



# UN-SCRAMBLE



The Official Newsletter of the Valiant Air Command, Inc.  
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2nd Quarter Review - April, May, June 2018

## Memorial Day at the Warbird Air Museum



MUSEUM AND GIFT SHOP - OPEN 7 DAYS A WEEK - 9AM TO 5PM

Closed Thanksgiving, Christmas and New Year's Day

Adults \$20.00 - Senior or Military \$18.00 - Students 13 to 18 years old \$10.00

Children 5 to 12 years old \$5.00 - Children under 5 years old FREE - Special Group Tour Rates Available

### *Statement of Purpose*

*The Valiant Air Command was formed to perpetuate the history of aviation, to encourage gathering of men and women in camaraderie, research and Warbird restoration, to serve as an educational tool for young and old alike; and to assure that the memory of those who gave their lives in service to their country shall not perish.*

501 (c) (3) Non-Profit Organization Museum Recognized by the Internal Revenue Service

# *Memorial Day Evening at the Warbird Air Museum*



***The flags were placed by the Brevard Veterans Memorial Center.***

*[www.veteransmemorialcenter.org](http://www.veteransmemorialcenter.org)*

*The Brevard Veterans Memorial Center is a non-profit organization with one goal in mind...TO SERVE OUR VETERANS! With an amazing array of military artifacts ranging from the Revolutionary War to our current conflicts in the Middle East, they strive to educate the public on our military's efforts both past and present in the FREE museum ...*

*They are located at 400 S Sykes Creek Pkwy, Merritt Island, FL 32952*

*Phone: (321) 453-1776*

# Future Events • 3rd Quarter • 2018

July 14	Warbird Air Museum Fly-In Breakfast 8-10:30 Starting this Saturday and continuing each month; drive up public pays for the breakfast between 8-10:00 and the museum is free.	August 21	12 Noon VAC BOD Meeting
July 17	12 Noon VAC BOD Meeting	September 8	Warbird Air Museum Fly-In Breakfast 8-10:30
August 11	Warbird Air Museum Fly-In Breakfast 8-10:30	September 18	12 Noon VAC BOD Meeting

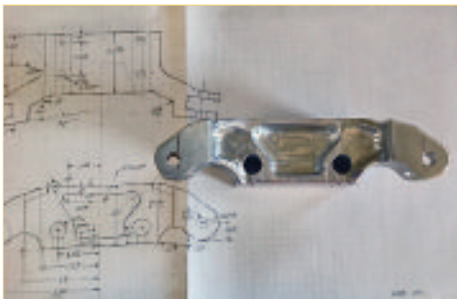
Check the VAC website for last minute changes and/or additions. [www.valiantaircommand.com](http://www.valiantaircommand.com)



## Commander's Report

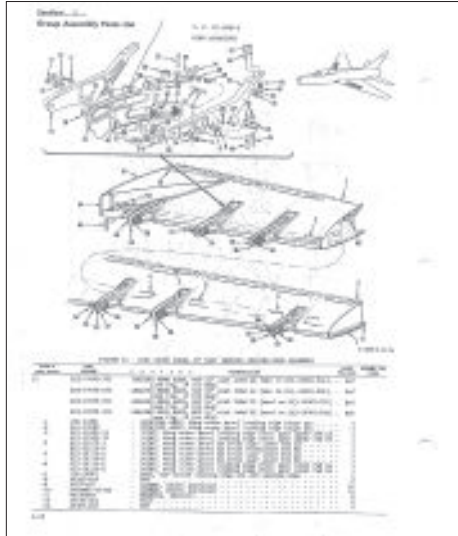
*Norm Daniels, Commander*  
 Email: [Commander@valiantaircommand.com](mailto:Commander@valiantaircommand.com)  
 (321) 268-1941 ext. 4101

It never ceases to amaze me the level of skill sets our restoration volunteers have. During the restoration process of the F-100 Super Saber it was discovered that many parts and pieces were missing. In one specific example, there was a missing bracket between the main landing gear doors. Rob Underwood created a drawing and then machined the missing piece. Not even the original aircraft builder could tell the difference.



Additionally, Rob created a drawing and machined missing variable length front wing slat ribs. No photos available because as soon as they were made they were installed on the aircraft. The slats perform as designed.

Another volunteer, Ken



Pagurik rewired the F-100 Super Saber and installed LED lighting in the wing tips and tail. We now have working wing and tail lights. Ken also rewired the cockpit of the B-52 and added led lighting in the original burned out light housings. He additionally wired the cockpit instrument panel so that it is also illuminated.

