

# Hangar Digest

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## From the Editor

In this issue I have begun the series "Airlift Legends" a portrayal of those extraordinary men who were instrumental in building and maintaining an airlift network that encompasses the globe. First up is Major General Robert Olds, the first commander of the Air Corps Ferrying Command.



It is time to elect five members to the AMC Museum Foundation's Board of Directors. The five can either be those who are currently serving on the board and whose term is due to expire, other nominations appearing on the ballot and persons nominated from the floor.

This year's election will be held at 10:00 AM Eastern Daylight Savings Time at the AMC Museum prior to the Foundation's monthly business meeting on September 1, 2004. All members are cordially invited to attend and remain for the business meeting following the election. Those unable to attend will find an absentee ballot on page 13. Your vote is important and the Board appreciates your participation.

On behalf of the Museum Foundation, I would like to take this opportunity to recognize: Susan Carr McLaughlan, Deborah Way, Stephanie Ferguson and especially Nadine Cragg-Lester of Delaware Technical & Community College for redesigning and updating our website. Especially noteworthy is that they volunteered their time and expertise for an extremely time-consuming task. Nadine will maintain the site. So, log on to: [www.amcmuseum.org](http://www.amcmuseum.org) and check it out!

Again, the museum thanks all of you that have contributed to the C-124 and the C-133 Projects. However, there seems to be some confusion as to the membership status granted for your contributions. Only those persons contributing \$1,000 or more become Lifetime members. All other dues are paid annually. So, please don't hesitate to renew your membership once you have been notified that it is due to expire.

*Harry E. Heist, Editor*

## LOOKING BACK

Comparing the results of a recent gasoline economy run with the gas performance of the C-133 shows that the MATS giant Cargomaster comes out ahead. The average gas mileage for the 1961 cars tested was 23.9 miles. The C-133 flying five miles above the earth, averages better than 24 miles per gallon for each comparable 3,000 pounds of weight. Also, the JP-4 fuel burned by the C-133 sells for about half the price of gasoline.

Source: The MATS Flyer, July 1961.

## From the Director

Big News.... We have acquired another rare aircraft — a Laister-Kauffman TG-4A glider, donated by Major John Kalinowski of the Delaware Wing of the Civil Air Patrol.

Approximately 150 TG-4A gliders were purchased by the Army Air Corps in 1942 to train combat glider pilots. The TG-4A was simply a civilian sailplane adapted for military use. It was a wonderful sailplane but not the best choice to train pilots on how to fly the heavyweight gliders such as the Waco CG-4A they would be flying in combat.

Our aircraft was sold as surplus in 1945 and it went on to fly for many years and eventually it was purchased by John for orientation training for the Delaware CAP cadets.

Two years ago John retired the glider and at this year's air show it was accepted into the Air Force Museum's collection. In addition to myself, on hand to receive the glider from John was Colonel John Pray, 436th Airlift Wing Commander and Brigadier General (Ret.) Michael Quarnaccio, museum foundation board president. This is only the second TG-4A in the Air Force collection and the only one to be displayed with the CG-4A cargo glider. It will be suspended in the main hangar directly above our glider exhibit.

Recently all of our volunteers and staff had the opportunity to travel to the new Air and Space Museum Annex at Dulles International airport. It was a fantastic trip and our thanks to Hank Baker for organizing it. It's pretty tough when your closest competition is the Air and Space Museum but we enjoyed the trip and felt that our museum measured up well against the best in the business. Special thanks to museum project manager Lin Ezell and Dulles Airport manager Keith Merlin for showing us a great day!

The new air conditioning system has come online and it is everything we had hoped for. Without the A/C the recent heat wave would have made many retirement ceremonies unbearable and now the only one sweating is the master of ceremonies.

By the time you read this newsletter the top fuselage section of the C-124 should be here and planning is now underway for the airlift of the lower section. It takes time but we are moving forward.

Cheers,

*Mike*

## Crusin' with the Curator

Please fasten your seatbelts, folks, here we go. The 2004 air show went off without a hitch and for those of you that missed it, well, you missed a good show. The weather co-operated nicely and all the preparations leading up to the big weekend proved to be worth the effort. Our ramp and facilities were up to snuff and I thank all who rolled up their sleeves and helped to get the museum ready.

We recently purchased a walk-behind floor scrubber and it's far better than the small office scrubber we've been using for years. Chester "Smitty" Smith has been clocking the miles around the hangar cleaning the floor. No, he's not for hire!

Moving up to the mezzanine: Mike has been busy fine-tuning the air refueling exhibit. He has positioned the

**(Continued on the following page)**



Left to Right: Mike Leister, B/G Quarnaccio, Maj. Kalinowski, Col. Pray

## **Crusin' with the Curator (Cont.)**

KB-50 reel assembly and attached a drogue end to the hose. Positioned near the drogue is a refueling boom from an F-100 fighter. Mike manufactured the support pieces to hold these items and it adds a real flavor to the "how" of aerial refueling. Good job, Mike!

