



NEWS

A publication of the Jimmy Doolittle Air & Space Museum Foundation

Vol. XXIII, No. 3, 2006

P O Box 1565 • Travis AFB, CA 94535 • (707) 424-5605 • www.jimmydoolittlemuseum.org

Bravo!

Applause!

*Salute! Thank
you!*

*Aerojet in
Sacramento and
the
Jet Propulsion
Shop at Travis
AFB.*

*Aerojet in
Sacramento has
donated the first
and second
stages of a Titan
IV missile.*

*The jet
propulsion shop
at Travis
presented the
museum with a
giant C-5
engine.*

*For more details,
see Curator's
comments on
page 11.*

*Also, thanks
Vacaville Tow,
Inc. for moving
our R-3350
engines.*



A Chinook helicopter lifts a C-47 Skytrain destined for the museum at Travis Air Force Base. (Rick Roach/The Reporter)

Museum Foundation for permanent display at the Travis Air Museum.

“This is a part of our national history,” Miller explained. “And I was determined to make sure everyone could enjoy that piece of history.”

Spirits were high and Miller was much in demand Wednesday as he greeted friends, shook hands and posed for pictures.

“Duncan! We gotta get a picture of you and the aircraft,” a friend announced as he pulled Miller into yet another pose.

Among the crowd of well-wishers were Air Force retirees, local dignitaries and family and friends of museum members.

“My dad works as a volunteer at the museum and he was a flight mechanic on the C-47s,” explained Sandra Hargrave, as she and husband, Jeff, waited for the liftoff with their son Robby, 4.

Final Flight continued on page 5

Final Flight: ‘Gooney Bird’ gets a lift

By Robin Miller

Article launched 12/07/2006

Standing alongside the Nut Tree Airport apron among a throng of onlookers, Gordon Valley resident and retired pilot Duncan Miller was the man of the hour Wednesday as his C-47 airplane was hoisted by a helicopter and transported to Travis Air Force Base.

“My baby’s leaving,” he said to one of the many friends and fans who turned out to watch.

Onlookers lined up early in the day to witness the California Air National Guard Chinook helicopter being tethered to the World War II-era plane. Miller, who has owned the craft for 17 years, donated it to the Jimmy Doolittle Air and Space



Duncan Miller salutes his 1942 C-47 Skytrain as it is lifted skyward Wednesday. (Rick Roach/The Reporter)

The Jimmy Doolittle Air and Space Museum NEWS is a publication of the Jimmy Doolittle Air & Space Museum Foundation. The NEWS is published three times a year. Subscriptions are free to paid members of the Jimmy Doolittle Air & Space Museum Foundation.

No part of the NEWS may be reproduced without written permission of the Jimmy Doolittle Air and Space Museum and Education Foundations.

Opinions expressed in the NEWS are those of the authors and do not necessarily represent the opinions of the Board of Directors, members of the Jimmy Doolittle Air & Space Museum Foundation, or the US Air Force.

Comments and questions about the NEWS may be addressed to Editor, Jimmy Doolittle Air & Space Museum Foundation NEWS, PO Box 1565, Travis AFB, CA 94535

ABOUT Us



The Jimmy Doolittle Air and Space Museum Foundation, with its Education Museum Foundation, is registered as a non-profit 501(c)(3) organization. It brings together historical, educational and technological resources to create programs which preserve our aviation heritage in building an air and space museum for all ages that embraces California aviation, Travis Air Force Base, the U. S. Air Force and the history of the Doolittle Tokyo Raiders.



It took teamwork to restore and move the C-47 "Okie Dokie." The complex operation was a perfect example of what the foundation does: bringing together resources to preserve our aviation heritage.

JIMMY DOOLITTLE AIR AND SPACE MUSEUM

The Jimmy Doolittle Air and Space Museum will be the name of the new, off-base museum that is being created by the Jimmy Doolittle Air and Space Museum Foundation. This will be a major tourist destination in northern California that will embrace the history of the Jimmy Doolittle Raid, the history of Travis Air Force Base, and the history of the US Air Force. The Jimmy Doolittle Air and Space Museum Foundation is its designated non-profit arm.

TRAVIS AIR MUSEUM

The Travis Air Museum is presently located on Travis Air Force Base. It presents the history of that base and the history of airlift in the Pacific. The Jimmy Doolittle Air and Space Museum Foundation formerly the Travis AFB Historical Society is the designated non-profit arm of the museum.

