





Hangar 602 after

We have watched in dismay, for many years now, the fading aspect of our name signage on the northside of our main gallery hangar, #602. A stream of Board and other members and visitors have put forward suggestions about the repainting of the huge letters on the building facade. Some have even taken it on as an intended project only to be daunted by the issue of how to get tall ladders or scaffolding into the garden below to reach the lettering.

At one point in this saga, someone asked B&B Signs in Topeka to give us an estimate to complete the job, but the bright idea instigator never was able to follow through and, along the way, B&B Signs went out of business. All the time the large blue letters have been fading more and more and almost assuming the color of the hangar skin surrounding them, until it was difficult to discern the difference from more than a distance of maybe a hundred yards from the Museum.

As a result of the accumulation of some very generous donations from a handful of our patrons, we contacted LBM Solutions here in Topeka to talk about the repainting of the sign. LBM suggested an alternative plan, whereby they would print the letters on large panels of polymetal and affix these panels to the hangar, over the old lettering. Polymetal is a composite board used for permanent outdoor signage with a lightweight chemically engineered plastic core as a stabilizer and two thin panels of aluminum on either side. Polymetal is durable, versatile and lightweight, just right for our needs.

Finally in early March the weather in Topeka had turned warm enough to allow LBM to bring in a large bucket Continued on pg 3

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In Remembrance

In the Hangar: The Grumman Tiger and Super Tiger Dennis Smirt



2 of Wrenches



Topeka Regional Airport

Hangars 602 & 604 7016 SE Forbes Avenue Topeka, KS 66619-1444 Telephone (785) 862-3303 www.combatairmuseum.org

Website Hosted by Rossini Management Systems, Inc.

Email: office@combatairmuseum.com

Museum Director - Kevin Drewelow Office Manager - Nelson Hinman, Jr. European Lialson Officer - Huw Thomas UK Correspondent - Richard Knight

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MUSEUM HOURS

January 2 - February 28/29
Mon.-Sun. Noon - 4:30
Last Entry Every Day is 3:30 P.M.
March 1 - December 31
Mon.-Sat. 9 A.M. - 4:30 P.M.
Sun. Noon - 4:30 P.M.
Last Entry Every Day is 3:30 P.M.

Closed New Year's Day, Easter, Thanksgiving, Christmas Day

PLANE TALK Newsletter Layout & Design Jennifer Anderson

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Plane Talk, the official newsletter of the Combat Air Museum of Topeka, Kansas, is published bi-monthly. We welcome your comments.

Your membership is important to us.
Join the COMBAT AIR MUSEUM



What is going on at the Combat Air Museum and how is the Museum doing? This is the question we are often asked these days as the nation has experienced a domestic health crisis due to the COVID-19 outbreak. Deputy Chairman Dave Murray said in his first 2021 Combat Air Museum financial statement, "Because of the COVID-19 pandemic and Kansas/Shawnee County Executive Orders, visitor numbers in 2020 dropped off precipitously from the 11,001 visitors we experienced in 2019. We ended the year with a total of only 5,097 paying guests, down 46.3% versus the 11,001 2019 total." Last year the Museum was closed from March 15 to June 1. We reopened under a daily deep cleaning, which we are still doing along with a social distancing regime and face mask routine." At first, as one might expect, attracting visitors was a bit slow before picking up a bit. As we began 2021 with the Museum being open only half days in January and February, we experienced some slow days along with some well attended days for this time of year. Favorable weather is usually a determining factor in relationship to Museum attendance during the winter months.

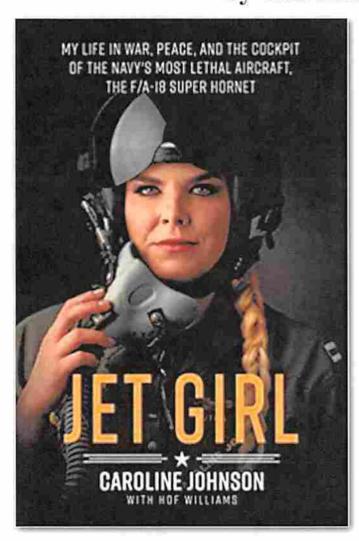
Yes, there were some anxious times when we closed our doors for the first time ever in our 43-year history last March. Dave and Les Carlson, our Treasurer, calculated we would be able to meet our financial obligations for a few months into the future, thanks to our "rainy day" reserve fund which we have always maintained. Again, giving credit where it is due, Dave and Les concluded we would have sustained a loss on the year of \$25,901 had it not been for two grants we managed to secure for the Museum. We received the first from the Federal Payroll Protection Plan for \$6,200. The second was a Kansas COVID-19 grant of \$20,000 in support of small businesses. Without these two grants the Combat Air Museum would have suffered greatly.