We're anticipating the arrival of one of the fuselage pieces of our C-124. The top half of the fuselage has been successfully separated from the lower half and if all goes as planned, it should be coming this way in June. So as you read this addition of the newsletter, we should have it here.

As stated in past newsletters, we've given up a portion of our restoration hangar to the C-5 cockpit upgrade team. In that process, the civil engineering folks have spruced up the interior of the hangar to include new ceiling lights. They've even ventured over onto our side of the fence to install fire detection devices and at the same time have fixed our lighting. We've been trying to get this done for many years and if all it took was giving up a portion of our hangar, we would have done that years ago. None-the-less, to accomplish this work, we had to move the Connie out of the hangar to clear the way for the civil engineer's bucket trucks. That meant moving ALL the equipment that we had just placed around the plane. But what the heck, we're so used to always moving something this was simply another challenge that we met.

Back to the C-124. Now we have to get the Connie back into the hangar, reposition the equipment around it and prepare the outside of the hangar for Old Shaky's arrival. After that, if anyone wants anything moved for convenience' sake, have at it.

Air conditioning....air conditioning....if you've not been in our display hangar since early May, you're missing a real treat. The HVAC contractors turned it on May 12th, The very next morning as I entered the museum I was greeted with a sensation that rivals....well suffice to say that I was more pleased with what hit me. COOL AIR! And quiet too. What a difference a day makes! I don't know if I should say that it was worth the wait but now that we have it, yeah, it was worth the wait. There is some fine-tuning and a bit more insulation to install but it's up and running.

As I get ready to shut the engine off on this installment, I want to once again thank each and everyone of you who helped get our museum ready for the air show and braved the crowds for two days to present your museum to them. I appreciate all that you do.

Jim

## **Meet Museum Volunteer Harold Daufenbach**

When Harold, "Duffy" as he is known, isn't explaining the inner workings of the P-51's Allison engine to young school students, he is in the restoration hangar working on the museum's C-121 Constellation.

Duffy entered the Air Force in 1949 at Eauclair, Wisconsin. His first operational assignment was with the 3205th Drone Squadron located at the Eglin AFB Proving Grounds in Florida. From Eglin he went on to assignments in Korea, back to Florida at MacDill AFB as a KC-97 crew chief and off to Cam Ranh Bay Air Base, Vietnam maintaining the C-47. His final active duty assignment was at Dover AFB working on the C-124, retiring with the rank of Tech Sergeant in 1969. He has been a museum volunteer docent and a key member of our restoration crew for four years.

When Duffy is not volunteering he enjoys fishing and working on his model trains. He resides in Marydel, Delaware.



## Developing an Air Transport Network

With the German invasion of Poland in September 1939, the start of World War II brought great changes in American military air transportation. Rapid German victories and the defeat of France in 1940 left only Great Britain to face the Nazis in Western Europe. However, the only means available to the British for striking directly at Germany was aerial bombardment. Desperately needing bombers to carry out their assault on Germany, the British looked to the United States' aircraft industry as a source of supply.

Neutrality legislation passed by Congress during the 1930s prevented the United States from supplying weapons to belligerents. However, the Roosevelt Administration secured congressional support to allow the British to purchase American-made munitions only if they transported them in their own ships on a "cash and carry" basis. Soon, however, the British ran short of money to pay for the weapons and President Roosevelt responded by obtaining the passage of the Lend-Lease Act in March 1941. This act allowed the United States to supply Great Britain with the weapons needed to continue the fight against Germany.

Flying the bombers to Great Britain offered the quickest method in delivering them across the North Atlantic; airplanes that lacked the range to make the long flight went by ship. Before the Lend-Lease Act, under the cash-and-carry legislation, the factories hired civilian pilots to fly the airplanes from the West Coast, where most of the factories were located, to Montreal, Canada. From there, civilian pilots employed by the British flew the airplanes to Newfoundland and then the 2,100 miles across the North Atlantic to Scotland. Ferrying the aircraft reduced the delivery times from three months, via surface transport, to only ten days, but the British had difficulty finding pilots who were willing to fly the planes. The lack of civilian pilots forced the withdrawal of RAF pilots from combat.

In April 1941, after the passage of the Lend-Lease legislation, General "Hap" Arnold, now in command of the Air Corps, suggested using Air Corps pilots to ferry the planes. The British readily accepted his proposal. On 28 May 1941, President Roosevelt directed the Secretary of War to take the responsibility of delivering the airplanes to Newfoundland; however, the American pilots lacked the authorization to fly across the Atlantic. The following day, Colonel Robert Olds of the Plans Division, Office of the Chief of the Air Corps, received orders to organize the ferrying service and the Air Corps Ferrying Command (ACFC) was officially constituted on 29 May 1941. Its mission included the movement of aircraft as may be required to meet specific situations. This broad charter allowed the ACFC to extend its operations around the world and authorized the creation of a regular military air transport route between the United States and Great Britain.