During the 100 hour required inspection of our C-47 Tico Belle, Marvin Juhl, Maintenance Officer discovered some corrosion in a few of the ribs in the left aileron. All the fabric was peeled off both sides in order to verify that no other corrosion issues existed. Bob Filippi using rib parts from a spare aileron made the correct repairs. Once repairs were made, Marvin began the task of recovering the entire aileron using FAA approved materials and procedures. The repairs have been

completed, ready for paint; as good or better than the original factory aileron.



1st Quarter - Jan, Feb & Mar  
 Submission deadline - Mar 25th NL Published - April 1st  
 2nd Quarter - April, May & June  
 Submission deadline - June 25th NL Published - June 30th  
 3rd Quarter - July, Aug & Sept  
 Submission deadline - Sept 25th NL Published - Sept 30th  
 4th Quarter - Oct, Nov & Dec  
 Submission deadline Dec 24th NL Published - Dec 31st

Please note:  
 Items submitted after the submission deadline will not be published or will be published the next month if applicable.  
 The Editor reserves the right to not publish submitted items.

# Open letter from our Commander

Fellow Members and Volunteers of the Valiant Air Command Warbird Air Museum:

I would like to address the results of our 41st Annual Space Coast Warbird Airshow (TICO).

From comments received, spectators were impressed with the constant activity of aircraft in the air as well as the Tora, Tora, Tora! Show. In short, the VAC, with Bob Boswell as AirShow Chairman, mounted an outstanding airshow even without the Thunderbirds, Blue Angels, or any of the other recognized military performance acrobatic teams. To put things in perspective, there is no doubt, based on prior years, comments that airshow spectators expect a military performance team. While Tora, Tora, Tora was a great visceral experience, it was not a precision jet acrobatic military exhibition.

What was disappointing was the attendance on Friday 4/6, Saturday 4/7 and Sunday 4/8, 2018. Some drops in attendance were predicted and ascribable to several factors which I and the Board of Directors were aware; one example was the visiting snowbirds who are normally still here in March were gone in April.

Our original published dates for our 2018 Airshow were March 9, 10, 11, 2018. For these dates, we made our request to the USAF for the Thunderbirds which we had as headline performers the prior year. The Thunderbirds set their schedules at least one year in advance and their schedule indicated that they were available on our published show dates. The Thunderbirds advised that they do not normally perform at the same airshow two years in a row. Because the Thunderbirds were available, the Melbourne Air and Space Airshow management booked the Thunderbirds to perform in Melbourne on our published airshow dates of March 10-11, 2018. There can't be 2 major airshows on the same day in a narrow geographical area. In short, we had to move our airshow dates to April 6-8, 2018 to give us approximately 4 weeks between their airshow and our airshow. It was at that time, I and the Board of Directors made the decision to go forward with our Airshow knowing that we would take a slight hit in attendance as both airshows draw from the same demographics.

Unfortunately, the USAF Thunderbirds moved

their performance dates to March 24-25, 2018. Thus, the Melbourne Air and Space Airshow moved their dates to coincide with the Thunderbirds revised schedule. This second last-minute change made the dates of both airshows too close together, so both were competing for the same demographic at basically at the same time.

We had already booked most of the performers and paid the required deposits (nonrefundable). We recognized that competition for attendees would be a critical issue and we dramatically increased our advertising budget to pick up additional ticket sales.

As little as a decade ago, booking performance acts was more simplified as many agreements were on a handshake basis with minimal support requirements other than fuel/oil and a couple of hotel rooms. Today, agreements are massive legal documents requiring page after page of specific items the air show producers must provide. Costs to fly in performance and vintage aircraft have grown for the aircraft owners as parts, maintenance, support equipment, fees and their support teams traveling with various aircraft have escalated.

As of today, there are approximately 200 airshows annually in the United States; some small and some (as ours) large. Switching airshow dates to avoid a conflicting nearby airshow in most cases precludes booking many performance acts, as they may well be performing on the same dates in another part of the country.

All airshow producers face one common issue; the weather. Producing an airshow with all the bells and whistles to attract as many attendees as possible is the goal, thus all airshow producers take the risk of weather issues curtailing not only attendance but aircraft performing their routines. That is the risk. All other issues are basically controllable.

The Valiant Air Command Warbird Air Museum has for the past 41 years mounted an annual airshow. The shows have grown in scope over the years and provides a financial gain in the community to the suppliers of goods and services; we and the performers use each year items such as: fuel, motels/hotels, caterers, tents, tables, chairs, portable toilets, waste removal, cars, restaurants, security, fire protection, insurance, advertising/marketing, generators, lighting, communication equipment, scanners and dozens of other support items.