However, we were not out of the woods completely as we began the new year. Then, suddenly, we were blessed with a third windfall from some faithful members, Ford and Catherine Ross. They provided a generous donation from the Ford and Catherine Ross – Topeka Community Foundation donor-advised fund. What a blessing at a time when it was most needed! There are still a lot of good and generous people in the world today.

Now let me give credit to our members and supporters. As things are still far from normal, many of these people have been chipping in with extra financial support. As I said before, there are a lot of good and generous people in the world today and many of them are members of the Combat Air Museum. This support represents "the finger in the dike" which is keeping our Museum open. I want to thank

Pilot's Notes: a book review

"JET GIRL: My Life in War and Peace"
by Caroline Johnson



A fairly new aviation book that would interest readers wanting to know more about the world of Naval Aviation from a female perspective, is entitled "JET GIRL: My Life in War and Peace" by former Navy F/A-18 Super Hornet Naval Flight Officer Caroline Johnson. In an interesting shifting of locations and time frames, Johnson goes from being a tall, statuesque Colorado debutante to the US Naval Academy, to flight training and then assignment to the rear seat of an F/A-18 Super Hornet with VFA-213, the "Black Lions." She flew with VFA-213 into combat against ISIS in Iraq and Afghanistan. Johnson shares

several not very flattering accounts of sexism and abuse through her naval days, but being the super achiever she was, she still earns her prize of flying backseat in combat. It's an uplifting read early, but degrades as her career dead-ends. The reader can decide how much is due to her and how much is because the world of naval aviation is still a machomale dominated arena.

Johnson's technical descriptions of training, trusting the pilot in front, the unbelievable sensor and weapons use in the Super Hornet, and day to day life at sea in combat are easy to follow. But for the sad and frustrated aspects of her short career, Johnson's story would paint a great picture of an exciting and rewarding career choice for any highly qualified young female to want to pursue. There is no doubt about Lt Johnson's patriotism and purpose, coupled with her drive to be the best, but it was sad to see a highly trained person like her leave the service earlier than she desired. It would be interesting to hear stories from other female naval aviators to compare experiences before deciding for oneself about changes in today's Navy. Having met a good number of naval aviators myself, I highly respect anyone, male or female, who can survive and thrive in the world of naval aviation.

continued from front page

lift that could straddle the garden and the sidewalk but still allow the workers to reach the height and location of the old sign. Within two hours our new five panel "COMBAT AIR MUSEUM" sign was up – beautiful large blue letters against a white background, a sign that can now be easily seen as soon as a visitor rounds the corner on Forbes Field from Southeast Airport Drive onto Forbes Avenue, a distance of some 400 - 500 yards.

Once this sign went up we realized that some other exhibits and signs on that side of the building need attention from the Fix It Friday group for refreshment and repainting. Stay tuned, more to follow!

2021 Calendar of Events

April

4-Easter, Museum closed

May

22-Pancake Feed TENTATIVE 31-Taps across America TENTATIVE

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14-Membership Luncheon TENTATIVE 21-25-Young Aviators Class TENTATIVE 26-27-Thunder Over the Heartland Air Show, Topeka Regional Airport

July

3-4-Kansas City Air Show, New Century AirCenter, Olathe, Kansas 19-23 Young Aviators Class TENTATIVE

August

9-Membership Luncheon TENTATIVE

September

25-Winged Foot 5K/10K Run & 4K Walk TENTATIVE

October

9-Girls in Aviation Day TENTATIVE 11-Membership Luncheon TENTATIVE

November

7-Daylight Savings time ends 25-Thanksgiving, Museum closed

December

13-Membership Luncheon TENTATIVE 25-Christmas, Museum closed

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New & Renewing Members

New:

Bradley & Star Caywood | Luke Douglas | Russ & Kyle Elliott | Michael Hatty & family | Joan Link | Edward Michel & family

Renewing:

Ted & Cindy Berard | Michael B & Candace Bush | Les Carlson | Juan Chavarria Jr & family | Bob & Carol Courtney | Steff Cunningham | Don Dawson | Norman Dysart | Leonard Faulconer | Shaun & Inga Finn | Monte Fuller | William & Donna Gilliland | Frank Holsburg | Dennis Lamberd | James & Ruby Leighton | Brig. Gen. Brad Link, USAF (Ret.) | Dr. Robert McElrov | Terry & Suzanne McGinn | Dave & Judy Murray | Bruce Nall & family | Mary Ann Naylor | Loren Otis | Lawrence Oxenberg | Michael Rockefeller & family | Dennis & Galene San Romani | Ashleigh Rutherford & family | Matt Sabatini & family | Rance & Laraine Sackrider | Donald & Bonnie Schonasky | Bryce St. John & family | Jay & Martha Stevenson | Terry Wages | Dr. Howard & Marilyn Ward

New Lifetime Members:

Justin & Leslic Gordon | SMSgt Charles Redding, USAF (Ret.) & Karen Redding | Dick & Jeanne Trupp

Visitors

296 people from 20 states, Columbia and Japan visited the Combat Air Museum in December.

In January, 443 visitors from 16 states toured your Museum.

238 people from 15 states and the United Kingdom visited the Combat Air Museum in February.





estorati By Kevin Drewelow



The F-86 right stabilizer tip during installation

The pandemic and Kansas winter reduced the number of people working on restoration and limited them to projects which could be done inside a heated workspace. Our volunteers focused on our North American F-86H Sabre.

Danny San Romani and Bob Crapser discovered the correct transponder for our Sabre in our collection of antique avionics. Danny is passionate about authenticity, so much so that he wanted the transponder installed even



though it will not be visible to the public. Danny installed the large, heavy transponder on its mount, retracted the mount into the belly and secured the access panel. Today's transponders are tiny compared to their ancestors! Danny

also installed an AN/ARC-27 radio in its bay just aft of the cockpit.

After Gary Naylor had a friend F-86 canopy fairing after corrosion treatment repair one of the



horizontal stabilizer tips, Danny completed the final installation of both tips. He also accomplished some corrosion control work on the canopy fairing and some main landing gear wheel components. Kenny McKibben, a former Air Force F-16 maintainer who now works on corporate aircraft in Kansas City, is making some structural repairs to one of the F-86's flaps. Kenny and Joe Wulfkuhle also repaired the corroded vertical stabilizer dorsal fairing. The Sabre has come a long way and is looking great!



Joe Wulfkuhle and Kenny McKibben repair the Sabre's dorsal fairing

Photo by

Museum

Pancake feed update... The pandemic cancelled almost all of our fundraising activities last year, but as Kansas emerges from the COVID curtain, we are planning a return to normal activities at the Combat Air Museum. We are tentatively planning to hold our annual pancake feed on Saturday, May 22, if Shawnee County Health Department emergency orders and conditions permit. Please watch the Museum's website and Facebook page for further details. We'll be sure to contact all members immediately once we make the final decision.

Speaking of fundraising... Darren Roberts is one of the world class master model builders whose miniature aircraft support many displays in our Museum. Realizing the Museum has a large collection of unbuilt plastic model aircraft, Darren has been building and selling completed models online and in our gift shop. He has raised \$600 to date, a significant contribution at a time when normal fundraising activities are impossible.

Photo by Kevin Drewelow

Darren Roberts delivers a Corsair model to sell at the museum

"Young Aviators" classes... COVID cancelled our popular "Young Aviators" classes last year, but we're making plans to bring them back this year, again contingent upon conditions. We plan to offer two classes on June 21–25 and July 19–23. Again, see the CAM website and Facebook page for developing information.

Sidewalk made safe... The long Kansas drought had caused the sidewalk leading to the Museum's main entrance to heave, creating several trip hazards. We added the repair to our list of things to do, but the pandemic put a halt to many Museum activities, including facilities maintenance. Luke Douglas lives in Ottawa, Kansas, and recently became a CAM member. He usually arrives in his flying club's Piper Cherokee and parks between the hangars before visiting the collection and helping where he can. After he learned about our sidewalk, he showed up one day in late February and pulled an interesting collection of tools and materials from the Piper. With some assistance from Danny and Kevin, Luke leveled the sidewalk! As



Luke Douglas repairs the sidewalk

Continued on pg 7

otes

Danny and Kevin used pry bars to raise the uneven sections, Luke shimmed the slabs with pieces of black walnut he selected because of its resistance to rot. The sidewalk is no longer a menace to visitors and should stay that way for several years. We're grateful for Luke's time, skills and willingness to leave things better than he found them!



