

providing more accurate billing. There would be no chance for error of port-handling charges against MAJCOM or SDT funds for the Guard or Reserve component or Air Force working capital funded shipments. It would lead to the elimination of the MAJCOMs requiring a port-handling budget.

The Air Force should take a long hard look at the way we pay port-handling charges. We should strive for accuracy in billing, eliminate unnecessary budgets, and properly obligate funds

where services are rendered. When we have resolved this confusion and conflict, then and only then, can we honestly know who's paying the bill.

At the time of writing, Master Sergeant Daniel J. Bender was a project manager at the Air Force Logistics Management Agency, Gunter Annex, Maxwell Air Force Base, Alabama.



Charles E. Taylor: Aviation's Unsung Hero

Kenneth MacTiernan, AMTA Director

An aircraft has a mechanical discrepancy and the man, or woman, you call is a skilled, trained aircraft maintenance technician (AMT). This professional investigates the fault, and before you know it, the problem is solved, the logbook is signed off, and the aircraft is returned to airworthy status. This scenario happens countless times at airports around the world 24/7, 365 days a year. This scenario, regardless of the severity of the discrepancy, does not differentiate between military, commercial, corporate, government, or general aviation aircraft. An aircraft is a technical piece of equipment, and the men and women who work on these modern marvels of engineering are, for the most part, taken for granted. Everybody knows that the AMT is skilled, knowledgeable, and professional. But does everybody know where these AMTs came from? Do they wonder who started the craft of the aircraft maintenance technician? Where did the basic principles of this demanding profession originate?

The world knows about mankind's first controlled, powered flight. Both Orville and Wilbur Wright are household names because their imagination and technical abilities allowed them to lay claim to the first manned powered flight—a rather impressive feather to have in one's cap. But who helped them achieve this milestone in mankind's history?

Unfortunately, the world knows little of the man that helped the Wright brothers and our country achieve this point in aviation's history. This man was Charles E. Taylor. Mr Taylor was a self-taught Midwestern mechanic, who worked for the Wright brothers in their bicycle shop. Charlie is considered the *unsung hero* of aviation because he was asked to build the first engines for the Wright Flyer. He met specifications requiring that the engine should produce 8 brake horsepower¹ and not weigh more than 200 pounds. Asked if he could produce such an engine, Charles E. Taylor simply replied, "Yes."

In roughly 6 weeks and working with a block of steel, the bicycle shop's lathe, drill press, and some simple hand tools, Taylor would make history. Because of the knowledge, skill, and integrity Mr Taylor possessed, the Wright Glider would become the Wright Flyer. Ohio and North Carolina would be the bases from which mankind would take the first manned, controlled, powered flight.

On December 17, 1903 when the Wrights took their first step into aviation history, Charlie was not there. He was back in the bicycle shop *minding the store*. Charlie knew his engine would work and stayed behind. But little do people know that Charlie made more than the first engines for the Wright Flyer. His skill was also used in manufacturing and repairing many of the components for the Flyer itself. One example is when Charlie repaired the propeller shafts after screws were jerked loose by using heavier gauge steel tubing. When parts needed attention that could not be addressed on the Kitty Hawk site, these parts were sent back to Charlie in the bicycle shop for repair.

After the Wrights successful flight, Charlie's knowledge, skill and integrity were needed even more. The Wrights would eventually need a larger engine, which of course was a task given to Charles E. Taylor. After necessary changes were made to new engine castings, Charlie built the 1904 engine with cylinders 1/8 inch thicker.

After the *problem* of flight was conquered, an area closer to the Ohio bicycle shop was needed for operations and improvements. It was then that 100 acres of prairie north of Dayton, now part of Wright-Patterson Air Force Base, called Huffman Prairie after its owner, became the first airport. But a prairie wasn't the ideal locale for an aircraft. Barbed wire fences, grassy hummocks, and such were all around the area. At this point in time it is, once again, Charles E. Taylor who assumes the responsibilities of an airport manager and getting things done. He dealt with unique problems, such as the assembling and maintaining of a shed, or an early-day hangar, in which the first Wright aircraft could be stored.

After twice being ignored by the United States government to examine their machine for possible military applications, the Wright brothers decided to take their new invention to Europe. They once again turned to their *aircraft mechanic* who was given the responsibility of crating the Wright Flyer for shipment across the globe to both England and France. This task was accomplished in a shed and then the Flyer was shipped to the East Coast by train. After the Wright Flyer made the journey to Europe, it was again Charles E. Taylor who was responsible for assembling the craft.

