

From WWII to the present, 95-year-old Chet Heth has been a propeller plane man

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by **Jarl Johnson**

Careers are sometimes molded by circumstances beyond our control. But you must love your work if it consumes your passions at the age of ninety-five.

Chester “Chet” Heth and his wife have lived in Palos Verdes for the past 46 years and raised a family of five children. They have eight grandchildren. Chet’s recent endeavors have split his time between his understanding wife and a desire to keep older propeller-driven airplanes flying.

His company, Conversion Technology in Torrance, fills a real need for these aircraft operators. He



Chet Heath and a P-51 Mustang at the Western Flight Museum in Torrance. Photo by David Fairchild

receives calls from around the world for propeller parts slated for piston or turbo-prop powered aircraft. The business has ranged from training and spare propellers to routine parts.

To better understand Chet's career let us flash back to the Solomon Islands in 1942, and in particular Guadalcanal Island.

With the invasion of Guadalcanal, World War II was finally turning a corner. US Command Headquarters had plans for our armed forces: They were to invade and island-hop the Pacific to the eventual invasion of the Japanese homeland.

On Guadalcanal our Marines had killed many of the Japanese soldiers holding the palm-studded island, and captured a number of others who were completing a new air field for the Japanese forces. The situation was hectic. The army needed to quickly activate the air field for our bombers and defensive fighter aircraft. Army construction engineers were bulldozing and laying down the steel mesh surfaces for runways while fighting was still going on in the jungle. "During the night Japanese bombers, that we nicknamed Washing Machine Charlies (because of the beat sound of their unsynchronized engines) would come over to machine gun or bomb us," Chet recalled. "We would revert from tents to our foxhole pits in the sand."

The offensive against the Japanese ships and their concurred land bases had begun. Ships were off-loading aircraft fuel, munitions and supplies. Army Air Corp and Marines were landing B-25 bombers and F4U fighters on a schedule set by the high command. Tents provided shelter for living and aircraft maintenance. Hatless and shirtless men showed no rank, but scurried about doing their tasks including aircraft arming or maintenance.

Among the hatless soldiers was civilian Chester G. Heth. He had come a long way from his family's Wisconsin dairy farm. In 1939, he dropped out of Marquette Engineering School because of lack of money and started to work for Hamilton Standard Division of United Aircraft Corp (UAC) as an engineering technician. Hamilton Standard was developing constant-speed Hydromatic propellers for high horsepower aircraft engines. By the time the war started the design was developed and their propeller models were slated for use on 90 percent of allied aircraft built during the war.

The military needed help to maintain them and Chet was one of two engineers chosen for the Pacific region. UAC assigned him to the Guadalcanal US307 Bomb Group as a Technical Advisor. His job was to train and assist wherever possible to diagnose and fix problems with the aircraft propeller systems. Not a simple task since the governing aspects of a propeller can be compared to car automatic transmissions. The propeller blade angle must change pitch with airspeed and altitude to pull maximum horsepower from the engine.



Furthermore, the ability to feather and shut down the engine was necessary if a bullet happened to blow out an engine. If it did not feather, the propeller would windmill violently, possibly losing the airplane.

Pilots would sometimes return from a mission with bullet holes in the propeller blades. Also, the stones and coral on the unpaved runways would cause gouges in the blades which could cause them to fracture.

Chet Heath, who is 95 and still working on propellers. Photo by David Fairhchild

The aircraft mechanics had to improvise solutions for the

problems that resulted from combat and the extreme use. It was Chet's job to implement and approve repairs such that the planes could be immediately put back into service.

Chet often thinks about those times and the many people involved in the war of the Pacific. For instance at the other end of the landing strip, the 475th Marine fighter group flew F4U Corsair "Gull Wing" fighter airplanes made by Chance Vought, also a UAC division at that time.

(Note that the aircraft, engine and propeller were all built by divisions of United Aircraft Corp.) Charles Lindbergh, working for UAC/Pratt and Whitney, was assigned as a technical advisor to this fighter group. The F4U had a 3000 HP Pratt and Whitney radial engine and a larger propeller than the bombers.

Lindbergh's earlier experience in aviation, including high-powered aircraft and air racing, was utilized by the military to refine combat tactics. As a civilian, Lindbergh was not supposed to enter combat, but he was credited with flying 50 engagements with enemy aircraft during his test flights. His contributions and guidance served to improve performance of the F4U and the especially the range of the P38 fighter. For many reasons Lindbergh's contribution to the war was not publicized until years later.

Chet transferred with the military to seven offensive air bases in the Solomon and other islands. He recalls one experience when he had to dodge Japanese machine gun bullets during his stay in Bougainville.

He was assisting the Marines with a problem on a F4U Corsair and was high on a work stand in front of the propeller with a Marine mechanic when someone yelled "Hit the deck!" Machine gun bullets whizzed by.

Chet and his companion jumped off of the work stand. Later that night, the entire Marine encampment had to hop into their foxholes when Japanese soldiers hidden in the hillside caves began an overnight attack. Marine sharpshooters retaliated and put down the attack in the early morning.