TABLE OF CONTENTS

Final Flight: 'Gooney Bird' gets a lift	1, 5	Travis Air Museum's Douglas A-26 Invader	10
About Us	2	Curator's Corner	11 - 12
From the Editor	3	Wanted! Vietnam gunship memoriabilia and info	12
Foundation Team	4	Berlin Airlift	12
Gift Shop	5	New Rocket Engines for the Museum, Titan IV ..	13 - 14
Mission "Okie Dokie"	6 - 9	Giant C-5 Engine Comes to the Museum	15

FROM THE EDITOR:

- *The publication of this Travis Air Museum NEWS was timed to coordinate with the Foundation's airlift of the C-47 "Okie Dokie" from Duncan Miller's hangar site at the Nut Tree Airport to its current location at the Travis Air Museum on Travis AFB, CA. This airlift turned into quite a saga, so the NEWS is being published at a later date than first planned.*
- *Fortunately, this airlift was witnessed and recorded by many individuals, so I have a wealth of photos, articles and videos to publish in the NEWS, on the Museum's website and contribute to our library and archives. Thank you to all.*
- *The Travis Air Museum NEWS is now available in a full color pdf format at www.jimmydoolittlemuseum.org.*

*See you on line,
Denell Burks
d.burks@travisairmuseum.org*



FOUNDATION TEAM

Foundation Team: Jimmy Doolittle Air and Space Museum Foundation’s Board of Directors, membership and volunteers. Travis Air Museum staff are employees of the U. S. Government.

Board of Directors

Mr. Andy Popenoe a.popenoe@travisairmuseum.org
President Jimmy Doolittle Air & Space Museum Foundation
Mrs. Denell Burks d.burks@travisairmuseum.org
Vice President/Editor/Membership JDASMF
Mr. Wally Mitchell w.mitchell@travisairmuseum.org
Treasurer JDASMF
Mr. Dave Florek d.florek@travisairmuseum.org
Secretary JDASMF and JDASMEF
Mr. Jack Batson j.batson@travisairmuseum.org
President Jimmy Doolittle Air & Space Museum Education Fndn.
Mr. David Fleming (707) 448-7448
VP Jimmy Doolittle Air & Space Museum Education Fndn.
Mr. Andrew Suihkonen a.suihkonen@travisairmuseum.org
Treasurer JDASMEF
Mr. Len Augustine l.augustine@travisairmuseum.org
Mr. Linn Benson
Mr. George Buchanan g.buchanan@travisairmuseum.org
Mr. Charles Dawes c.dawes@travisairmuseum.org
Mr. Jerry Hoenicke j.hoenicke@travisairmuseum.org
Mr. Earl Johnson e.johnson@travisairmuseum.org
Gift Shop Manager
Mr. Phil Lancaster
Mr. Duncan Miller (707) 425-0900
BGen. Mike Peters m.peters@travisairmuseum.org
Mrs. Iris Taggart (916) 455-4412
MGen. James Taylor j.taylor@travisairmuseum.org

Membership

Since 1982, members of the Jimmy Doolittle Air and Space Museum Foundation (previously the Travis AFB Historical Society) played an important role in meeting the mission of bringing together historical, educational and technological resources to help create programs which preserve our aviation heritage and build an air and space museum for all ages, embracing California aviation, Travis Air Force Base, the U. S. Air Force and the history of the Doolittle Tokyo Raiders. Join Up! The Jimmy Doolittle Air and Space Museum Foundation, with its Education Museum Foundation, is registered as a non-profit 501(c)(3) organization.

Travis Air Museum Staff

The staff of the Travis Air Museum are employees of the U S government. The Travis Air Museum is a part of the National Museum of the United States Air Force field program.

Dr Gary Leiser Gary.Leiser@travis.af.mil
Curator (707) 424-5598

Gary Leiser has been the director of the Travis Air Museum since 1996. Prior to that he was the historian for 15th AF headquartered at Travis. A Middle East specialist, he received a doctorate in Middle Eastern history from the University of Pennsylvania in 1976. He spent 10 years in the Middle East in various capacities and is fluent in Arabic and Turkish. He has published nine books on Middle Eastern history as well as numerous articles for scholarly journals and encyclopedias.

MSgt Mitchell Danbury Mitch.Danbury@travis.af.mil
Superintendent - (707) 424-5605

Volunteers

Volunteers are the lifeblood of the Foundation and the Museum. Day in and day out, they provide a myriad of services for the Foundation and the Museum.

How to Become a Volunteer:

Volunteers at the Museum enjoy a real sense of camaraderie, in a flexible environment that appreciates the value of their time and commitment. We use their particular skills or areas of interest to fulfill the needs of the Museum.

We encourage you to become a museum volunteer...give the gift of time. Even a small commitment of time can make a real difference. It’s a great opportunity to share your excitement and enthusiasm about aviation, while making a positive impact in the community.

If you’re interested, please call the Museum office at (707) 424-5606. We look forward to hearing from you. From docents to artisans, mechanics to shop keepers, we appreciate the gift of time and talent.

Crew Chiefs:

We at the “Air Museum” are proud of the work our volunteer’s accomplish on a daily basis. We currently have a need for “volunteers” or “organizations” to adopt one of our aircraft displayed outside of the museum building. As a “crew chief” assigned to one of our aircraft you would be responsible for maintaining the overall appearance.

FINAL FLIGHT CONTINUED

“I saw it with its wings on,” boasted Robby. “And its propellers.”

In November, the first attempt to hoist the airplane had to be abandoned when the aircraft proved too heavy for the helicopter. The problem was due to downdraft from the helicopter, officials said later. The wings and propellers were removed from the plane and transported by ground to the air base in advance of Wednesday’s lift.

“That made the airplane almost 4,000 pounds lighter,” Miller said.