Danny lifts the slab so Luke can install a shim

Volunteers making a difference... Some of our regular volunteers are returning to CAM as they receive their vaccinations and feel comfortable at the Museum. Charie Broughton is running the gift shop

on Mondays again and Don Dawson is once again busy in our workshop maintaining equipment and displays. Stef! replaced Cunningham electrical outlet in the floor of the Bob Dole Education Center. Steve Wodtke has completed a database of the books and media in our library. Chairman Gene Howerter just completed assembling tribute a veterans. The display features a "Thank You Veterans" banner and some photos of World War Two aircraft on a pole in hangar 602.



Banner in hangar 602

From the Chairman... continued from page 2

By Kevin Drewelow

all of you profoundly as we weather the storm in the coming months. COVID-19 is still a very real nuisance and we will continue to deal with it until it is controlled.

Feel free to visit the Museum when you can and don't forget your face mask. Again, thanks to each and every one of you for your generous support! •



Our Chinook in February

LOGBOOK

Great Aviation History



LOGBOOK magazine is a print journal chronicling the entire range of aviation history. We would be happy to send you a complimentary issue.

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Courageous Women Who Flew Spitfi

By Richard Knight, Plane Talk UK Correspondent

The news of the death at 103 of Eleanor Wadsworth, one of the last three "Spitfire Women", who ferried aircraft to the front line in

World War Two got me to put pen to paper and write this small tribute to these remarkable women.

Back in 1940 with Britain fighting for survival, pilots were in short supply and aircraft as production increased the need to distribute these fighting machines from the Eleanor Wadsworth



factories to airfields all over Britain was Existing female pilots said they paramount. could help but women were banned from the armed forces.

The need for aircraft delivery was desperate and Pauline Gower, an experienced commercial pilot, convinced the government and Royal Air Force (RAF) to form a civilian organization whose pilots were principally tasked with ferrying new fighting machines from the factory to the RAF airfields. And so the Air Transport Auxiliary (ATA) was born.

In January 1940, eight female pilots ferried open-cockpit training planes - de Havilland Tiger Moths - from a muddy base near the de Havilland factory just north of London, up to Scotland. It was a modest start, but within a few years this group of female flyers would be single-handedly at the controls of fighter planes and four-engine bombers, virtually every type flown by the RAF and the Fleet Air Arm. In time their numbers would swell to 166, including 25 female flyers from the USA, out of a total of 1,245 ATA ferry pilots and engineers.

Once a pilot was cleared through the initial training program they were issued with "Ferry Pilot Notes", a two-ring book of small cards with

the critical data and notations necessary to ferry each aircraft type. Over the course of the war 147 different types of aircraft were delivered by these pilots.

Sometimes pilots would six different types of plane in just one day, ferrying Spitfires, Hurricanes, Barracudas, Harvards, Wellingtons, Tempests and Lancaster bombers in the everchanging British weather without radios or navigation aids. Because they were required to stay within sight of the ground, they were not taught the art of flying with instruments. They flew 'blind' with just maps, a compass and a Delivering to frontline airfields in unarmed planes was dangerous and more than once a delivery was made at an airfield already under attack by the German Luftwaffe.

One female pilot landed her heavy Lancaster bomber and taxied to the holding area. Groundcrew drove out to take the pilot back to the base commander and they were stunned to see a pretty young ATA pilot descend the steps. They waited and after 10 minutes she said, "Why are we waiting". "We are waiting for the pilot" was the reply. When she said she was the pilot they fell about laughing and continued to wait. Eventually one of the crew went up into the bomber to "search for the pilot", eventually returning to the jeep where the ground-crew sat in total silence for the drive back to the commander!



Nancy Miller



In Remembrance

Kenneth C. Hollemon CAM Lifetime Member #3230 USCG veteran July 8, 1944 - November 2, 2020

Captain Kenneth C. Hollemon, USCG (Ret), graduated from the U.S. Coast Guard Academy in 1966. Ken retired after 30 years of service during his career. Ken commanded the Personnel and Payroll Division of the USCG most of his career, a position



which landed him in Topeka, Kansas. Ken served the Combat Air Museum as a member of its board of directors until moving to Bend, Oregon for retirement. Ken was kind, gracious, and thoughtful to all he encountered. The United States Coast Guard recognized Ken as a key leader in gender equality while serving his country. -Gene

Richard E. Long CAM Membership #206 USAF veteran

September 9, 1933 – January 20, 2021

Longtime member and volunteer Richard (Dick) Long passed away Wednesday, January 20, 2021. Richard joined the Combat Air Museum in January 1978 soon after it received its charter in 1977.