To allow American military aircrews to ferry Lend-Lease aircraft outside the Western Hemisphere, President Roosevelt authorized the ACFC on 24 November 1941 to deliver planes "to such other places and in such manner as may be necessary to carry out the Lend-Lease program." Although implicit before this time, President Roosevelt, with this decision, formally gave the ACFC a global mission.

Even before Roosevelt's authorization, the Air Corps Ferrying Command was heavily involved in surveying air routes to Alaska, Australia, Africa, India and Great Britain to ensure that Lend-Lease aircraft reached the Allies in an efficient and safe manner. During mid 1941, fighting in the Mediterranean increased Britain's aircraft requirements for that theater beyond all expectations. When the Germans attacked the Soviet Union in June 1941, the movement of aircraft into that region was even more important. To support the Allied effort, ACFC leaders established an air transport route over the South Atlantic as a means to rush Lend-Lease supplies to the beleaguered Russians through Persia via Cairo, Egypt. This was a much more significant accomplishment than the North Atlantic route.

The South Atlantic route was extremely important to the Air Corps Ferrying Command prior to the formal entry of the United States into World War II. ACFC officially opened the route on 14 November 1941. The ferrying missions to the Middle East began in Florida and extended through the Caribbean and Antilles Islands to Natal, on the easternmost portion of the Brazilian coast, a distance of 4,000 miles. From there the

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## Developing an Air Transport Network (Cont.)

flight across the South Atlantic was about 1,800 miles but upon reaching Africa the ACFC pilots could stop at any number of places before continuing on to Cairo. A major advantage of the route was the year-round favorable flying weather although the tropical jungles of the Amazon and the stormy weather in some parts of the Caribbean presented their own unique dangers. However, the 1,800 mile distance presented a formidable barrier to the movement of two-engine aircraft but with the opening of an air base on Ascension Island in July 1942, the ocean crossing was divided into fairly easy stages and ceased to be a serious operational problem.

The route was especially critical following the attack on Pearl Harbor when President Roosevelt ordered the reinforcement of the Philippine Air Force. With Japan cutting off the Pacific route, the Ferrying Command used the South Atlantic route to rush 80 Boeing B-17 and Consolidated B-24 bomber aircraft to the Philippines. The assignment was the first major foreign ferrying operation of the war.

With the opening of the South Atlantic route, the ACFC began assigning control, communications and weather personnel at bases along the way. These airmen were responsible for dispatching all United States military aircraft, regardless of the command to which they were assigned; transmitting arrival and departure reports, providing fueling and maintenance facilities, arranging quarters and mess for transient crews, collecting and forwarding intelligence information and exercising general administrative control. The worldwide nature of the Air Corps Ferrying Command's commitments ensured the command's involvement in several specialized service functions which would remain part of its operations for many years. Accordingly after the war, the Air Weather Service, the Air Photographic and Charting Service and the Army Airways Communications System were assigned to the Air Transport Command. This development also led to the command assuming housekeeping functions at bases throughout the world.

Note: The Air Corps Ferrying Command was renamed the Air Transport Command on 20 June 1942.

Sources: MAC History Office, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command 1941-1991*; Office of Air Force History, *The Army Air Force in World War II, Vol. I*.

## Artifact Facts by: Hal Sellars

While creating my leather patch exhibit for the museum, I learned a lot about not only the different kinds of leather patches that were used on flight jackets but also how hard it can be to create a meaningful and effective museum exhibit.

Leather patches were made in several ways—they could be painted onto a leather disk, embroidered or created from pieces of cut and sewn leather. They identified the unit the wearer was assigned to and also were decorative. Some were made so well, they're in almost like-new condition today.

Some of the leather patches in the museum's collection are still attached to flight jackets. The ones on display, however, were never attached to a jacket or had been carefully removed.

I enjoyed creating the exhibit and hope you will visit the museum soon and learn a little about an interesting part of World War II history.

I enjoyed creating the exhibit and hope you will visit the museum soon and learn a little about an interesting part of World War II history.

*Hal is a recent graduate of Polytech High School and as a senior class project created an AMC Museum exhibit of leather patches worn on World War II flight jackets. Hal is the son of Deborah Sellars, the museum's collection manager.*



## Airlift Legends: Major General Robert Olds

A factor underlying and shaping American strategy in World War II was the great distance separating each of the active theaters of war from the main source of supply in the United States. In establishing overseas lines of supply, the armed forces had of necessity to rely most heavily on water transport. There was no other possible means of moving the bulk of the military forces and the enormous tonnage required to support large-scale operations so far from home base. But the very nature of the war and especially the urgent demands for a speedy reinforcement of our outposts during the first months of hostilities, made it imperative that a system of air supply be developed. The fastest and most economical method of moving combat aircraft from the factory to the front — which might be 10,000 to 15,000 miles away — was to ferry them under their own power. To keep them in battle at their highest efficiency, an air transport service was needed for the delivery of spare engines, auxiliary equipment of all kinds, flight crews and ground personnel. The job was given to a new agency, the Air Corps Ferrying Command under the command of Colonel Robert Olds.



