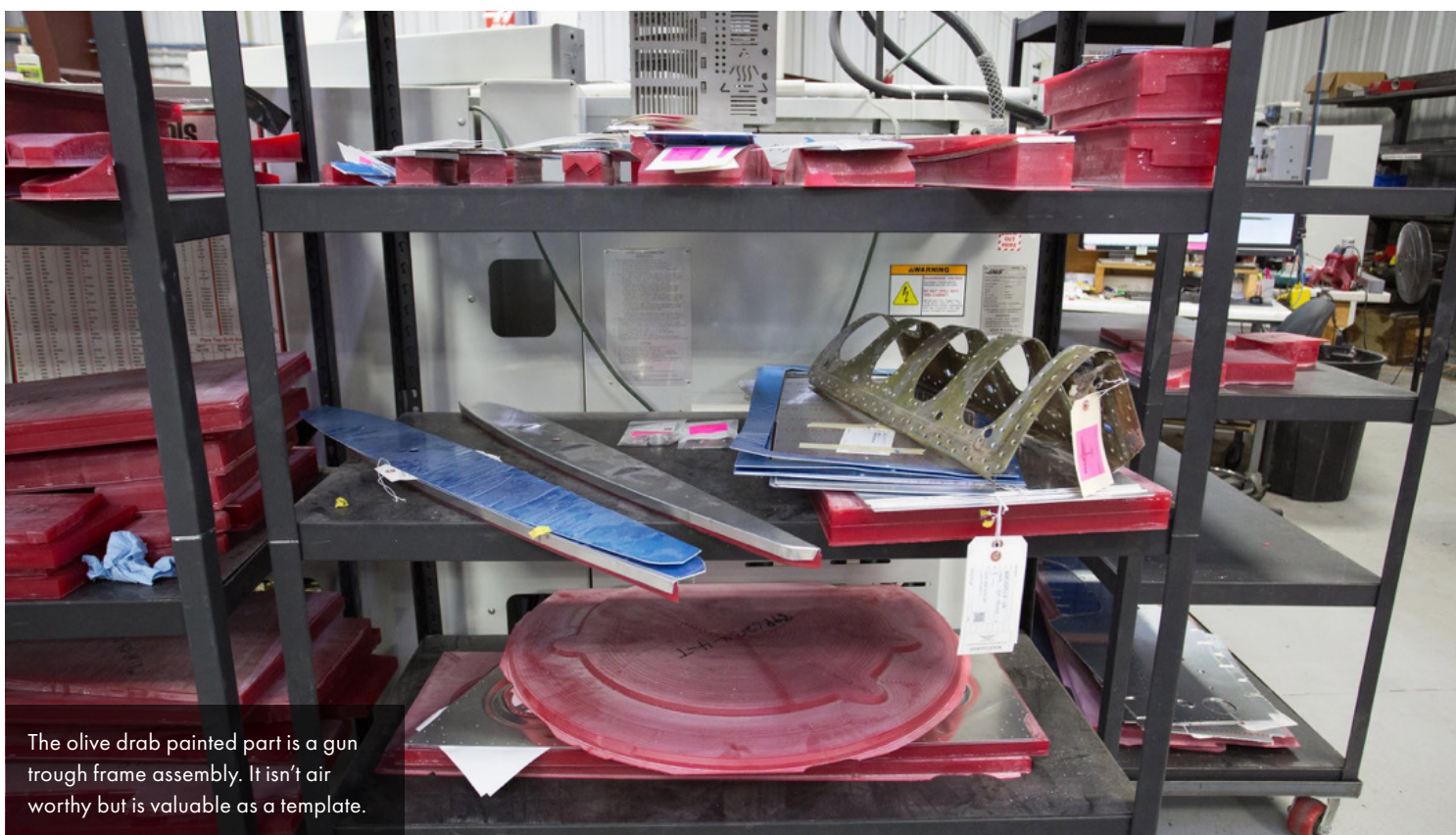


Parts

Though much of the primary assemblies are well along, or near completion, there are still plenty of parts that must be readied for installation later.