Richard was a faithful volunteer and would often be seen running our entrance and gift shop. Richard enjoyed helping with anything that had to do with aircraft as well as supporting our air shows. He was raised in Iowa and served in the United States Air Force which brought him to Forbes Air Force Base in Topeka. Thanks, Richard, for your service to your country and the Combat Air Museum – Gene

Deloris A. Zink CAM Membership # 5170 May 24, 1935-February 21, 2021

Deloris began as the Museum's Office Manager in January 2011. Deloris was a very outgoing and beloved volunteer member of the Museum, as well as an employee. She enjoyed working on various projects and taking charge. She always referred to the men at the Museum as the



"guys", even though there were "gals" she enjoyed. After moving to Hays, Kansas, Deloris remained a fan of the Museum and stayed in contact until her passing. We at the Museum will remember Deloris with fondness. We send our sincere condolences to her loving family.

Courageous Women ... continued from pg 8

The two remaining ATA veterans are Nancy Miller (USA) and Briton Jaye Edwards, who lives in Canada. Nancy Miller learnt to fly in 1939 at Oakland, California and heard about the ATA from a friend. She took the train from Los Angeles to Montreal, Canada for training on Harvards in 1942 before setting out to the UK from Halifax on a convoy ship. During her time in the ATA Nancy flew over 50 different types of aircraft including Spitfires. She made 612 deliveries and clocked up 899 flight hours.



Jaye Edwards

PEANERINALK

In the Hangar: The Grumman Tiger and Super Tiger

By Dennis Smirl



One of the four Grumman aircraft in the inventory of the Combat Air Museum is an F11F-1 Tiger, which flew with the Blue Angels in 1968 as aircraft number 5. This striking display always draws a crowd and photographers love its sleek, futuristic look.

Tracing the history of the F11F (F-11A after adoption of the unified Tri-Service naming system in 1962) takes us back to the beginning of the jet age when Grumman Aircraft was struggling with the transition from piston engines to turbojet engines. Initial concepts for Grumman's first jet fighter began with project G-75, a two-seater powered by four Westinghouse J-30 engines. The project died on the designers' drawing boards for a multitude of reasons and Grumman quickly moved to project G-79, a single engine, one-man fighter with the promise of excellent performance. Using the Pratt & Whitney J42 centrifugal compressor engine, a copy of the British Rolls-Royce Nene, project G-79 became the F9F-2, although some Panthers were equipped with the Allison J33 as a backup in case there were problems with the J42.

As better engines came along, newer versions of the Panther provided increased performance. The program culminated in the F9F-5, powered by the Pratt & Whitney J48. The Museum has a beautiful example of this aircraft.

Straight wings and fixed tip tanks limited the performance of the F9F-5. Seeing they'd reached the limit of performance available from the Panther, Grumman engineers and designers created a swept wing version known as the F9F-6 Cougar. Sweeping the flying surfaces was what it took. Even though faced with a short service life, Grumman had a

transonic fighter that could beat the MiG-15 and fight on par with the MiG-17 should the need have arisen. Subsequently, Grumman produced the F9F-7 and the F9F-8, finally building a few F9F-8s as two-place TF9F-8s.

Still, the U. S. Navy wanted more performance, so Grumman engineering and design started with a fresh sheet of paper and came up with the F9F-9. It was neither a Panther nor a Cougar. It was an all-new aircraft called the Tiger, and one can only wonder why it was still thought of as a part of the F9F lineage.

The F9F-9 Tiger featured an extremely slim, arearuled fuselage wrapped around an afterburning axialflow Wright J65 turbojet engine. This engine choice was the limiting factor for an amazingly futuristic design. The resulting aircraft was barely supersonic in level flight but could be pushed to much higher speeds in a dive. Armed with four 20 millimeter cannon, it looked like a great choice for fleet defense. For Museum visitors, the view from the second-floor art gallery shows the Tiger's area-ruled, Coke-bottle fuselage to great advantage and provides some excellent picture taking opportunities.

Engineers never solved one problem. The initial production run of the new aircraft incorporated a nose that didn't have room for a state-of-the-art radar unit. These early F11F-1s were called short-nose Tigers, while later aircraft featured a different front section that would have held a radar unit, and that version was considered the long-nose Tiger. The Museum's aircraft has the long nose. Apparently, the Navy never installed the updated radar even in the long-nose version, and the active duty life of the Tiger was limited to the day fighter role by the lack of a radar unit.