Affectionately nicknamed “Gooney Bird,” C-47s have a long and distinguished history. Adapted from the DC-3 commercial airliner, by the end of World War II more than 9,000 of them were in military use carrying personnel and cargo - and in a combat role towing troop-carrying gliders and dropping paratroopers into enemy territory.

Miller’s particular aircraft, named the “Okie Dokie” flew as part of the Normandy invasion during World War II.

After the war, many of the planes remained in service, participating in the Berlin Airlift, the Korean War and the Vietnam War. The plane Miller later acquired ultimately became a mosquito bomber in Florida before he and a friend purchased it and brought it to Vacaville.

Seeing it leave the Nut Tree was a thrill for Miller, who lifted his own camera and took a few snaps as the plane was hoisted into the air. An initial test lift ended quickly as the plane began to spin around a bit. But crews opened a drag chute on the airplane and the spinning problem was quickly solved.

Whoops, whistles and applause burst out as the craft was carried away and Miller lifted his hand to wave goodbye. But it was not goodbye forever, as he was whisked by pickup to Travis to watch the landing and see his “Okie Dokie” towed into place at the museum.

“It’s a thrill,” he said as the plane disappeared from the Nut Tree and into the distance. “And it looks safe; that’s the big thing.”

Robin Miller, City/Editor, can be reached at citydesk@thereporter.com.

Jimmy Doolittle Air and Space Museum Foundation

GIFT SHOP

Specializing in Quality Aviation and Military Merchandise



Located in the Travis Air Museum
Travis AFB, California
www.jimmydoolittlemuseum.org
707.424.4450



Art, Belt Buckles, Books, Bumper Stickers, Calendars, Caps, Cards, CDs, Coasters, Coins, Cups, DVDs, Flags, Jackets, Jewelry, Key Fobs, Magnets, Model Aircraft, Mugs, Patches, Pencils, Pens, Pins, Play Sets, Posters, Post Cards, Shirts, Shot Glasses, Toys, Tee Shirts, Videos, Wind Socks and much more.

MISSION “OKIE DOKIE”



(Travis Air Museum archives)

During WWII, the C-47 “Skytrain,” tail #292990, flew in the Normandy invasion and the Berlin Airlift. The plane is one of a few which was not converted to civilian use. It even has original first aid kits on the wall and pallets for airlifting wounded soldiers out of harms way. 17 years ago, Duncan Miller and a friend purchased it for about \$1 a pound; they guessed about \$19,000.00 and they got it.



(Travis Air Museum archives)

By Denell Burks



(Travis Air Museum archives)

Duncan Miller (middle), Foundation Board member and aviation guru extraordinaire signing the paperwork donating his C-47 “Okie Dokie” to the Jimmy Doolittle Air and Space Museum Foundation. Witnesses were Andy Suihkonen (left), JDASM Education Foundation Treasurer, and Dave Fleming (right), JDASM Foundation Board Member and holder of Foundation membership #1. Thank you, Duncan.

Mission “Okie Dokie” began when 85-year old Duncan Miller decided that his original condition C-47 needed to be in a museum for generations to see, especially those in the local area. Miller, who shortly after WWII became the C-47 instructor pilot for what would become Travis AFB, felt that donating his “Okie Dokie” to the Jimmy Doolittle Air and Space Museum Foundation would be the best way to accomplish this.

David Fleming became the Foundation’s project manager for finding the best way to move the C-47 from its home at Duncan Miller’s Nut Tree Airport hangar to the Travis Air Museum’s Airpark. As you can imagine, the logistics of this move involved a great many people, affiliated with a wide array of agencies, concerns and opinions. At times, it seemed that Mission “Okie Dokie” was “Mission Impossible.”

Fortunately, in November 2006, all the pieces fell into place when Colonel Steven J. Arquiette, Commander 60th Air Mobility Wing, Lt. Colonel Mitch Medigovich, Commander of the 3rd Battalion, 140th Aviation Regiment

and Jack Batson, President of the Jimmy Doolittle Air and Space Museum Education Foundation all signed an OK for the C-47, to be airlifted by Stockton's California Air National Guard with a CH-47 "Chinook" heavy lift helicopter.

So, it was THUMBS UP!

The dates were set:

- November 14th for rigging;
- November 15th for an 11:00 a.m. liftoff.

Press Releases went out:

- Iris Taggart, Foundation Board member, personally contacted the Sacramento television stations,
- Lindsey Hahn, 1 Lt, USAF, Deputy Chief, 60 AMW Public Affairs sent out a press release from Travis AFB, and
- Denell Burks, Foundation vice president, notified Ian Thompson of Fairfield's "Daily Republic" and Robin Miller of Vacaville's "Reporter."

November 15, 2006 dawned bright and beautiful. Calm winds, Chamber of Commerce weather. It was a perfect beginning to "Mission Okie." The local media from San Francisco to Sacramento filled the airways and their helicopters filled the skies. The Fairfield and Vacaville newspapers gave front page coverage. Aviation enthusiasts converged on the Nut Tree Airport to see the once-in-a-lifetime airlift of a C-47 "Skytrain" by a CH-47 "Chinook." Travis Air Museum was waiting to welcome another jewel to its airlift crown.