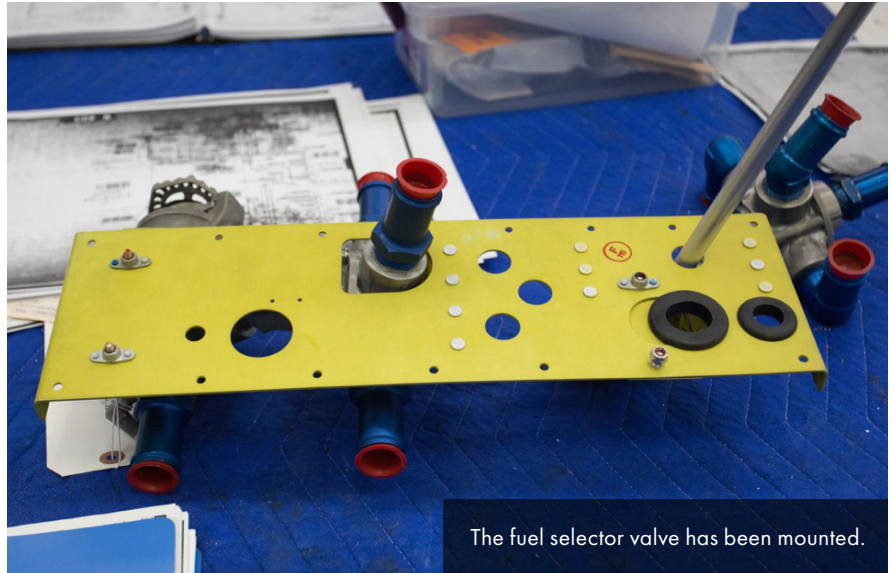
Matt works on a secondary wing stiffener. The 40s era 1500 ton Dominion hydraulic press came in handy to form the .064 aluminum around the REN form.



The olive drab painted part is a gun trough frame assembly. It isn't air worthy but is valuable as a template.



This is a fuel selector valve.



The fuel selector valve has been mounted.

The rod running upward on the right side of the image controls the fuel selector through a small gear box. This assembly is called the center panel rear crossie to auxiliary tank. It mounts to the bottom of the rear wing crossie.



This parts rack holds wing rib parts to be installed later.



History

In the June/July update we began listing the missions the 5th Air Force was flying during 42-27609's combat career. From a publication of the Center for Air Force History, Kit Carter and Robert Mueller's *Combat Chronology 1941-1945*, I found the 5th Air Force's missions for the dates that our P-47 could have been in combat. The mission list for 42-27609's active period is long, so I have sectioned the list into three parts. The June/July list was the first installment of three.

This second listing will be the missions flown from July 1st through August 15th, 1944

Note that on 15 June, 1944 the 5th Air Force was incorporated into the Far East Air Force (FEAF). FEAF was formed with jurisdiction over the Fifth and Thirteenth AFs with General Kenney in overall command.

The air attacks on Wewak in July denied the enemy the ability to attack the Allied landing further west along the coast.



Biak under heavy air attack, 1944,
photo Wikipedia.org

This period saw sustained air assaults against Japanese bases in the Netherlands, East Indies, and Allied landings on Biak, Noemfoor, and Sansapor. The P-47s provided escort to the A-20s, B-25s, and B-24s, as well as flying ground attack missions during this period.

Included are missions that either definitely included P-47s (by naming the type), or possibly included Thunderbolts because either the acronym FB for fighter bombers or fgtrs (fighters) was used. There were other missions in this busy period that only listed HB (heavy bombers) or MD (light bombers) as participating aircraft. Acronyms, punctuation, abbreviations,



and grammatical choices in the listing are those of the original authors. The bolded dates are an addition by me, in the interest of visual clarity.

7/1/44 FEAF B-24's bomb A/F at Namlea and hit shipping throughout the Amboina-Ceram-Boeroe area. Other B24's, B-25's, A-20's and FBs hit A/F, AA guns, bivouacs, supplies, and Japanese defenses on Noemfoor I in preparation for Allied landings on 2 Jul. A/F at Manokwari is also bombed. Bmrs and ftrs continue to pound Wewak coastal area; many of the strikes are in conjunction with Navy PT boats. A few B-24s on armed rcn bomb tgts on Yap and Peleliu.

7/2/44 FEAF B-24's, B-25's, and A-20's, and FBs, along with naval guns, bombard Kamiri area of Noemfoor I, after which Allied amphibious forces land with little opposition and secure beachhead. Other B-25's attack barges near Manokwari.