*continued on page 5*

# Open letter from our Commander

*continued from page 4*

Our annual airshow is funded in part by donations from members, sponsors and ticket sales. We are lucky to have a volunteer base to support daily on-the-field requirements. To put this in perspective, if we were to pay for these services based on recorded 9,500-man-hours, the cost would exceed \$75,000 for the 3 days of the airshow. We also have a solid group of members who support the airshow with contributions. Our sponsor list is comprised of many Brevard County firms and they have been most generous in supporting the airshow and the Valiant Air Command Warbird Air Museum. Currently, we do not have a major donator firm. We have been and are seeking one or two large corporate sponsors.

I would like to address the differences between our airshow and the Melbourne Air and Space Airshow:

1. Our airshow is the major annual fundraiser to support the Warbird Air Museum. As a non-profit 501(c)3, we depend heavily on this airshow and other donations to keep the museum open to the public.
2. Our airshow support team and Board of Directors are comprised of volunteers not paid personnel, and a key point is that many of our volunteers are snowbirds who are only available during part of the year.
3. The Melbourne Air and Space Airshow is not an annual charity event. It makes no difference if there is or is not a profit made as costs are underwritten.

4. The Melbourne Air and Space Airshow has a very large corporate sponsor, Northrup Grumman, who basically underwrites the airshow. Northrup Grumman was granted an incentive package from the City of Melbourne, State of Florida, and Brevard County to entice them to move their new facility to Melbourne. I have no quarrel with Northrup Grumman being a good corporate citizen by sponsoring an airshow.

As the Commander of the Valiant Air Command, Inc., I need to make a recommendation to the Board of Directors whether to go forward with our 2019 airshow set for March 15, 16, 17 or cancel if there are arbitrary date changes made by the Melbourne Air and Space Airshow for 2019, which may place both of us in direct competition with each other if a military jet performance team is unavailable. There was not a conflict for resources and airshow visitors when the second major aviation event was in the Fall. With this much separation, both can be supported and well attended.

I am not willing to risk the resources of the museum for the sake of mounting an airshow because it has been a tradition. I recognize that not having an airshow in 2019 might hurt the businesses in and around Titusville and possibly causing a future problem with our sponsors.

I am open for your thoughts, please email me: [norm.daniels@valiantaircommand.com](mailto:norm.daniels@valiantaircommand.com).

*Norm Daniels*

## **ALL NEW LANDSCAPING FOR THE MUSEUM**





## Executive Officer's Report

Bob Boswell, Executive Officer  
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### SPACE COAST Warbird AIRSHOW

We went to press with the first quarter Unscramble shortly after this year's Warbird AirShow, so I was only able to lightly talk about it at that time.

Since the show ended we have continued to receive calls, emails and social media talking about what a major event it was! Here is a short recap of the main activities that provided something for everyone.

The Air Sports Parachute Team delivered a giant American flag to start the show. The Army reenactors provided a firepower demonstration near their camp area and the Army Heritage Aviation Association provided rides in their Huey and Cobra Helicopters. On the other side of the field the B-17 Memphis Belle, a Vietnam era C-7 Caribou, SNJs and Biplanes provided airplane rides. In the infield, multiple car clubs showed off their rides while the youngsters enjoyed the carnival attractions. There was an autocross track set-up on Taxiway "D" where our visitors could drive in an exotic car such as a Ferrari or Lamborghini. There were also multiple air races against these exotic cars. The Rat Patrol Team with their vintage military vehicles opened the show Saturday with a parade that carried WW II veterans, including Lt. Colonel Dick Cole, Lt. Colonel Jimmy Doolittle's actual co-pilot on the 1942 B-25 raid on Tokyo. In the air show gift shop Lt. Colonel Cole and others were recounting their previous adventures and signing books. There was over 45 static display aircraft and we flew

over 35 additional aircraft in the show. The 45-minute eight aircraft aerial performance provided by our headline team, "Tora Tora Tora", was a thriller! With smoke in their face and aircraft zooming in and out shooting guns and dropping bombs, the spectators felt like they were part of the attack.

This show provided the opportunity, as it has over the years, for the CAP, JROTC, Scouts, civic groups, and other non-profits to earn money for their organization. It takes an army of workers to present this 3-day event and we could not have had such a great air show without the outstanding support of the ground teams and the pilots & crews. Being a member of the air show is much more rewarding than just watching, especially reflecting on the part you did that made it such a success.

It was very unfortunate that the Air and Space Show in Melbourne announced in December that they would hold their air show on our published air show date in March. This date had been published for almost two years and the same time of the year the VAC has been hosting a community air show for years. To avoid conflict, we moved our show to a later date, almost 30 days later. The Air and Space Show later announced that they were moving their show to a new date, within two weeks of our new event date. Our performers and vendors, who graciously agreed to the first slip, could not support another date. With the performers and vendors being under contract,

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### Mustard Seed Kidz came for a tour!



Mustard Seed Kidz Child Development Center offers center-based and full-time child care and early education services designed for young children. Located at 2975 Eber Blvd, the company serves families living in the Melbourne, FL area.