Long time military columnist and Museum supporter Ian

Thompson of Fairfield's "Daily Republic" continues the rest of the story on the next page.



(Rick Roach/The Reporter)



Juran Zweerink/The Reporter



(MSG Richard J. Hildebrand (USAF-Ret))

CH-47 "Chinook" helicopter attempts to lift C-47 at Nut Tree Airport.

THANK YOU Co G 140th AVIATION REGIMENT

Department of the Army
Headquarters, CA Army National Guard
Unit

Co G 140th Aviation Regiment (CA Army)
2000 Stimson Road
Stockton, CA 95206

14 Nov 06 Rigging Crew
SFC Steve Robertson Project Coordinator
SSG Tim Gibson
SSG Wes Farnham

15 Nov 06 Flight Crew
CW4 Scott Ahrens Pilot in Command
CW3 Shawn Hollins Pilot
SFC Steve Robertson Flight Engineer
SSG Edward Moe Flight Engineer

15 Nov 06 Ground Crew
SSG Tim Gibson Team Lead
SSG Wes Farnham
SFC Mark Kellam
Sgt Jorge Sanchez-Rivera
SPC Todd Packard

MISSION "OKIE DOKIE" CONTINUED

Chinook unable to lift C-47 to transport to Travis

By Ian Thompson, 11/16/2006

VACAVILLE - For a moment, it lifted free of the ground - but in the end, the C-47 Skytrain proved too heavy to move.

The California National Guard helicopter crew pushed its Chinook helicopter close to its limit just trying to get the World War II-era twin-engine transport two feet off the ground Wednesday.

The plan was to have the Chinook, which flew up from Stockton, pick the C-47 up in a sling and fly it to Travis where it would then be towed to the museum.

"This is the plane that is one of the most important airlift planes in history," museum board member David Fleming said.

A disappointed Duncan Miller, who donated the aircraft to the Jimmy Doolittle Air and Space Museum on Travis Air Force Base, broke the news to the crowd of largely retired aviators who came to cheer Miller's plane on.

"I was embarrassed, but it was prudent of the Guard to say they could not lift it," Miller said. "This is much better than taking any risks."

There were plans to have the California Highway Patrol close Interstate 80 long enough to allow the helicopter and its load to fly over.

More than 300 spectators gathered in the morning at the Nut Tree Airport to see the spectacle of the Chinook lifting the C-47 into the air and flying it off to Travis at about 60 mph.

"I saw the Chinook flying over this morning and figured they were going



to do it," said Stan Matthews of Vacaville, who brought his camera along to take pictures.

A first attempt was cut short when the helicopter's downwash pushed the C-47's tail stabilizers down. They had to be reinforced to keep them from being damaged.

As time wore on, the crowd got smaller but many were still there to see the 1 p.m. attempted lift that prompted the Guard to declare the plane was too heavy.

"That is incredible, just incredible," said Iris Taggart of Sacramento as the plane lifted, moments before it was set back down.

Now, Miller and his friends will reweigh the aircraft and then work out what they need to take off to lighten it.

"We will get the weight down and try this again," Miller said.

The C-47 Skytrain is the military version of the Douglas DC-3, the cargo and passenger aircraft that revolutionized commercial flight. During World War II, it was the backbone of the Allied air transport fleet.

Named the Okie Dokie, Miller's C-47 has been parked at the Nut Tree Airport for 17 years next to the hangars where Miller and his friends pass the time restoring vintage military aircraft.

It is probably one of the few remaining C-47s from World War II that was never modified for commercial use, Miller said.

The Okie Dokie was sent to England in 1943 to become part of the air fleet that carried American paratroopers of the 82nd and 101st Airborne Divisions into battle on the night before D-Day, June 6, 1944.

It was later one of the air transports that flew food and supplies into Berlin during the Berlin Airlift shortly after World War II.

The C-47 eventually ended up in Florida where Miller found it, bought it and flew it cross-country to Vacaville.

He then restored the Okie Dokie to its original paint scheme that included the black-and-white invasion strips on the wings as well as static lines inside that paratroopers clipped their parachute harnesses to before jumping into France.

Reach Ian Thompson at 427-6976 or at ithompson@dailyrepublic.net.

Skytrain Okie Dokie makes successful flight

By Ian Thompson, 12/07/2006

VACAVILLE – The World War II-era C-47 Skytrain Okie Dokie rose into the air to the cheers of well-wishers Wednesday afternoon as the vintage aircraft began its last “flight” to Travis Air Force Base.

“Isn’t that just grand, said Grant Franks, one of those gathered at the Nut Tree Airport to watch a California Army National Guard CH-47 Chinook helicopter pick up the Okie Dokie.

The 63-year-old aircraft lifted slowly into the sky, slung beneath the Chinook which flew to the east before turning south to deliver the C-47 to its new home at the Jimmy Doolittle Air and Space Museum.

This was the second attempt to lift up and carry the C-47, which was donated to the museum by long-time aircraft restorer Duncan Miller.

