

## Cold Front

Meet the men who kept the Thunderbolts flying.

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***Jugs in fearsome formation. (NASM (SI Neg. #00083262))***

New Year's Day, 1945, dawned clear and cold for the tired men of the 365th Fighter Group, stationed in Metz, France. Hangars that once sheltered the group's three Republic P-47D Thunderbolt squadrons had been bombed, and the crews were working in maintenance and operations tents they had set up on the flightline. By 9 a.m., the 387th and 388th Fighter Squadrons had already launched their bomb-laden Thunderbolts northeast to search out supply lines and Nazi forces trying to escape eastward. The ground crews waited as the pilots of the remaining squadron, the 386th, donned parachutes and headed out to their airplanes. It was the first day of the seventh year of the Second World War.

That day in the life of the 365th was chronicled in detail by then-Staff Sergeant Charles Johnson, the group's official historian. In his 1975 book *The History of the Hell Hawks*, Johnson reported an exchange between Staff Sergeant George "Moocher" Wasson, a 365th crew chief, and a friend, Staff Sergeant John Lehnert. Wasson was trying to dry a cigarette butt he had just retrieved from the frozen ground, when Lehnert noticed him fumbling with it. "Hell, George, have a Camel!" Lehnert called, beckoning him over with a fresh cigarette. The two stood smoking and talking for a couple of minutes. Just as

Wasson resumed his walk to the hangar to fetch a part for his P-47, he heard someone yell, "Look at those P-51s buzzing the field!" Lehnert and

Wasson turned together and spotted the oncoming fighters—and muzzle flashes. "P-51s, my ass!" someone shouted. "Those are Germans!"

Sixteen Messerschmitt Bf 109s swept in from the hills north of the field, heading directly for the fully loaded Thunderbolts clustered on steel-mat hardstands. The 109s were part of a last-ditch Luftwaffe strike, a mission code-named Bodenplatte (Paving Tiles). Since the Allies' breakout from Normandy in August 1944, General Dwight Eisenhower's armies had pressed up to Germany's fortified frontier, where supply problems, winter weather, and heavy German resistance had brought the advance to a crawl.

In support of Hitler's Ardennes offensive, Hermann Goering's Luftwaffe mustered its remaining fighter strength for a coordinated surprise attack on the Allies' forward tactical airfields in Holland, Belgium, and France. The pilots, ground crews, and P-47s in Metz were all caught in the open.

As dozens of startled men dashed for cover in nearby gun pits, the German fighters hammered the field with long bursts of machine gun and cannon fire. Bullets and shells from the 109s' propeller-hub-mounted cannon blew holes in the parked fighters. Explosions cracked across the open field as gas tanks caught fire, detonating bombs and ammunition.

Tech Sergeant Marion Hill, then-chief noncommissioned officer of the 365th's intelligence section (now a retired chemist living in Oregon), remembers diving for the foundation wall of a burned-out barracks. "That first pass was right overhead," Hill recalls. "They just missed us." His luck didn't hold out long. "I heard a whoosh." A shell fragment ricocheted off the foundation and hit him in the face. "I saw my gloves and lower left arm covered in blood." He was hastily bandaged under fire and evacuated on a stretcher.

Meanwhile, on a 388th Squadron hardstand, Corporal Emanuel Catanuto spotted his friend Corporal Lee Weldon trapped in a Thunderbolt cockpit, a German bullet in his thigh. As repeated strafing passes set the airplane afire, Catanuto vaulted to Weldon's rescue. He reached through the smoke and searing heat, opened the cockpit's door, jerked Weldon free, and tumbled backward off the wing. Grabbing Weldon by his good leg, he dragged the blood-soaked mechanic 30 yards to safety. Suddenly, the P-47's fuel tanks and bombs exploded, engulfing the two men in a hail of shrapnel. Both miraculously escaped unharmed.