After the Wright's return to the United States, Calbraith (Cal) Perry Rodgers, grandson of Commodore Calbraith Perry whose *gunboat diplomacy* opened Japan to the West, decided to make an attempt at transcontinental flight. Once again, it was Charlie who was looked at to be Cal's chief mechanic for this historic attempt. But before working for Cal on the *Vin-Fiz Flyer*, named after the first bottled grape drink of Cal's sponsor for this event,

Article Acronyms

AMT - Aircraft Maintenance Technician

AMTA - Aircraft Maintenance Technician Association

FAA - Federal Aviation Administration

Charlie checked with the Wrights because, with so few Wright aircraft, Charlie's knowledge was crucial to have around. Orville and Wilbur consented to give Charlie a leave of absence.

With Taylor participating in such a historic achievement, one would think his name would be mentioned in the same breath and sentence with Orville and Wilbur Wright, but such is not the case. Although the Wrights gave credit to Charlie for his contribution, he never searched for the limelight or to cash in on his notoriety. He had a job to do and he did it, just like today's AMTs. With the death of the Wright brothers and the rapid growth in both engine and airframe technology, Charles E. Taylor simply became a forgotten name. He became aviation's original *Unsung Hero*.

After 100 years of controlled, powered flight it is time that Charles E. Taylor be remembered and recognized for what he did and for the vocation he inspired—today's aircraft maintenance technicians. One organization trying to educate the public about Charles E. Taylor's proud place in aviation's history, and the men and women who have followed in his footsteps, is the Aircraft Maintenance Technicians Association (AMTA). The AMTA is a nonprofit organization and is open to all with a love of aviation. Their Web site is www.AMTAUSA.com. One of the ways the AMTA is helping to remember Charlie for his contributions is by donating bronze busts of his likeness at aerospace museums across the country. They have already donated one to the San Diego Aerospace Museum and plan others for the Smithsonian National Air and Space Museum and the National Aviation Hall of Fame.

The AMTA also has a program called the *Faces Behind Safety* which highlights AMTs from across the industry so the public can see and read about today's AMTs and how they follow in Charlie's footsteps.

With the leadership of Richard Dilbeck, Federal Aviation Administration (FAA) Aviation Safety Program Manager, Airworthiness, resolutions are being passed that recognize 24 May of each year as Aviation Maintenance Technician Day. This is in honor of Charles E. Taylor's birthday. Thanks to Mr Dilbeck, the State of California was the first to pass a resolution, and now 30 more states are in the process of passing similar resolutions. A national resolution is under way, thanks in large part to the Professional Aviation Maintenance Association and their president Brian Finnegan. With this day set aside as a day to honor Charles E. Taylor, and today's AMTs, recognition is forthcoming.

Last year, Embry-Riddle Aeronautical University in Daytona Beach, Florida renamed their maintenance program the Charles Taylor Department of Aviation Maintenance Science in honor of Mr Taylor and dedicated a bronze bust of Charlie during a daytime barbecue and nighttime formal dinner. This was done in large part due to the determination of Aviation Maintenance Science Department Chairman Fred Mirgale.

Frontier Airlines, under the guidance of Tom Hendershot, celebrates 24 May by sponsoring barbecues for their AMTs across their system. Last year the AMTA held their first AMT Day Celebration at Spanish Landing in San Diego, California.

There is also a very informative book written by Howard R. DuFour titled, *Charles E. Taylor: The Wright Brothers Mechanician*. This book portrays not only what Charlie did for aviation, but also his colorful life. It is a must for any aviation enthusiast's library.

The FAA has a program called the Charles E. Taylor Master Mechanic Award. This award is given to any aircraft maintenance technician, who has a minimum of 50 years in aviation, has been licensed for at least 30 of those years, and has never had his license revoked or negative action taken against him, and is recognized for his contributions to aviation. To be considered for this prestigious award, an individual must be nominated by three separate people in writing, detailing the reasons the person deserves an award named for the *father of aircraft maintenance*.

So, the next time an aircraft has a mechanical discrepancy, remember that the man or woman you call to inspect and repair the fault is a person who follows in the footsteps of a man who looked at his craft with respect and passion. Aircraft maintenance technicians use knowledge, skill, and integrity as the basis for their craft. They do not look for notoriety or the spotlight. They carry a great responsibility, and they pass that responsibility on from generation to generation. They are aircraft maintenance technicians! Thanks to Charles E. Taylor!

Notes

1. Brake Horsepower: The measure of an engine's horsepower without the loss in power caused by the gearbox, generator, differential, water pump, and other auxiliaries.

Kenneth MacTiernan is the founder and director of the Aircraft Maintenance Technicians Association. He served in the United States Air Force from 1981 to 1985 as a B-52 mechanic. He is also a 20-year aviation maintenance technician for American Airlines.

JL*

notable quotes

I said to myself, I have things in my head that are not like what anyone has taught me—shapes and ideas so near to me—so natural to my way of being and thinking that it hasn't occurred to me to put them down. I decided to start anew, to strip away what I had been taught.

—Georgia O'Keeffe