“It is part of our national history and it is going to be there forever,” said, Miller who flew C-47s in 1945 at the Fairfield-Suisun Army Air Force Base, before it was renamed Travis Air Force Base.

The Stockton-based guard unit tried in November to move the Okie Dokie. It couldn’t lift the C-47 because the helicopter’s downdraft pushed the C-47’s wings down, making the aircraft heavier than the helicopter could carry.

Since then, civilian and military volunteers removed the plane’s propellers and its wings to lighten it up.

“She is almost 4,00 pounds lighter now,” Miller, said. .



LtCol Charles Ewing (USAF Ret)

The Okie Dokie was safely deposited at the west end of the base runway and then quickly towed to the museum “where we will put her back together, polish her up and put her On display,” Master Sgt., Terry Juran said.

The Okie Dokie spent the last 17 years at Nut Tree after Miller flew it cross-country from Florida where he found and bought it.

It is one of the few C-47’s never modified for civilian use. It carried American paratroopers of the 82nd and 101st Airborne Divisions into Normandy, France, the night before D-Day on June 6, 1944.

When Miller restored the Okie Dokie, he painted the distinctive black-and-white invasion stripe’s on both wings and fuselage.

The aircraft also flew food and supplies to Berlin when the Soviet Army blockaded the city in an unsuccessful effort to force the western Allies to leave.

Reach Ian Thompson at 427-6976 or at ithompson@dailyrepublic.net

“Just to have airlift history back home is a good thing, said Colonel Steven J. Arquette, the commander of the 60th Air Mobility Wing, Travis Air Force Base, Calif., one of those gathered at Travis AFB to watch the California Army National Guard CH-47 Chinook helicopter deliver the Okie Dokie.

—KCRA interview.

TRAVIS AIR MUSEUM'S DOUGLAS A-26 "INVADER"



(Travis Air Museum archives)



(Travis Air Museum archives)

The Travis Air Museum is proud to showcase our newly repainted Douglas A-26 "Invader." The A-26 was designed as a modernization of its successful A-20 "Havoc." It had changed so dramatically that it was given a new name and designation. Introduced to the European Theater in September of 1944, the A-26 was employed to destroy the enemies ground rail transportation.

In 1948, all Martin B-26 "Marauders" were retired from service and the A-26 was redesignated the B-26.

The "Invader" saw extensive use in the Korean War. Again its targets were railways, overland supply routes and the new job of bridge busting. It attacked its targets during the day and at night. Many of the Korean War A-26s were painted black as camouflage against enemy search lights. At the end of the war, many of the A-26s were returned stateside for training duties or to be scrapped.

Nineteen years after its first mission, the "Invader" was called upon to fight once again. With strengthened wings, updated avionics, and heavily armed, the redesignated A-26Ks went to

Vietnam. Used primarily at night to stop supplies flowing down the Ho Chi Minh Trail, the A-26K was an effective weapon.

The Travis Air Museum has one "Invader." Our Vietnam era aircraft is an A-26B converted to 'K' model configuration minus dual control and under-wing gun pods. It is painted as a 609th Special Operations Squadron aircraft.

Specifications:

- Wing Span: 70'a
- Length: 50'9"
- Height: 18'6"
- Maximum Speed: 355 M.P.H.
- Service Ceiling: 31,300 Ft.
- Range: 1,800 Miles
- Crew: 3
- Armament : up to 18 x .50 Cal. Machine Guns; 4,000 Lbs. of bombs
- Engines 2 x 2,000 H.P. Pratt & Whitney R-2800 "Double Wasp" 18 cylinder radial engines.



(Travis Air Museum archives)

This information is available on the Foundation's website at www.travisairmuseum.org. The information is derived from "Travis Air Force Museum" by Nick Veronico copyright Travis AFB Historical Society/Jimmy Doolittle Air and Space Museum Foundation. This book is available from the Jimmy Doolittle Air and Space Museum GIFT SHOP located in the Travis Air Museum.

CURATOR'S CORNER



By Gary Leiser

It is well known that the Travis Air Museum is the largest air museum in the Air Mobility Command and one of the largest air museums on the West Coast. Recently its holdings have gotten even larger.

AEROJET DONATES TITAN IV MISSILE

First, through the efforts of Foundation member **Dave Florek** in particular, Aerojet in Sacramento has donated the first and second stages of a Titan IV missile to the National Museum of the Air Force at Wright-Patterson AFB, OH, which in turn has loaned it to the museum. This considerably augments our Space exhibit. Stage two is on display and stage one is in preparation.

TRAVIS PRESENTS C-5 ENGINE

Second, the jet propulsion shop at Travis presented the museum with a giant C-5 engine. Personnel from that shop also positioned it in the museum, no mean feat for something ten feet high and thirty-three feet long!