Robert Olds was born on 15 June 1896 in Woodside, Maryland. On 15 January 1917, he enlisted in the Aviation Section of the Signal Enlisted Reserve Corps at Fortress Monroe, Virginia. In less than six months he learned to fly, became a rated reserve military aviator, received a commission as a first lieutenant and assumed command of the 17th Aero Squadron at Kelly Field, Texas. For the next 20 years, he built a strong background in training and serving as an instructor at various stateside bases and at Clermont, France the site of the instruction center for bombardment aviation. In 1937 he was assigned to Langley Field, Virginia as Commander of the 2nd Bombardment Group, serving as group commander for seven B-17 bombers on the historic goodwill flight to Brazil in February 1938.

Involved in testing and evaluating the B-17 Flying Fortress, he set a series of altitude and non-stop transcontinental flight records, demonstrating the value of this aircraft as an offensive weapon. Because of his expertise in long distance navigation, on 29 May 1941, he accepted the challenge of organizing the Air Corps Ferrying Command to ferry aircraft from Canada to England. His duties entailed establishing ground installations on both sides of the Atlantic and setting up an extensive aircrew force needed to deliver the airplanes. On 9 June 1941, the first aircraft left the factory for overseas delivery under the new command. By early 1942, Olds' ferrying service had grown beyond the original route to include South America, Africa and India, with plans underway for the Pacific and Alaskan routes.

Lieutenant General Harold L. George would assume command of the Ferrying Command on 1 April 1942.

Probably better known to the younger historians than Major General Robert Olds was his son Brigadier General Robin Olds, triple ace of World War II and Vietnam.

Sources: MAC History Office, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command 1941-1991*; Office of Air Force History, *The Army Air Force in World War II, Vol. I*.

### **The Air Corps Ferrying Command Insignia...**

was a disc of gold with an arched base of white with lines of latitude and longitude in blue; over all a symbolic upright wing of an aircraft in red and blue. On a dexter border from the upper edge of the base to the upright wing of the aircraft are the Morse Code dots and dashes in red, white and blue for the letters "ACFC." The insignia represents aircraft being ferried from West to East, which referred to President Roosevelt's directive to the command that aircraft be ferried "with the greatest possible speed."

Source: *U.S. War Department orders via CPD/HO Maxwell AFB.*



## The Hall of Heroes

A force of 550 Americans, later referred to as the “Lost Battalion,” were completely surrounded by German soldiers on 3 October 1918. Pinned down, in a ravine and running low on supplies, the American troops withstood German attacks and even endured Allied shelling. Although the Lost Battalion managed to release carrier pigeons, their messages contained the wrong coordinates. On 5 October, airmen from the 50th Aero Squadron attempted to drop supplies to the battalion from their deHavilland DH-4 airplanes. Lacking the unit’s true location, the airmen dropped most of the cargo into German trenches. Instructed not only to drop supplies but to find the Lost Battalion, the entire 50th Aero Squadron undertook the operation on 6 October, under adverse weather conditions. The most successful effort was made by First Lieutenant Harold E. Goettler and his observer, Second Lieutenant Erwin R. Bleckley. Volunteering for a second mission, Goettler and Bleckley flew over the ravine at an altitude of only 200 feet. Their plan was to draw enough enemy fire so they could pinpoint the battalion’s location. Slowly, in their bullet-riddled plane, they narrowed down the possibilities. Both, however, received fatal wounds in the process. Goettler managed to crash-land his plane near allied lines before expiring but he was too late to save Bleckley’s life. Lieutenants Maurice Graham and James McCurdy completed what Goettler and Bleckley had started but again at some cost. A bullet hit McCurdy in the neck. Surmising what the airmen were attempting to do, during the night, the Lost Battalion laid out panel markers which disclosed their exact position. Finding these markers the next morning, the 50th Aero Squadron relayed the location to the ground forces which promptly rescued the Lost Battalion. For their heroic efforts to resupply and rescue the battalion, Goettler and Bleckley received the Medal of Honor.



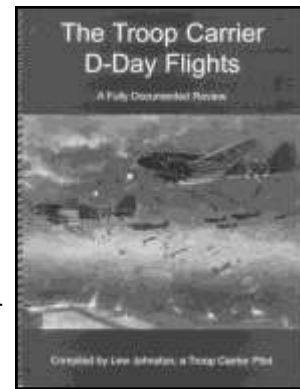
Source: MAC History Office, *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command 1941-1991*.