7/3/44 FEAF P-38's and B-25's hit personnel and supply areas S of Kamiri and spt invading ground forces as they push E along the N coast of Noemfoor I. Efman I, Manokwari, Biak I are attacked by B-24's, A-20's, and ftrs. Wewak coastal area continues under sustained air attack as Allied airplanes pound tgts including forces at Brandi Plantation and supplies and a bridge near But. HBs hit airstrips, AA positions, and T/Os in Yap group, at Woleai, and at Peleliu. Larat and Saumlakki are also bombed.

7/4/44 FEAF A-20's continue spt of Allied ground forces pushing E and SE from Kamiri A/F area of Noemfoor I and taking Kamiri village and Kornasoren A/F. P-47's strafe T/Os at nearby Biak I while B-24's bomb A/F at Efman I. Other aircraft bomb and strafe troops E of Maffin Bay. Personnel areas at But and Dagua and barges at Wewak Pt are also attacked. B-24's hit shipping and A/Fs in Amboina-Ceram area. B24's bomb Yap and hit airstrips on Woleai, Sorol, and Peleliu.

7/5/44 FEAF In area around Wewak A-20's and FBs hit dumps at Dagua and attack barges during 4/5 Jul. B-24's bomb airstrips and AA guns at Yap and Woleai; Sorol and Paliau I are also hit. Light strikes are flown in spt of troops on Noemfoor I and against barges, A/Fs, and troop concentrations at Efman and Biak Is and at Moemi, Manokwari, and in Wakde area.

Republic P-47D-23-RA Thunderbolt of the 35th Fighter Group, 39th FS and P-38, PTO

7/6/44 FEAF B-25's, A-20's, and FBs continue to pound Wewak area, concentrating on troops S of Matapau. B-25's and FBs sweep N coast of Vogelkop Peninsula and offshore islands, hitting T/Os. Other FBs hit Manokwari area and buildings at Ransiki, Moari, and Oransbari. A/Fs, gun positions, comm tgts, and supply dumps in area around Babo are hit by B-24's, A-26's, A-20's, and P-38's. B-24's bomb town and warehouse area of Yap and a few hit A/F at Woleai.

7/7/44 FEAF B-24's and A-20's bomb Moemi and Nabire A/Fs; supply dumps along Wiske R are also attacked. A few FBs and RAAF aircraft attack barges, gun positions, and troops along coast in Wewak area. B24's bomb Yap, Sorol I radio station, and runway on Woleai

7/8/44 FEAF MBs and FBs hit fuel dumps, barges, villages, and various other tgts at Babo, Fak Fak, Sagan, Kokas, at mouth of Maroe R, along Cape Kariensore, and W of Namber. B-25's, A-20's, FBs and a few HBs attack Woleai, hitting barges, gun positions, and comm tgts.

7/9/44 FEAF A-20's and FBs pound shipping, A/Fs, troops, and other tgts at Babo, Manokwari, Efman, Biak and various points along coastline of Geelvink Bay. B-25's and FBs sink a 3,000-ton vessel and several barges around Halmahera I. Dumps at Marubian, Kairiru, and Niap and bridge at But are bombed by B-25's, A-20's, and FBs. B-24's bomb Namlea A/F and attack Yap and Woleai.



A P-47, probably a D-23, didn't make it back to Noemfoor. USAAF Photo

7/10/44 FEAF B-24's attack Laha, Namlea, and T/Os in Boeroe-Ceram-Amboina area. A-20's, FBs, and a B-25 hit troops, villages, and barges in Wewak area. B-24's bomb A/Fs and town areas at Yap, Gagil-Tomil I and Sorol. Operations also include smallscale strikes in Wakde area and snoopers and armed rcn missions over the Carolines.

7/11/44 FEAF B-24's pound A/F at Babo while A-20's hit supply dumps at Kokas. B-25's bomb A/Fs at Manokwari, Waren, and Moemi during the night. A-20's, MBs, and FBs spt ground forces in Sarmi-Sawar area and bomb A/Fs, shipping, and various occupied areas and installations on Halmahera, in Schouten Is, on Boeroe, and the Palau group, and at Woleai.