The Army's anti-aircraft gunners had been firing away at the Germans, and that began to take a toll on the attackers: One Bf 109 crashed in flames on the flightline, hurling its pilot from the cockpit. The body tumbled to a stop a few feet from where half a dozen Hell Hawks, members of the 365th Fighter Group, were huddled in a shallow pit. Flight chief Alvin Brady felt little sympathy for the dead German: "They got us into it, after all." Another crew member said: "I saw a ring on his finger. If I'd had something to cut that finger off, I would have probably got that ring off him." Someone else beat him to it.

The surviving Messerschmitts withdrew over the hills, leaving "Y-34 Metz" in shambles. Wounded pilot Carl

Riggs, then a second lieutenant, recalls, "There was devastation everywhere. Burning planes were all over the place." Greasy clouds of black smoke spiraled skyward, and the thud of bombs exploding in the fires punctuated the sudden silence. Twenty-two P-47s lay burning

on the field, and another 11 were badly damaged. The 386th Fighter Squadron was effectively out of action, and at least 11 men had been wounded. For the Hell Hawks, the raid was a sobering taste of the war they had brought to the enemy. "It was terrifying to be on the receiving end of the tactics we'd been using all along," says Riggs.

Despite the havoc the Luftwaffe had wreaked on Y-34, Operation Bodenplatte was a failure: 40 percent of the 850 attacking German fighters were destroyed or damaged, and 234 attacking pilots were killed, captured, or wounded.

The 365th ground crews, like those in other units hit by the Luftwaffe that day, turned quickly to the business of salvaging and repairing their damaged aircraft. The "ground pounders," as the pilots sometimes called the maintenance crews, dug new foxholes, dragged wrecked airplanes off the field, and patched the ones with reparable damage. Cannibalizing the wrecked P-47s, the ground crews scrambled to turn around the survivors. By sharing aircraft from the two squadrons that had been airborne at the time of the attack, pilots from all three squadrons got back in the air that afternoon.

In the Republic P-47 Thunderbolt, ground crews had a rugged, reliable fighter, perfect for the mud and spartan repair facilities of their forward airfields. It was called "the Jug" because of its milk bottle shape—its beefy construction and the efficient Republic design made it relatively simple to maintain under combat conditions.

Originally designed as a high-altitude interceptor, the P-47 first flew in May 1941. The brutish fuselage was married to a pair of graceful, semi-elliptical wings mounted with eight heavy .50-caliber machine guns. It derived its power from a 2,000-horsepower, 18-cylinder, Pratt & Whitney R-2800 Double Wasp radial engine with a turbo-supercharger. With full tanks, ammunition, and two 1,000-pound bombs, later models weighed in at a hefty 19,400 pounds, more than any other single-engine fighter of World War II.

The P-47D entered combat in March 1943. With Lockheed's P-38 Lightning needed in the Pacific and the superb North American P-51 Mustang still in development, the Thunderbolt filled the need for a long-range escort for the bomber offensive from England. Its massive engine propelled the P-47 to a speed of 433 mph at 30,000 feet.

As the 1944 cross-Channel invasion approached, the Mustang arrived in the European theater and proved both more agile and longer-legged than the fuel-thirsty Thunderbolt. The Ninth Air Force Fighter Command, led by Major General Elwood "Pete" Quesada, needed a sturdy attack fighter to insulate the Allies in Normandy from German reinforcements and support the ground forces after D-Day. The P-47's rugged design and powerful armament were perfect for those jobs.

Unlike the inline powerplants of the Mustang and Lightning, the P-47's radial engine was air-cooled: It dispensed with a radiator and liquid coolant system, which were so vulnerable to a lucky enemy shot. More than one Thunderbolt returned to base with a cylinder blown away, its connecting rod dangling. The big engine up front, coupled with armor plate fore and aft of the cockpit, gave the pilot extensive protection from enemy fighters and ground fire. The

turbocharger's ducts, running the length of the lower fuselage, protected a pilot's legs from the jarring crunch of an emergency belly landing. Flight chief Alvin Bradley of the 386th Fighter Squadron is adamant about the aircraft he once maintained: "It was the safest, toughest plane to bring somebody back after it was damaged."