As the fighting moved to the Philippine Islands, Chet had a few months back in the states with his family; then returned to the war zone. He was assigned to the 2nd Air Corp Force B-29 group based in Okinawa.

When the war ended he participated in the relocation of the air wings to Japan for the occupation. UAC and other US industries were interested in some of the wartime aircraft developments that the Japanese had made and Chet was one of the members of the team to analyze their aircraft.

He returned home to his family in 1946.

At that time TWA was rapidly incorporating the triple-tailed Lockheed Constellation aircraft into its domestic service. Howard Hughes tried to spirit Chet away by offering him a position on the team for Hughes' personal Constellation. Chet was considering the offer when he was surprised by his local draft board. They advised him to report for his physical to be drafted into the army. He passed the physical but alerted Hamilton Standard of his plight. The company quickly moved him to Edwards AF base where the secret Northrop B-35 flying-wing bomber was undergoing flight tests. Hamilton Standard designed and manufactured the large counter-rotating propellers for the B-35. Chet thought that he had served the military enough and was delighted to work on this advanced airplane.

In 1952 when the Korean conflict began, back he went to the Pacific:

The C-119 "flying boxcar" aircraft were used to drop parachute troops and supplies into the K2 war zone of Korea. A few aircraft had crashed for unknown reasons with loss of life. On the occasion of two crashes in one day, he was "asked" to accompany an investigation team by helicopter to one of the crash sites. They were to go across the 38th Parallel and behind enemy lines. They feared the North Korean ground troops who were in the area. The Marine helicopter pilot told them that they had ten minutes to do their job otherwise he would leave without them.

An early investigation had concluded that faulty engine mounts were causing the crashes. But Chet spotted the engine and propeller about 150 feet from the smoldering crash site. A large section of one propeller blade had separated causing the unbalance that ripped the engine off of the C-119. The team got back to the helicopter in time but not before Chet asked himself: "What am I doing here? I am a civilian; there's a war going on and here I am across the battle lines in enemy territory." The investigation concluded that blades were failing because of the poor maintenance and harsh runway conditions.

After Korea, Chet made his home in California and later transferred to Seattle where he finally

received his BS in engineering after many hours of night classes. His job was to help provide engineering coordination with aircraft manufacturers. However in the event of national emergencies his bosses expected him to use his experience in support of our military overseas.

In 2001 with 52 years of employment, he passed the normal age of retirement from Hamilton Standard, but saw a chance to start his own company. He noted that many of the aircraft corporations had consolidated and that airplane operators had difficulty getting parts and know-how for older aircraft. Some countries were obtaining used aircraft but could not fly them for lack of spare parts. Chet saw the need to provide service for commercial and military organizations around the world. His company specializes in propellers. He has accomplished this even to the point of coordinating the manufacture of a large batch of new propeller blades.

Recently, Lufthansa Airlines requested his help for propellers to be used on a very old restored aircraft: a 1950s Lockheed L1649 Constellation. This model was the last model of "Connies" built.

Lufthansa has plans to fly the restored airplane around the world for publicity purposes. They needed help in restoring the propeller systems and Chet was their man.

The Connie is distinguished by its triple tail and the sleek, almost artistic curvature of its fuselage. In 1939, Lockheed designed an early model to Howard Hughes' specifications. Hughes, a majority owner of TWA, wanted a new design to fly, in pressurized comfort, over weather, at 300 mph with 44 passengers. The war interrupted airline use but about 50 Connies gained a good reputation with our military during WWII and after.

In 1946 the surplus Connies were rapidly incorporated into domestic airline service. By the 1950s new models were stretched in length and wingspan and increased in engine power, to compete with the Douglas DC-7 and Boeing 377. All were four engine, propeller-driven aircraft.

The L1649 was the first commercial aircraft that enabled airlines to fly long distance, transcontinental and overseas service without stopping for fuel.

Non-stop flights from NYC to London with such international airlines such as Lufthansa, and TWA were made possible. Cruising to a destination at around 300 miles an hour required many hours. Passengers were graciously served drinks and multi-course dinners on china with silverware. This was an era of true First Class Service competition among the airlines. The longest flight, taking 19 hours, was to Los Angeles from London, over the North Pole. The L1649 was such a wonderful airplane that it is no wonder people at Lufthansa want to see one flying again.

But it must first meet FAA and European EASA current specifications.

Chet located the large number of parts for the four propeller assemblies including the controls, synchrophasers and deicers. He had to go to Canada to find a certified company capable of overhauling these 60 year-old, 17-foot diameter propellers. Recently, in Canada, he met with a German film crew and was interviewed for German television.

The aircraft itself has been stripped of its aluminum skin and is being rebuilt throughout in Auburn, Maine.

So, why does someone who has spent over 52 years with a top corporation (now named United Technologies) continue to work daily in a company of his own? After all, he has a well-earned pension from those many years of corporate life.

Our school counselors once told us to find a job that we love.

Chet has continued a lifetime of fulfillment through a special love for his work. To help in solving technical problems provides him personal satisfaction and pleasure. There is no doubt that Chet's love and dedication to his work has contributed to civil and military aviation. However he credits his work activity to keeping him reasonably well at 95.