7/12/44 FEAF B-24's hit Manokwari A/F; weather curtails further operations in Geelvink Bay area. A-20's, MBs, and FBs again hit troop concentrations and barges in Wewak area. Smaller strikes by B-24's and B-25's are flown against A/F at Laha, Dili, and on Koer I. B-24's pounds Yap.

7/13/44 FEAF B-24's again bomb Yap and Sorol. B-24's, B-25's, and A-20's bomb gun positions and A/F at Babo and in Manokwari area and hit supply depot at Kokas. FBs spt Allied ground forces in Aitape area while A-20's and FBs pound occupied areas and gun positions in Wewak area and on Mushu I. B-24's also hit Amahai A/F.

7/14/44 FEAF B-24's continue to blast Yap. Oil reservoirs and wells at Boela are bombed and strafed by A-20's. B-24's and B-25's attack barge facilities and gun positions at Lautem. On Vogelkop Peninsula night ftrs hit A/Fs while B-25's bomb barge terminal at Kokas. A-20's hit Japanese forces at Sauri and bomb A/F at But. FBs spt ground forces in Aitape area along Driniumor R and Koronal Creek and blast troop concentrations near Afua.

7/15/44 FEAF B-24's blast Yap, scoring numerous hits in Yap town area and on radio station and barracks area. B-24's, penetrating heavy weather front, bomb A/F at Efman while B-25's hit enemy forces along Korrido Anchorage, and A-20's blast gun emplacements on island off Manokwari. B-25's, A-20's, and FBs again pound troop concentrations over wide area around Wewak.



7/16/44 FEAF B-24's continue bombing Yap. Other B-24's pound AA positions at Manokwari. FBs bomb supply dumps N of Moemi and attack shipping in Kokas-Babo area. Bmrs and ftrs again hit troop and supply concentrations in Wewak sector. B-24's hit Atamboea A/F. TC missions to forward bases, especially Biak, increase.

7/18/44 FEAF B-24's strike Yap, bombing town and Blelatsch peninsula; several of the HBs bomb Sorol I. Bad weather prevents strikes on Vogelkop Peninsula. FBs continue to hit barges, supply routes, and troop concentrations in coastal area from Aitape to Wewak.

7/19/44 FEAF B-24's, striking in 2 waves, attack A/F on Yap. Several of the B-24's become separated from the formations and bomb Ngulu and Sorol Is. Weather again cancels strikes on Vogelkop Peninsula area. FB's hit stores, gun positions, and T/Os along Dandriwad R and spt Allied ground forces in SarmiSawar sector



7/20/44 FEAF B-24's bomb W part of Yap town. Other B-24's hit A/F and AA guns at Manokwari and AA at Moemi. B-25's hit shipping off Sorong, in Kaiboes Bay, and off Misool I, and bomb Kasim I. A-20's spt Allied ground forces in Sarmi sector. B-24's bomb Namlea A/F and shipping in Kayeli Bay. B-25's hit shipping at Dili. A-20's and a B-25 bomb supply dumps at Cape Moem, Wom, and Sauri while FBs hit T/Os along Yakumul coastal road and troops on Kairiru I.

7/21/44 FEAF B-24's again pound Yap I, concentrating on the A/F. Ftrs, many dropping phosphorus bombs on the HB formation, attack fiercely but ineffectively; the B-24's claim 7 ftrs shot down. Other B-24's bomb AA positions and A/F at Manokwari. A-20's hit barracks at Nabire. P-39's hit caves and barge hideouts on N coast of Biak I and spt ground forces along Verkam R. B-25's hit shipping at several points around the long coastline of Vogelkop Peninsula. B-25s and A-20's pound But, and P-39's bomb bridge nearby. P-47's follow with attack on But and also hit Wewak jetties and Kairiru I.

7/22/44 FEAF B-24's again attack A/F on Yap. B-24's, B-25's, A-20's, and an assortment of FBs direct their main attacks against several shipping terminals in the Vogelkop Peninsula area, sink sub chaser off Morotai, bomb Saumlakki, and hit But A/F and personnel areas, barge hideouts, supply and ammo dumps, bridges and roads at, and to the W of, Wewak.





7/23/44 FEF B-24's again bomb Yap I, hitting town area and A/F. A/Fs and shipping terminals over widespread areas of Vogelkop Peninsula and nearby islands are pounded by B-24's, B-25's, A-20's, and FBs. But A/F is again the main tgt in NE New Guinea. Comm, supplies, barges, and troop concentrations from Wewak to Yakumul are also bombed and strafed throughout the day.