EXHIBITS

Meanwhile, work progressed on other exhibits. **Andrea Read** completed a wall exhibit on the Wright brothers and the dawn of modern aviation. She also began work to improve the China-Burma-India exhibit. Newcomer **Victor Monte** has begun painting a mural for the CBI exhibit. **MSgt Danbury** began work on a Vietnam Gunship exhibit and completed the 11th AF exhibit. He also expanded the WW II exhibit of aircraft identification models in a cabinet donated by **Allan Jones**. Allan himself completed a display of models of aircraft used in the Pacific Theater in WW II. He also donated models from his own collection to this display. **Steve Bissell** donated a B-24 model which was added to the 11th AF exhibit. **Jim Spellman** continued work on the Space exhibit. We are sorry to report that, after ten months, **Andrea** has left us to work "in the real world." She was on loan from AMTRAK and did a terrific job. **MSgt Juran** repainted the A-26. Next in line is the F-105.

SOCIAL EVENTS

The director made presentations to several service clubs and served as a guide to members of General Travis' family who visited the base. The

museum continued to be the venue for many social events: retirements, promotions, receptions, dinners, and youth events. In October it hosted the Fighter Aces Symposium for P-38 aces.

GIFT SHOP

The gift shop has a new roof, so we are ready for the winter. **Earl Johnson** has expanded his C-5 stock of die-cast models and books. He, **Gerry Propp**, **Arnold Weiss**, who just turned 89, and **Jim Disher** encourage you to shop often for quality aviation and military merchandise. There's a great selection for kids of all ages.

The Fairfield Mall has redesigned one of its entrances and given it an aviation theme. The Museum loaned the mall some historical support items for the grand opening. **Virgil Sellers** and **Bob Florkowski** served as docents for about two tours a week. Even docent emeritus **Eric Schmidt** emerged from the swamps of South Carolina and gave a tour.

Nuts and Bolts

Bob Zirzow worked on the restoration of the interior of the C-7 and replaced the tail tire on the C-56. **Jeff Burnaman** did the same for the C-45. **Charles White** and **Ken Cox** worked on restoring the computer (doomsday device) from the B-52 for display. **Neil Wood**, **Jake Jacobson**, and **Bob** also continued the restoration of the Hound Dog missile. It will soon be ready for "unveiling." **Neil** also improved the air flow in the museum by "restoring" some windows that had been painted shut. **Bill Lancaster** helped to hang our large photo of the Golden Bear over the display on its restoration and also repaired the wiring in two display cabinets. **Bob Jenkins** restored, and with the help of **Bob Zirzow** and **Neil Wood**, hung our B-25 propeller in the engine room. He has now turned his attention to the Liberty Engine propeller. **Charles White** worked on the restoration of our B-29 propeller. **Ben Reed** kept the library and archives functioning and answered many inquiries. **Jim Martin** continued to inspect all aircraft twice a week (checking for nesting raccoons) and made various minor repairs. **Charlie Moran** and **Robert Cassero** worked on the propellers of the C-118. **Bob Adorni** refurbished display cases for the

CURATOR CONTINUED

small aircraft models and Vietnam display. **Bill Santee** was a man of many projects. And all hands helped to rearrange the engines in the engine room to make way for the C-5 engine and Titan IV engines. They also placed the second stage of the Titan IV on display.

Wanted! Vietnam gunship memorabilia and information.



<http://members.aol.com/samc130/ac130.html>

**Currently,
MSgt Mitch Danbury
Travis Air Museum
superintendent
is creating a
Vietnam Gunship
Exhibit.**

**If you want to help or
contribute, please call
(707) 424-6505.**

BERLIN AIRLIFT

From the Travis Air Museum Berlin Airlift exhibit and website: www.travisairmuseum.org

Although, the “Cold War” lasted for decades, the first major test of the Free World’s will to resist Soviet aggression came in June 1948 when Soviet authorities, claiming “Technical difficulties,” halted all traffic by land and by water into or out of the western-controlled section of Berlin. The only remaining access routes into the city were three 20 mile-wide air corridors across the Russian zone of Germany. Faced with the choice of abandoning the city or attempting to supply its inhabitants with the necessities of life by air, the Western Powers chose the latter course and for the next 11 months sustained the city’s 2 1/2 million residents in one of the greatest feats in aviation history.

“Operation Vittles,” as the airlift was unofficially named, began on June 26 when USAF C-47s carried 80 tons of food into Berlin, far less than the estimated 4,500 tons of food, coal, and other material needed daily to maintain a minimum level of existence. But this force was soon augmented by U.S. Navy and Royal Air Force cargo aircraft. On Oct. 15, 1948 to promote increased safety and cooperation between the separate U.S. and British airlift efforts, the Allies created a unified command, the Combined Airlift Task Force under Maj. Gen. William H. Tunner, USAF.

To underscore Allied determination to resist Soviet pressure, three SAC bomb groups were sent to Europe, placing Soviet targets well within B-29 range.

Airlift aircraft used three airfields within Berlin: Tempelhof in the U.S. sector, Gatow in the British sector, and Tegel which was built in the French sector in only 60 days using volunteer German men and women laborers.

Airlift pilots flew under an extremely rigid system of traffic control, which required each pilot to fly an exact route at predetermined speed and altitude. If an arriving plane was unable to make a landing at Berlin on its first attempt, it had to return to its base in West Germany. Adding to the routine dangers facing airlift pilots was Soviet harassment in the form of jamming radio channels, directing searchlights at aircraft taking off at night, the “buzzing” of cargo planes by Russian fighters, and barrage balloons allowed to drift into the air corridors.