Although the deHavilland DH-4 was originally a British combat airplane, it was redesigned in the United States in 1917 with the famed Liberty engine. The airplane was used by the U. S. Air Service in France primarily for observation, day bombing and artillery spotting. It carried the nickname “The Flaming Coffin” because of the supposed ease with which it could be shot down in flames but, in reality, only eight of the 33 DH-4s lost in combat by the U.S. burned as they fell. The DH-4 was the only U.S.-built airplane to see combat in WWI.

## **Recommended Reading: The Troop Carrier D-Day Flights**

“The Troop Carrier D-Day Flights” is a fully documented close look at how the Troop Carrier C-47s and gliders delivered airborne troops and their equipment and supplies to the continent of Europe on 6 June 1944. Supplementing this book are the “World War II Troop Carrier Oral Histories” from those participants of the D-Day flights.

Author Lew Johnston has compiled an extensive look at some of the more interesting historical records of the Troop Carrier D-Day flights and a collection of some of the more representative stories of the dedication, bravery and accomplishments of the Troop Carrier and Airborne forces that served together.



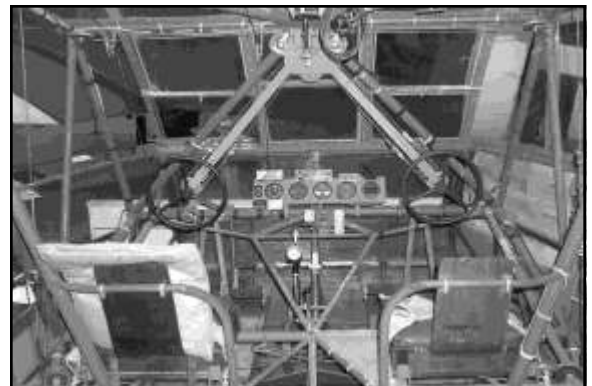
This book is available from the museum’s gift shop and can be purchased for \$35.00 including shipping and handling, payable by check, VISA or MasterCard.

Please call (302)677-5992 or e-mail: [william.hardie@dover.af.mil](mailto:william.hardie@dover.af.mil) to place your order.

## **Museum Aircraft of the Quarter: Waco CG-4A “Hadrian”**

The CG-4A was the most widely used U.S. troop/cargo glider of World War II and eventually more than 12,000 were procured by the U.S. Army Air Forces. Fifteen companies, including piano and furniture manufacturers produced the CG-4A with 1,074 being built by the Waco Aircraft Company of Troy, Ohio.

The CG-4A was constructed of fabric covered wood and metal and was crewed by a pilot and copilot. It could carry 13 fully equipped troops or a jeep, quarter-ton truck, or a 75mm Howitzer, all loaded through an upward-hinged nose section. The C-47 and the C-46 were usually used as the tow aircraft.



CG-4As went into operation in July 1943 during the Allied invasion of Sicily. They participated in the D-Day assault on France and during other important airborne operations in Europe and in the China-Burma-India Theater. Gliders were considered expendable and were abandoned or destroyed after landing.

The museum’s glider, tail #45-15009, was built by Commonwealth Aircraft Company of Kansas City, Kansas in 1945. The aircraft came from the Air Force Museum at Wright Patterson AFB on May 17, 1995 in a condition that can be described as nothing other than a disaster. Museum volunteer John Demory almost single-handedly has been responsible for the cockpit’s restoration. However, due to other priorities, the restoration of the remainder of the glider has been put aside for many rainy days.

Shortly after receiving delivery of the glider from Wright Patterson, we received word that there were remnants of a CG-4A located in Vienna, New Jersey a few miles from the Delaware Water Gap. Upon arrival, we found the glider’s rusted skeleton encased in 50 year’s of forest growth. Obviously there was nothing of salvage value; however, it was interesting to note that the owner discarded the glider and used its shipping crate to build his house.



## “Name the Plane”

The airplane that I asked you to identify in April’s issue of the Hangar Digest is the Cessna U-3A.

In 1956 the US Air Force announced a requirement for an “off the shelf” light commercial twin-engine airplane to be used for liaison and light cargo missions. An evaluation was made of several existing designs and the Cessna Model 310 was declared the winner. The Model 310 had first flown in January 1953, with civilian production deliveries beginning the following year.

The Air Force purchased 80 of the 310s under the original designation L-27A that were delivered between May and December 1957. A procurement of an additional 80 was made between May and November 1958.

The L-27A was nearly identical to the commercial Model 310 but auxiliary fuel tanks, a special interior and a revised instrument panel were added at the Air Force’s request. The aircraft were painted in a blue and white scheme, earning them the semi-official nickname of “Blue Canoe”, referring to the peculiar shape of the L-27’s fuselage. In the 1962 tri-service redesignation system, the L-27As were classified as utility aircraft and were redesignated as U-3As.