7/24/44 FEF Operations in the Caroline Is are restricted to snooper strikes by HBs. Bad weather cancels scheduled strikes in Vogelkop Peninsula area. B-24's bomb AA positions at Saumlakki. 18 A-20's and a B-25 bomb But A/F, P-47's hit supply areas at Sauri, and P-39's bomb and strafe bridges and supply dumps in Suain area.

7/26/44 FEF B-24's again hit supply areas, comm, and other tgts on Woleai. Other B-24's bomb A/Fs at Babo and Ransiki. A-20's and B-25's, along with RAAF FBs, hit troop concentrations, small shipping, mortar positions, shore guns, and other T/Os along Hollandia-Aitape-Wewak coastline. B-25's bomb Langgoer.

7/27/44 FEF B-24's hit A/F on Woleai and supply areas on Mariaon and Tagaulap Is. Other B-24's bomb A/Fs at Lolobata and Miti while B-25's hit Galela A/F. B-24's and B-25's bomb shipping and air facilities at Ransiki, Moemi, and Babo, hit freighter in Kaiboos Bay, and bomb AA positions at Kokas, while A-20's blast fuel dumps at Nabire. P-39's strafe concentrations and small vessels along W coast of Geelvink Bay. A-20's, B-25's, and FBs hit troop concentrations, supply dumps, gun positions, barges, and a variety of other tgts along coast from Aitape to Wewak to Cape Moem. B-24's bomb Laha, Namlea, Cape Chater, and Dili.

7/28/44 FEF Tgts in Woleai I are bombed by 4 sqs of B-24's; A/F and supply area are well covered. B-24's and A-20's pound A/Fs at Manokwari and Babo, bivouac areas at Kasoeri, and shipping in Kaimana Bay. P-39's hit

Windissi and other Geelvink Bay villages. A-20's and FBs blast stores, troop concentrations, comm tgts, barges, and T/Os in Wewak, Cape Moem, and But areas. Laha and Cape Chater are hit by B-24's while B-25's bomb supply dumps at Maumere.

7/29/44 FEF B-24's bomb supply areas on Woleai I; nearby islands of Mariaon and Tagaulap are also hit. Other B-24's bomb A/Fs at Boela, Namlea, and Cape Chater, and pound Moemi, Sagan, Otawiri, and Urarom. MBs hit oil tgts at Karaka, shipping off Sorong and Cape Fatagar, and a supply village W of Babo. P-39's bomb Windissi and strafe troop concentrations along W shore of Geelvink Bay for third consecutive day. In NE New Guinea bms and ftrs continue pounding the N coast, hitting troops, bridges and stores at Wewak and along Harech Creek, and T/Os in Yakumul area.

7/30/44 FEF Supply area on Woleai I is again bombed by B-24's. Other B-24's and P-38's attack A/F and oil installations at Boela while more P-38's attack shipping off E Ceram, off Amboina, and near Talaga. B-25's hit A/Fs at Penfoei and Koepang. B-24's hit Morotai I. P-39's spt Allied ground forces on Biak I and continue to patrol W Geelvink Bay, hitting barges in Bentoni Bay and troops at Idorra. Allied forces (TF TYPHOON) land on N coast of Vogelkop Peninsula near Mar. The landings, made without preparatory bombardment to achieve surprise, meet no opposition. Bms and ftrs continue to pound troop concentrations, barges, ships, fuel dumps, comm and other tgts between Wewak and Aitape.

7/31/44 FEF B-24's again strike Woleai. A/Fs at Lolobata and Galela also are hit by B-24's. P-39's continue to hit villages on W coast of Geelvink Bay. In NE New Guinea FBs continue pounding Japanese concentrations and T/Os on N coast, particularly between Wewak and Yakumul. A-20's spt Australian ground forces in Hansa Bay area, hitting troop positions W of Sepik R and troop concentrations at Singarin and Kopa.