At midnight on May 12, 1949, the Soviets reopened land and water routes into Berlin. However, the airlift continued until September 30 to build a backlog of supplies. The Allied airlift had saved Berlin from Soviet takeover and had taught valuable lessons in air traffic control, aircraft maintenance, standardized loading and unloading procedures, and other aspects of sustained mass movement of cargo by air. Cost of the effort in human lives totaled more than 65 U.S., British, and German personnel, including 31 Americans.

NEW ROCKET ENGINES FOR THE MUSEUM



(NASA)



(Travis Air Museum archives)

Pictured on the right is the second stage of the Museum's Titan IV engine.

Through the indefatigable efforts of board member Dave Florek, the Travis Air Museum has acquired the first and second stages of a Titan IV rocket engine from Aerojet in Sacramento. These stages were valued at \$5.8 and \$1 million dollars respectively. They represent a major addition to the Space wing of the Museum.

We also wish to recognize Juanita Garcia of GenCorp, Inc, Sacramento, and Douglas Cosens, Richard Ratazzi and Joe Szymusik of Aerojet, also in Sacramento, for their personal attention in obtaining the missile stages for our museum.

The following is a description of the Titan IV from Wikipedia:

The **Titan IV** family (including the IVA and IVB) of space boosters were used by the US Air Force. They were launched from Cape Canaveral Air Force Station, Florida, and Vandenberg Air Force Base, California.

The Titan IV was retired in 2005. The final launch (B-30) from Cape Canaveral AFS occurred on April 29, 2005, and the final launch from Vandenberg AFB occurred on October 19, 2005.

BACKGROUND

The Titan rocket family was established in October 1955 when the Air Force awarded Lockheed Martin (the former Glenn L.

Martin Company) a contract to build an intercontinental ballistic missile (SM-68). It became known as the Titan I, the nation's first two-stage ICBM and replaced the Atlas ICBM as the second underground vertically stored, silo-based ICBM. Both stages of the Titan I used liquid oxygen and alcohol as propellants. A subsequent version of the Titan family, the Titan II, was similar to the Titan I, but was much more powerful. Designated as LGM-25C, the Titan II was the largest missile at the time, to be developed by the USAF. The Titan II had newly developed engines which used Aerozine 50 and Nitrogen Tetroxide as fuel and oxidizer.

Titan III development began in 1961 with the Titan IIIA. Years later, the Titan IVB evolved from the Titan III family and is similar to the Titan 34D. The last Titan IVA was launched in August 1998. The first Titan IVB flew on Feb. 23, 1997. The Titan IVB is an upgraded rocket having a new guidance system, flight termination system, ground checkout system, solid rocket motor upgrade and a 25 percent increase in thrust capability.

In the early 1980's, General Dynamics had a plan to use one Space Shuttle to lift a Lunar Module into orbit with one Titan IV rocket to send an Apollo type Service Module into orbit to

continued on next page

NEW ROCKET ENGINES FOR THE MUSEUM CONTINUED

rendezvous and join the Lunar Module into making one moonship to land on the Moon. The plan required the Space Shuttle and Titan IV to use aluminum-lithium fuel tanks instead of aluminum to make a greater payload weight for take-off. In the 1990's both Shuttle and Titan IV were converted to aluminum-lithium tanks to rendezvous with the highly inclined orbit of the Russian Mir Space Station. The Titan IVB became obsolete with the advent of the Atlas V rocket and the Delta IV heavy rocket booster launch vehicles.



Launch of a Titan IVB launch vehicle. (USAF)

GENERAL CHARACTERISTICS

- Primary Function: Space booster
- Builder: Lockheed-Martin Astronautics
- Power Plant:
 - Stage 0 consisted of two solid-rocket motors.
 - Stage 1 used an LR87 liquid-propellant rocket engine.
 - Stage 2 used the LR91 liquid-propellant engine.
 - Optional upper stages included the Centaur and Internal Upper Stage.
- Guidance System: A ring laser gyro guidance system manufactured by Honeywell.
- Thrust: Solid rocket motors provide 1.7 million pounds force (7.56 MN) per motor at liftoff.
 - First stage provides an average of 548,000 pounds force (2.44 MN)
 - second stage provides an average of 105,000 pounds force (467 kN).
 - Optional Centaur upper stage provides 33,100 pounds force (147 kN) and the Inertial Upper Stage provides up to 41,500 pounds force (185 kN).
- Length: Up to 204 feet (62.17 m)
- Lift Capability:
 - Can carry up to 47,800 pounds (21,680 kg) into a low-earth orbit
 - up to 12,700 pounds (5,760 kg) into a geosynchronous orbit when launched from Cape Canaveral AFS, Fla.;
 - and up to 38,800 pounds (17,600 kg) into a low-earth polar orbit when launched from Vandenberg AFB.
 - into geosynchronous orbit:
 - with Centaur upper stage 12,700 lb (5,760 kg)
 - with Inertial Upper Stage 5,250 pounds (2,380 kg)
- Maximum Takeoff Weight: Approximately 2.2 million pounds (1,000,000 kg)
- Cost: Approximately \$250-350 million, depending on launch configuration.
- Date deployed: June 1989
- Launch sites: Cape Canaveral AFS, Fla., and Vandenberg AFB, Calif.