In late June 1944, crew chiefs, sheet metal workers, armorers, radio techs, propeller specialists, and engine mechanics of the Ninth Air Force, the U.S. tactical air arm in northwest Europe, crossed the Invasion beaches to meet their airplanes and pilots in Normandy. Just a few weeks after D-Day, nearly a dozen Thunderbolt groups were active on new airstrips, some carved out under enemy fire.

The 365th Fighter Group was typical of the 18 fighter-bomber units serving in the Ninth. After Pearl Harbor, volunteers and inductees had streamed through the Army's basic training and technical schools to fill the ranks of the air forces. Those with the right aptitude, perhaps aided by pre-war experience as gas station attendants or factory workers, were trained as aircraft mechanics.

Twenty-two-year-old Staff Sergeant Guy Bauman, for example, was a truck driver in Illinois when he was drafted in 1942. When the Army sent him to engine school at the Republic factory in Farmingdale on Long Island, New York, he had never even seen an airplane before. He eventually joined the 365th as a P-47 crew chief. With his colleagues, he would linger near the runway for the hour or two their airplanes were on missions. The returning pilots usually notified the crew by radio if someone was missing. "It was nerve-wracking," Bauman remembers. "You worried about that pilot all the time. They were just like a brother to you."

A fighter group like the 365th had three squadrons, each with approximately 25 P-47s. Each airplane was maintained by a crew chief and his assistant, along with an armorer to load the .50-caliber machine gun ammunition, bombs, and rockets. A flight chief supervised the teams and looked after eight or nine aircraft. A squadron line chief—a senior non-commissioned officer—assigned cadres of propeller and radio personnel, sheet metal experts, and instrument techs to repair battle damage or broken systems, making sure each fighter was ready before dawn for that day's sorties.

The 365th ground crews trained in Virginia, Delaware, and New Jersey, and arrived in England in 1943 with 15,000 other GIs crammed onto the oceanliner Queen Elizabeth. The unit initially flew from England and got its first taste of combat in bomber escort missions across the Channel. After D-Day, with the Allies and the German forces deadlocked in Normandy's hedgerows, the 365th shifted to a forward airfield near Utah Beach, and its work began in earnest.

Charles Johnson wrote that before shipping out to England, the 365th's commander, Colonel Lance Call, issued an edict that "no matter what the extent of damage to the aircraft, it must be flying again within twenty-four hours."

The daily routine was simple in concept but relentless in practice. "During combat operations, we woke up the plane with a preflight check," Johnson wrote. "First, we started the engine to check its operation and the performance of the magnetos. We also checked the instruments and the propeller's pitch control. Then came a complete check of the exterior of the plane including the sheet metal, control surfaces, and windshield. Often, bombs were loaded under the wing or on the belly. The fuze on the nose of each bomb was checked to be sure the detonator safety wire was in place.

"When a 110-gallon tank of gas was attached to the belly, glass tubing was used to connect the two pieces of rubber fuel line," one from the tank, one from the airplane. The connection was a constant source of worry for crew chiefs, Johnson recalled. If a rough runway or turbulence broke the glass, would the pilot be forced to abort, or run short of fuel in the heat of a dogfight?

Preflight complete, the ground crew waited for the pilots to arrive in a jeep or truck called the "fish wagon." One man would lug the parachute up to the cockpit while the crew chief helped the pilot climb onto the wing, then lent him a hand with the parachute straps. Finally, the crew chief lay prone on one wing, and hung onto one of the protruding .50-caliber gun barrels to perform one of the most unusual duties of a Thunderbolt ground crewman: guiding the pilot down the taxiway.