Of the readers submitting an entry, all identified the aircraft as the L-27A/ U-3A. Our randomly selected winner of the “Name the Plane” contest is Steven Daskal of Burke, Virginia and he will receive the book “The Troop Carrier D-Day Flights”. Congratulations!

This time I ask that you identify the airplane depicted below including the manufacturer, mission, design and series (if applicable); i.e., Boeing B-17G. Please send your entry by letter, e-mail, FAX or post card to any of the addresses listed on the last page. **Please do not leave your entry by phone.** Following each mailing, I receive what appears to be FAX messages on my voice mail. Please note, the FAX number is (302) 677-5940. I will designate each correct response with a number ID from which I will randomly select one winner. Please send your entry as soon as possible and include a return address. The winner will receive a book selection from the museum’s gift shop. Good luck and thank you for your participation!

(Museum staff and volunteers are not eligible)



## Around the Bases: Charleston AFB, South Carolina

Charleston Air Force Base is located ten miles from downtown Charleston, South Carolina and is the home of the **437th Airlift Wing (Air Mobility Command)**.

Immediately following the attack on Pearl Harbor, the commander of the Eastern Defense Command planned for the defense of the eastern coast of the United States and the Air Corps set out to begin military operations at municipal airports along the eastern coast. On 11 December 1941, the Air Corps representatives arrived at Charleston and announced to airport authorities that the Army would take over part of the field for defense of the east coast. Although an official base had not yet been established, in January 1942 anti-submarine missions began. An order was issued on 22 October 1942 assigning the base to the Air Service Command and officially named the base, Charleston Army Air Base. During the fall of 1942, the base performed a dual role of defense and training. Anti-submarine missions continued to be flown each day and air depot and service groups destined for overseas received combat training. The base transferred from the Air Service Command to the First Air Force and became a training base for B-24 Liberator bomber crews destined for the European Theater of Operations. During 1 January 1944 to 30 May 1945, 8,630 trained B-24 crews graduated.

With the end of the war in Europe, Charleston's mission was changed. The demand for B-24 crews declined and the future of the base was unclear. Base leadership received orders to prepare to train B-17 crews and a number of pilots reported for training. However, with an increased demand for air supply, representatives of the Air Transport Command visited the field to determine if it was appropriate to use it as a Ferrying Division base. On 20 May 1945, Charleston Army Air Field transferred to the jurisdiction of the Air Transport Command.

Transport operations continued until February 1946 when the War Department declared Charleston Army Air Field surplus and inactivated the base. All base assets reverted to the War Assets Division and the city requested the airfield's return. By that time the base consisted of 2,050 acres and had benefited from \$12 million worth of improvements. The Army surrendered the lease on 19 October 1948. The airfield continued to serve as the Municipal Airport for the city.

In response to the Korean War, the newly activated Air Force came to Charleston in January 1953. In August, fifty C-119 Flying Boxcar aircraft arrived under the Tactical Air Command's 456th Troop Carrier Wing. With the 456th's deployment to Korea, the 1608th Air Transport Group (ATG), Atlantic Division, Military Air Transport Service (MATS) was activated on 15 January 1954 and the base received its first C-54 Skymaster aircraft on 4 March 1954.

Nearly one year later, on 1 March 1955, the Air Force transferred command of the base from the Tactical Air Command to MATS and activated the 1608th Air Transport Wing (ATW). The 1608th took over all administration operation and maintenance of the base and inaugurated Charleston's airlift tradition. On 3 January 1956, MATS designated Charleston AFB as an Aerial Port of Embarkation and channel missions were scheduled regularly to the Caribbean, Central America, North Africa and to the Middle East.

The C-54 remained the primary aircraft at Charleston until the base received its first C-121C Super Constellation, on 16 September 1955. The aircraft was dubbed "The City of Charleston".

As the construction boom of the 1950s continued the temporary structures of World War II were demolished and many of the buildings still in use today were built, including family housing. As the new streets were laid out they were named after deceased South Carolinian veterans that received the Distinguished Flying Cross or higher. The one exception is "Graves Avenue", which was already named after Brigadier

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## **Around the Bases: Charleston AFB, South Carolina (Cont.)**

General Davis D. Graves, the first commander of the base. The base's airlift mission also expanded during this time and by 1957 three C-54 squadrons and two C-121 squadrons were operating from Charleston AFB.

In June 1958 the base received its first C-124C Globemaster II and transferred its last C-54. In August 1958, the C-124s airlifted troops and supplies to the Middle East in support of the Lebanon Crisis and in September, C-124s airlifted a squadron of F-104s to Taiwan when communist China threatened nearby islands.