GIANT C-5 ENGINE COMES TO THE MUSEUM



(Travis Air Museum archives)

The jet propulsion shop at Travis presented the museum with a giant C-5 engine.

Personnel from that shop also positioned it in the museum, no mean feat for something ten feet high and thirty-three feet long!

By Gary Leiser

In September the jet propulsion shop at Travis AFB closed its doors and offered the Travis Air Museum a C-5 engine. A few days later one was proudly on display in the Museum's engine room! The giant C-5 aircraft is powered by four huge General Electric TF39 dual-rotor turbofan engines with fixed exhaust nozzles. It has a 1-1/2-stage front fan that is driven by a six-stage low-pressure turbine. The fan has a pressure ratio of 1.5 : 1 and generates 85% of total engine thrust. The high-pressure compressor has 16 stages and is driven by a two-stage, air-cooled turbine. The inlet guide vanes and the first six compressor stator stages are variable, and their scheduling is regulated by the main fuel control. This engine was used to power both the C-5A and C-5B aircraft.

Cost: \$6.2 million

Thrust rating: 41,100 pounds

Cruise thrust (Mach .8 and 36,089 feet): 8,244 pounds

Weight: 7,150 pounds

Airflow (max at takeoff): 1,549 pounds/second

Nacelle exterior diameter: 8.5 feet

Engine pod length: 26.2 feet

Oil tank capacity: 9.1 gallons

Engine length with spinner (but not tail cone): 203 inches

Fuel rate: 3,600 gallons per hour

THRUST REVERSER

Cascade type, mounted on the fan cow. Reverses only the fan exhaust. The primary gas generator stream is not reversed. With this arrangement, approximately 57 percent of the total engine thrust is reversed. Reversers operate effectively down to a cutoff speed of about 30 knots. The two inboard engines may be reversed in flight for emergency descents.

As impressive as the size of this engine, now the largest in our collection, was the ability of the crew from the jet propulsion shop to insert it in the museum. I didn't think they could do it, but within twenty minutes there it was! Totally awesome.

MEMBERSHIP: JIMMY DOOLITTLE AIR & SPACE MUSEUM FOUNDATION

A membership in the Jimmy Doolittle Air & Space Museum Foundation is an excellent gift for birthdays, holidays, thank yous, retirements or memorials. Being a part of history is a gift that keeps on giving!

Mail this form and check to: Jimmy Doolittle Air & Space Museum Foundation
P.O. Box 1565
Travis AFB, CA 94535.
For further information phone: (707) 424-5605.



Membership Form (Please print)

Name _____ Date _____
 Address _____ Membership # _____
 City _____ State _____ Amount Enclosed: _____
 Zip _____ Phone _____

Email: _____

New Renewal

ANNUAL DUES AND MEMBERSHIP CATEGORIES

<input type="checkbox"/> Individual Patron	<input type="checkbox"/> \$15.00/1 yr.,	<input type="checkbox"/> \$40.00/3 yrs.,	<input type="checkbox"/> \$65.00/5 yrs.
<input type="checkbox"/> Family Patron	<input type="checkbox"/> \$25.00/1 yr.,	<input type="checkbox"/> \$70.00/3 yrs.,	<input type="checkbox"/> \$115.00/5 yrs.
<input type="checkbox"/> Contributing Patron	<input type="checkbox"/> \$100.00/1 yr.,	<input type="checkbox"/> \$295.00/3yrs.,	<input type="checkbox"/> \$490.00/5yrs.
<input type="checkbox"/> Sponsor Patron	<input type="checkbox"/> \$250.00/1 yr.,	<input type="checkbox"/> \$745.00/3 yrs.	
<input type="checkbox"/> Benefactor Patron	<input type="checkbox"/> \$500.00	Business and Cooperate Annual Membership Available	
<input type="checkbox"/> *LifePatron	<input type="checkbox"/> \$1,000.00	*Life patrons may make this total contribution in any amount over a five consecutive calendar year period. Approved as tax deductible by both United States IRS and California Franchise Tax Board.	

Whether you can give an hour or a day, volunteers are needed in the Gift Shop and office; with the restoration and maintenance crew and as a docent. Please call 424-5605 for more information. Thanks!

Jimmy Doolittle Air & Space Museum Foundation
P. O. Box 1565
Travis AFB, CA 94535

**PRSRT STD
NON PROFIT ORG.
U.S. POSTAGE
PAID
Vacaville, CA
Permit No. 9**



*The Jimmy Doolittle Air and Space Museum Foundation wishes to recognize **all military and civilian volunteers**, and in particular Stockton's **Air National Guard, Travis Air Force Base, Travis Air Museum's fantastic Restoration Crew, Ghillotti Construction, and the Nut Tree Airport management and staff** for their outstanding contribution to the successful C-47 "Okie Dokie" airlift.*