B-25 skip bombing, Photo National Archives



8/2/44 FEF B-24's bomb A/F at Yap I. A-20's bomb Nabire A/F while in Wewak area bms and ftrs hit bridge and A/F at Boram and bridges, comm lines, troop concentrations, and other tgts along coastline, especially between But and Cape Karawop. MBs and HBs carry out wide sweeps over the Moluccas and Lesser Sunda Is, hitting A/Fs at Maumere, Amahai, and Liang, and shipping off Ceram and Amboina. HBs hit Cape Chater and Lautem while MBs bomb camp near Poeloeti. FBs hit Mapia I and coastal vessels and shore tgts at Talaud.

8/3/44 FEF B-24's bomb Yap and islands in Woleai group. Bad weather cancels scheduled strikes over Vogelkop Peninsula area, However, MBs hit troop concentrations at Bira and other points on MacCluer Gulf, bomb Urarom, and spt Allied ground forces on Biak by hitting troops in Korim Bay area. An ammo dump and oil derrick at Boela are also destroyed. Supply dumps, comm tgts, and bridges are hit as FBs and A-20's continue to blast areas around But, Dagua, and Wewak.

8/6/44 FEF Yap supply area is bombed by B-24's. Heavy frontal weather activity over Vogelkop Peninsula and the Moluccas cancels strikes in that area. On the mainland of New Guinea, MBs and ftrs, though restricted by weather, spt ground operations near Sarimi, hit gun positions at Dagua, and strafe fuel dumps and T/Os at Cape Djeruen.

8/8/44 FEF B-24's bomb Yap and GagilTomil Is, concentrating on airstrips, A/Fs at Galela, Lolobata, and Babo, and towns of Urarom and Manokwari. A-20's bomb radio station near Hollandia and hit troop concentrations in Musu area. FBs bomb bridges and buildings at Boram, troops at But, and guns at Dagua.

8/9/44 FEF B-24's blast AA positions in 3 different areas of Yap I. Other B-24's bomb A/Fs at Boela and at Liang. A-20's hit shipping facilities at Asap I and bomb Nabire A/F. Ftrs strafe villages S of Manokwari. B-25's bomb forces on N coast of Waigeo I. A-20's and FBs hit troops at Dagua and near Haur and bomb stores at Cape Moem and machineguns at Cape Wom.

8/10/44 FEF B-24's attack Yap, concentrating on AA positions, A/Fs and town of Yap. Others hit A/Fs at Galela, Lolobata and Namlea. B-25's bomb Langgoer A/F. FBs attack Sorong, Manokwari, and villages along W coast of Geelvink Bay. FBs continue to pound forces between Aitape and Wewak. Large-scale TC missions are flown to forward bases, especially in Schouten Is.

8/12/44 FEF FEF long-range rcn is greatly increased thanks to strategic position of newly acquired Schouten Is bases. B-24's pound A/F at Babo while B-25's and P-39's hit Nabire A/F. Other P-39's attack defenses at Mansinam I and shore concentrations along W Geelvink Bay. P-47's spt ground operations in area of Sansapor Pt by bombing Dore. A-20's and P-47's hit forces and T/Os in Sarimi area and along Metimedian R. A-20's and P-39's attack troops at Haur, coastal tgts in cooperation with PT boats, and fuel dumps at Boram.

8/13/44 FEF Bad weather in SWPA curtails operations. B-24's bomb bivouacs and supply dumps at Manokwari. Bms hit Cape Wom storage area while P-39's cooperate with PT boats to hit Dagua personnel areas and Suain coastal positions. P-47's and P-39's hit Cape Wom, troops at Ulban, Matapau, and Suain, and spt ground forces at Sarimi. TC aircraft complete nearly 90 missions to Owi I and other forward bases.



US B-25J of 499th 'Bats Outta Hell' Bomb Squadron attacking Japanese Type-C Escort Vessel, Photo National Archives

8/14/44 FEAF B-25's and B-24's attack Ternate I, AA positions, oil dumps, barracks, supply areas, and other tgts throughout the Halmaheras. B-24's pound A/F at Babo while A-20's and FBs, along with RAAF airplanes, blasting bivouac, and troops at Terabu, Kaiten, and Wewak Pt.

8/15/44 FEAF B-24's bomb Lolobata A/F and B-25's attack shipping in Ternate area, setting a 1,200-ton vessel afire and damaging several luggers and barges. P-39's dive-bomb AA positions at Wewak Pt. FEAF aircraft on armed rcn hit T/Os in Ceram area and Tanimbar Is.