Charleston contributed to the "Space Race" by returning astronaut John Glenn's space capsule, *Friendship 7* via C-124 to Cape Canaveral, following his pioneering orbit of the Earth on 20 February 1962. This event initiated Charleston's long standing support of NASA from Projects Mercury, Gemini and Apollo through the fatal space shuttle *Challenger* recovery.

The base received its first C-130E Hercules on 11 August 1962 and assumed the annual resupply of McMurdo Station, Antarctica in support of Operation DEEP FREEZE. All the C-121s were transferred by June 1963 and two squadrons of C-130Es (41st and 76th Air Transport Squadrons) and two C-124 squadrons (3rd Air Transport Squadron and the 17th Air Transport Squadron) made up the 1608th's airlift compliment. The advent with the arrival of the C-130's marked the beginning of airdrop and formation flying at Charleston and forged a close working relationship with the Army's airborne units. The C-130E remained at the base until 1967, being replaced by the C-141A Starlifter.

On 14 August 1965, Charleston AFB became the second base after Travis AFB, California to receive the C-141A. The C-141's arrival launched the base into the jet age and would become the mainstay for the next 30 years. By the end of 1967, the 3rd, 41st and 76th squadrons were flying the C-141. The 17th continued to operate the C-124 until the squadron's deactivation on 8 April 1969.

Following the Starlifter's arrival, a change in the Air Force doctrine recognized airlift as a distinct mission. This led to the reorganization and redesignation of the airlift units, changing the Military Air Transport Service to the Military Airlift Command (MAC). The Air Force deactivated the 1608th Air Transport Wing and activated the 437th Military Airlift Wing. The Air Transport Squadrons were redesignated as Military Airlift Squadrons.

Charleston became the first base to receive the C-5A Galaxy. To accommodate the large aircraft, another construction boom ensued. Huge hangars were constructed to house the large aircraft. However, the C-5's stay at Charleston was short-lived. By July 1973, the wing swapped its C-5s for Dover AFB's C-141s.

Throughout the 1960s, 70s, 80s and the 1990s, the wing participated in every major action including the Vietnam War, the rescue of Americans from Grenada, the invasion of Panama, Operation DESERT STORM and countless humanitarian relief missions.

On 14 June 1993, Charleston became the first base to receive the C-17A Globemaster III. The advent of the C-17's arrival again launched the base into a new era and sparked yet another construction boom.

On 1 October 1993, the wing underwent a major reorganization restructured under the "One Wing, One Base, One Boss" concept. The wing's designation changed from the 437th Military Airlift Wing to the 437th Airlift Wing and the flying squadrons followed suit being redesignated as Airlift Squadrons.

On 15 July 2000, the wing ended its 35 year association with the C-141 Starlifter and officially transitioned to the C-17A Globemaster III

As the world turned its calendars to a new millennium and the realization that the free world faces a different type of enemy, Charleston personnel and its C-17s are deployed around the globe in support of Operation IRAQI FREEDOM.

Source: <http://public.charleston.amc.af.mil>

## Engines: The Lycoming XR-7755-3

Let me see a show of hands from those of you who believe the Pratt & Whitney R-4360 "Wasp Major" is the largest and most powerful reciprocating engine ever built. True, with its 28 cylinders producing a maximum of 3,500 horsepower and with its ability to power huge airplanes such as the B-36 bomber, C-124 Globemaster II and the B-35 Flying Wing it truly is a technical marvel. Now, for those of you that did not raise your hands, you must be aware of the Lycoming XR-7755-3.

Having made several visits to the National Air and Space Museum's Paul E. Garber Restoration and Storage Facility at Silver Hill, Maryland and believing that I had seen almost everything, tucked away in its dusty shadows, it wasn't until my recent visit to the new and breathtaking National Air and Space Museum's Steven F. Udvar-Hazy Center at Washington's Dulles International Airport that I became acquainted with the XR-7755-3. *(Eventually all aircraft and collections will be moved from Garber to the Udvar-Hazy Center).*

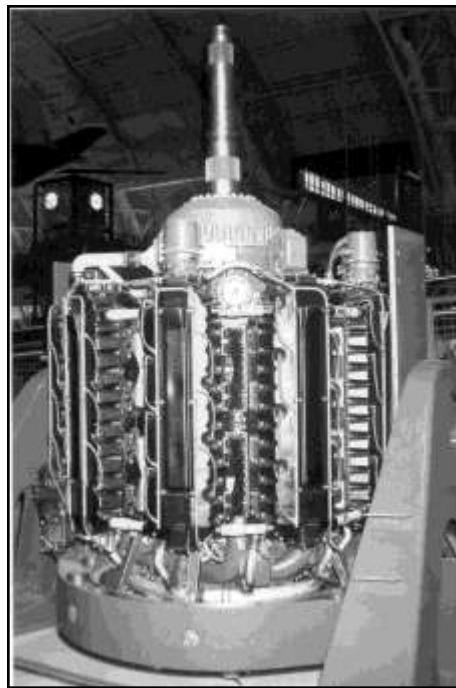
During World War II, the U.S. Army Air Forces needed an engine with high takeoff power and low fuel consumption for a yet-to-be designed long-range bomber and transport. Lycoming Manufacturing Company of Williamsport, Pennsylvania began designing such an engine in early 1944. It featured nine dual-lobe overhead camshafts, which shifted axially for takeoff and cruising efficiency and a two speed, geared, dual-rotation propeller drive. The engine was designated the XR-7755-3, the largest, most powerful reciprocating aircraft engine in the world.