From the cockpit, the view forward while taxiing was blocked by the huge cowl of the Pratt & Whitney radial. Pilots were taught to make continuous S-turns to clear the route ahead, but so many Thunderbolt tails were clipped by the following airplane's prop that the crew chiefs had to take on a new job as "copilots." Using hand signals, the enlisted man directed his pilot to the end of the runway, then hopped down just before takeoff.

Flight chief Don Shilling, a tech sergeant from the 406th, liked to accompany his airplanes out to the runway in a jeep. "You could always tell if your airplane was running good when it was under full blast—you know—if she was hitting on all 18 [cylinders]," he says. The P-47's mission—dive-bombing and low-level strafing—brought other headaches to the ground crews. All too often they saw their airplanes return with bent propellers, holes in wings and fuselage, and traces of the battlefield—dirt, stones, shrapnel, branches, leaves—embedded in the wings and cowling. But it was precisely the P-47's ability to limp back with seemingly fatal damage that made it the ideal aircraft for ground attack.

Pilots returned with airplanes flayed by flak from German gunners, whose 88-mm and quad-mounted 20-mm guns were deadly at medium and low altitudes. Carrol Joy, a staff sergeant from the 406th, reports that his airplane once returned with 105 holes in it, and Shilling saw a P-47 return so badly shot up that "you could crawl through those holes in the wing."

Warren Dronen, who flew 80 combat missions with the 362nd Fighter Group, once had his Thunderbolt perforated by flak, holes stitching his wing with "a sound like a sewing machine." He managed to get back safely. With the prop windmilling to a stop, his crew chief jumped up

on the wing, took one look at the battered airplane, and said, "Jeez, Lieutenant! Why the hell did you bring that thing back here?"

Ground crews saw the evidence of close combat on their airplanes, and in the faces of their pilots, every day. Yet they seldom got a direct taste of war. "You didn't actually kill somebody face to face," wrote Frank Mangan in his 2003 book *Mangan's War*. "You merely helped from a distance." But as the tempo of fighting increased near the German frontier, the sustained air-to-ground onslaught inevitably touched everyone.

In Metz, a 365th gas truck driver was fatally wounded by the propeller hub from a crashing Thunderbolt. In Florennes, Belgium, a crew chief was struck by a stray shell from the guns of a landing P-38 Lightning. "He was dead before he hit the ground," Charles Johnson wrote.

But it was the Battle of the Bulge—when the Germans penetrated deep into Belgium in December 1944, creating a "bulge" in the Allied line—that brought the immediacy of war to the 365th ground crews. Between bouts of bitter winter weather, each Thunderbolt was slashing at the German advance with several sorties a day. In addition to the steady work of maintaining and re-arming the Jugs, the ground crews pulled guard duty during the long, freezing nights, staying on the lookout for German infiltrators.

The temperature hovered near zero, recalls Alvin Bradley, and snow drifted so deep on the Hell Hawks' runway that crew chiefs had to repeatedly taxi a few fighters back and forth to blow the steel matting clear. James Hagan, a staff sergeant and crew chief with the 365th, remembers the frostbitten toes and fingers that came with the all-out effort to keep the P-47s in the air. Engine changes, refueling, re-arming: All were done outdoors in the snow and frozen mud.

The war's last frigid winter turned the demanding work of maintaining a Thunderbolt into an ordeal. Shilling remembers working through a brutally cold night with a fellow crew chief to change a P-47 carburetor—work too intricate for gloves. One worked, hands deep in the frigid engine, while the other warmed his frozen fingers over a makeshift ammo-box stove. Finally they got the job done. "The plane was shot down the next day," says Shilling.

When a mission returned, the crews shifted into high gear. "The planes were in varying condition: broken windows, oily windshields, bullet holes or flak tears here and there," wrote Johnson. If the pilots mishandled the throttle and water injection system on takeoff or in combat, they'd bring back blown cylinders and broken connecting rods. When leaks developed in valve cover gaskets, a fine film of oil sometimes sprayed back over the windscreen—a constant cause of complaints among the pilots.