During this era, Lockheed was producing and selling several versions of the F-104 Starfighter, both from their stateside factory and through license-built examples in Europe and Japan. The Tiger and the Starfighter were excellent designs, but the Tiger had more wing area and was more agile than the Starfighter. The big handicap for the Tiger was the engine. With the Wright J65, the Tiger was only capable of 750 miles per hour while the Starfighter could manage 1,400 miles per hour; none of which is important in a dogfight as even in Vietnam, most



Grumman F11F-1F Super Tiger

continued from page 10 engagements occurred at speeds below 400 miles per hour.

Still, the Tiger managed to add to its luster with an impressive ability to climb away from a carrier launch to engage the enemy as far from the carrier as possible. The publicity downside came during testing, when a Tiger's pilot fired all four 20 millimeter cannon, went into a dive, outran the projectiles, and flew under his own spray of cannon shells. The Tiger crash landed and never flew again, while the pilot recovered from his injuries and returned to flying six months later.

In service with the Blue Angels, Tigers consistently delivered the kind of performance necessary for a great air show. The team had one newsworthy glitch when in Canada they were the victims of poor translation between English measurement and the metric system, incorrectly adjusted their instruments and broke the sound barrier right over a Canadian metropolis. Evidently it costs a lot in U. S. dollars to replace the glass in several downtown city blocks!

Without the final chapter, the F-11A story might be easily forgotten. However, Grumman built two examples beyond the original contract, and modified them by installing the General Electric YJ79-GE-3 engine, complete with afterburner. The performance with the new engine was astonishing. Suddenly, the Super Tiger was capable of Mach 2 in level flight, the first Navy aircraft to do so, and it could climb to more than 76,000 feet above sea level. Minor changes to the aircraft included a sharply triangular leading-edge extension, a slightly longer fuselage, and bigger air intakes for the General Electric engine. This new F11F-1F Super Tiger was the naval fighter that its original designers had intended, and Grumman intended to market it to the Navy and to the world.

Unfortunately, politics, timing and money interfered. The first problem was that the McDonnell F-4 Phantom was in its early phases of development. Then, Lockheed exerted influence through the Pentagon to keep the Super Tiger out of European and Japanese markets. Germany, particularly, paid a heavy price for their choice of aircraft, losing so many Starfighters to pilot error and weather that it became a national scandal. Japan had less of a problem but still had issues with their pilots transitioning from the F-86F to the F-They too lost aircraft and pilots to the difficulties of flying the highly demanding Lockheed aircraft, as did several other NATO countries who had ordered small numbers of the Starfighter.

The question remains after more than half a century: which of the two aircraft was better at the job it was intended to do? Comparing the Super Tiger to the Starfighter shows that the Super Tiger, because it had been designed and built to come aboard a carrier, was a stronger and more forgiving aircraft to fly. Choosing the Starfighter cost the Germans money and blood that might not have been lost with the Tiger.

Bottom line: had there ever been a time over Edwards Air Force Base when the Tiger and the Starfighter could have gone one-on-one in a series of mock dogfights, which aircraft would have prevailed? There are many opinions, but there was little difference in the aircraft - total weight, thrustto-weight, and weaponry - other than the wing. Grumman had a better wing which, if properly flown, would have turned inside the Starfighter at any altitude and speed. •

To become a member, click on www.combatairmuseum.org/membership.htm

or call the Museum at 785.862.3303



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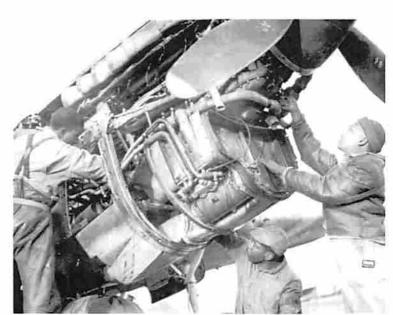
ELECTRONIC SERVICE REQUESTED

Visit the Combat Air Museum for fun, information and an educational experience.

A Bender of Wrenches

COMBAT 12

Here's to the people with greasy hands
Who fuel the planes when the pilots land
Who fix the canopies and stop the leaks
Change the tires and oil the squeaks
Who smooth the scratches and rivet the panels
Check "loud and clear" on the radio channels
Check wires and cables for chafing and tears
Who pull the chocks and walk the wings
And do a million maint nance things
Who watch as the birds take off and flies
So here's a salute to the gals and guys
From a group of flyers who seldom ponder
The ones who keep them in the wild blue yonder
-Author unknown



COMBAT AIR MUSEUM - PLANE TALK