Lycoming built two prototypes and they were successfully tested by the Army but neither engine was ever mounted on an airframe. With the introduction of the reliable and lighter gas turbine engines after World War II, the XR-7755-3 was obsolete before it could be fully developed.

The XR-7755-3 had 36 cylinders, rated at 5,000 horsepower, liquid cooled and weighed 6,130 pounds compared to the 3,400 pound weight of the R-4360.



Pratt & Whitney R-4360



Lycoming XR-7755-3

**NOTICE OF THE MEETING OF:  
THE AMC MUSEUM'S BOARD OF DIRECTORS**

Members of the Air Mobility Command Museum are cordially invited to attend the Museum's Foundation Meeting for the purpose of electing five (5) members to the Board of Directors. The meeting will be held at the AMC Museum, 1301 Heritage Road, Dover Air Force Base, Delaware on Wednesday, September 1, 2004 at 10:00 a.m. Eastern Daylight Savings Time.

The following persons have been nominated:

- Brig. Gen. Richard Bundy, USAF (Ret)\*
- TSgt. Jay Schmukler, USAF (Ret)\*
- CMSgt. Jimmy Nolan, USAF (Ret)\*
- Maj. Hans Reigle, USAFR (Ret)\*
- MSgt. Harry Van Den Heuvel, USAF (Ret)\*
- CMSgt. Donald A. "Doc" Adams, USAF (Ret)<sup>1</sup>
- Col. Richard B. Harper, Jr., USAF (Ret)<sup>2</sup>
- 

\*Denotes Incumbent.

<sup>1</sup> Don "Doc" Adams entered the Air Force in June 1950 and retired from active duty as the maintenance superintendent of the 436<sup>th</sup> Military Airlift Wing Avionics Maintenance Squadron in 1980. He is an active museum volunteer, a member of our restoration crew and is an "as needed" docent. He has been a volunteer since 1998.

<sup>2</sup> Richard Harper retired from Dover AFB as Base Commander in 1988 after 27½ years of active service. He is a Vietnam veteran, former pilot and navigator having logged time in tanker, reconnaissance and airlift aircraft. He has been a member of the board of directors of USO Delaware, the Central Delaware Chamber of Commerce and President of the Georgetown-Millsboro Rotary Club. He has been a spokesperson for the United Way of Delaware, American Red Cross and has been a speaker at monthly Transition Assistance Programs at Dover AFB for the past 14 years. He currently serves as Deputy Director of Sussex County Senior Services having held this position since 1996.

If you desire to write-in your nomination you may do so; however, nominees must be members (Friends) of the AMC Museum. Board members must be available to attend the monthly business meeting and serve on such committees as designated by the Board's President. Those elected will serve a term of three years. **(Select no more than five of the nominees).**

You may cast your vote by: US Postal Service – AMC Museum Foundation, P.O. Box 02050 Dover AFB, DE 19902-2050; e-mail [harry.heist@dover.af.mil](mailto:harry.heist@dover.af.mil); FAX (302) 677-5940 or by your presence at the meeting. Absentee votes must be received prior to August 30, 2004. The Board thanks you for your participation.

(signed)

Lt Col Phil White, USAF (Ret.)

Secretary

June 2, 2004

For an updated Pave a Path to History  
brick form, please visit:

<http://amcmuseum.org/support>

**★The Benefits of Membership★**

**Becoming a Member of the Museum is easy and it not only benefits the Museum's programs and projects, it also benefits you!**

For an updated membership form,  
please visit:

<http://amcmuseum.org/support>

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**Website ([www.amcmuseum.org](http://www.amcmuseum.org))**

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The Hangar Digest is published quarterly and is dedicated to the preservation of our airlift and tanker heritage. All articles, unless otherwise noted, are written by the editor. All photographs are the courtesy of the Air Mobility Command Museum unless otherwise designated.

I solicit your comments, articles and ideas for future issues. You may contact me by mail: Harry E. Heist c/o The Hangar Digest, P.O. Box 02050, Dover AFB, DE 19902-2050; FAX (302)677-5940; PH (302)677-5997 and email:

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*Harry E. Heist (Editor)*