Crews had to fill fuel and oil tanks, install drop tanks, and top off the water injection system next to the firewall (used to keep the fuel-air mixture from pre-igniting in the cylinders at high power settings). The armorers reloaded the wing bays with fresh belts of .50-caliber ammunition (about 300 rounds per gun) and wrestled a pair of 1,000-pound bombs into their under-wing shackles. The crew chiefs and their assistants did most of the servicing, while flight

and line chiefs assigned specialists to tackle battle damage or pilot squawks. The crews were lucky if they had an hour to get the P-47Ds back in the air.

As good as the big Pratt & Whitney engine was, maintaining it posed challenges. Jim Hagan remembers that changing spark plugs was a knuckle-buster: "You had to get your hand inside there, and there wasn't a whole lot of room."

"You worked from the time it was light until you couldn't see anymore," says Alvin Bradley. Add guard duty and other work details to flightline duties and the ground crews were working almost around the clock. And yet they took it in stride. "I was never tired," says Shilling. "There was just too much excitement."

By the fall of 1944, says Joy, "we were a well-oiled machine," handling three and sometimes four sorties a day.

Because the Ninth Air Force's fighter groups moved constantly to keep pace with the shifting frontlines, they seldom had adequate repair facilities. The 365th Fighter Group saw combat from March 1944 until May 1945. It hopped through England, France, Belgium, and finally Germany, occupying eight bases from D-Day to VE-Day. The group seldom enjoyed the luxury of even a bombed-out Luftwaffe hangar.

Frank Mangan, whose book details his experiences as an armorer and photographer with the 50th Fighter Group, attributes the crews' ability to handle the relentless schedule to a simple desire to get the job done. "You got used to the routine," he says. He recalls thinking, "Here it is Christmas Eve, and the rest of the world is waiting for Santa, and I'm out here loading ammo! We didn't like it, but nobody bitched about it. Our attitude was 'Let's get this thing over with.' "

Rain turned the primitive airfields into quagmires, recalls Mangan. "Our bivouac area was a knee-deep sea of slippery, goopy muck. Mud stuck to our shoes and gathered more with each step until our feet looked like two big chunks of clay."

For ground crews and pilots, tent living was the rule; in Normandy the men were lucky to have a tarp stretched over a foxhole. For days on end, the crews' standard chow consisted of K- and C-rations, but if the group settled down for a few weeks, the men could fill their mess kits with hot meals from their own spartan field kitchens.

When work was done, says Staff Sergeant Ray Larson of the 406th, "we cleaned the grease and dirt from our hands with gasoline." Showers were a rare treat; Alvin Bradley remembers melting snow in his helmet and taking a sponge bath in the cold water. And when his buddies found themselves bunking in a bomb-scarred Luftwaffe barracks, Mangan writes, "We used champagne liberated from the cellar to flush the toilets—and it worked!"

During the war, the 365th Fighter Group lost 69 men in combat or in accidents, most of them pilots. The one thing a crew chief dreaded most was discovering his airplane and pilot had failed to return from a mission. Yet the ground crews couldn't afford to dwell on the loss. Don Shilling lost his pilot three days after D-Day. "You got over it in a hurry," he says. "You could not sit around and mope. You had to get [back] on the stick."

Charles Johnson wrote the following lines on November 28, 1944, the day his pilot, First Lieutenant John Fitzsimmonds, was killed by a flak burst over Julich, Germany, on his 84th combat mission. Johnson had waited at the runway for his return:

Where's the one that can't be seen?

Where's the one to make sixteen?

One by one, sighs of relief.

I stood alone in disbelief.

No words are said...the others know.

Johnson, who died last year, got it right. "That P-47 was one tough airplane," he said, "and I guess so were we."