Would you like to be part of the volunteer restoration crew or how about becoming a Tour Guide? Fill out an application on our website or stop at the Gift Shop and get an application.

## Executive Officer's Report continued from page 6

we would have lost a great amount of money by canceling the show. So, the show went on. As expected attendance and revenue were disappointing. Since the annual Warbird AirShow, produced by the VAC, is intended to be a fundraiser for the benefit of our non-profit Warbird Air Museum, this outcome is certainly to be avoided in future years. Those who missed this show missed a good one. A special thanks to all the members, vendors and volunteers who helped make the 2018 Space Coast Warbird AirShow an outstanding event and real crowd pleaser.

We have already started planning for the next Space Coast Warbird AirShow, March 15-17, 2019. We are always looking for volunteer support. If you are interested in working one or more days next March, please go to our website, [www.valiantaircommand.com](http://www.valiantaircommand.com), to put in a volunteer application.

### FLY-IN BREAKFAST

New Test Program for the Warbird Air Museum Fly-In Breakfast, 8:00 to 10:30 on the second Saturday of each month.

Starting on Saturday, July 14th and continuing the second Saturday each month, the drive-up public can, between 08:00 and 10:00 am, pay \$12 per person at the Gift Shop for the breakfast and the museum visit is free. No charge for the fly-in aircraft who already pay \$12 per person. The breakfast is catered and provides a variety of selections in addition to omelets made to order. Even with the marginal weather we have had a good turn out and continue to add new members.

### TICO BELLE

Our focus is on completion of our annual and 100-hour aircraft maintenance and return the C-47 to flight as soon as possible. Progress has been steady; however, several items have kept us from completing the maintenance as quickly as we would have hoped.

We are planning to fly the C-47 Tico Belle to AirVenture at Oshkosh this year. Tentative dates

are 22-29 July. This will be an opportunity to show the flag and to encourage the folks up North to visit our Warbird Air Museum when they come South during the winter. Also, at Oshkosh, we will be looking for Donors and Sponsors for our planned C-47 "Return to Normandy" flight in 2019.

### VETERANS DAY

On Saturday and Sunday, November 10th & 11th the VAC will host our annual Veterans Weekend Open House to celebrate the service of all Military Veterans. The Warbird Air Museum Open House Event is free to all Veterans and Military of all services, active, retired and separated. Admission is also free to all Florida Residents with an ID. In addition to our display aircraft, other aircraft will be flying in & out during the event. There will be electric trains, models of all types, radio-controlled airplanes, desktop flight simulators, a petting zoo, pony rides, several vendors and of course hot dogs and hamburgers grilled on site. This is another great family event as we honor our Veterans.

Once again the Kennedy Space Center Amateur Radio Club set their equipment up in the picnic area in front of the Valiant Air Command. Ham Radio Operators perform a very valuable service in times of crisis.



**Left to right: Dave Harrison (KE8GIJ), Larry Anders (KM4CVB), Rick Gleason (KK4URK), Scott Vangen (WB0QMZ)**

***Do you know what this is?***



***See the answer on page 9***



## Maintenance Officer's Report

Marvin Juhl, Maintenance Officer  
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(321) 268-1941 ext. 4108

C-47 is still undergoing its 100 hr inspection, but with high expectations of completion in July. No doubt it's been spending a long time in the inspection mode. I suppose it's like some of us when we get older, we need to see the doctor more often for checkups and then on occasion be forwarded to a specialist which takes up more time. So we needed to make sure that those fourteen heartbeats are producing and the valves working correctly with proper pressures. Yes, we did find one of those on the left side: (number four) valve press indicated very low, which required immediate attention. We can't forget those running nasty drips getting on the floor, wish we could say, "just put a band-aid on it", but as we all know that doesn't work. On the right side, red drippings were found, had to do a pump replacement with transfusion. Also, we have those sniffing coughing black stuff getting everywhere as well (diapers were needed). As you can tell, getting old isn't easy. The good news is with proper care and attention, its longevity can be increased. In addition with all that said, aircraft continuous inspection program is closing in on completion. We have

completed the fabric covering and installation of the left aileron. Modifications were made for left and right engine oil systems by installing oil filters. First of the engine run-ups checked out satisfactory. More engine run-ups and system checks, will be needed before sign off.

TBM (Avenger): we have long been waiting on the cylinders which are now in transit to us. And yes these cylinders (all fourteen) are newly overhauled, will be installing these soon after the C-47 has completed its inspection, which of course has priority over the TBM. The airframe on this TBM appears to be in good shape with a few minor discrepancies. Install cylinders, prop, engine test run, clear the discrepancies and sign off the inspection program. Then she will be ready for her test flights. Sounds simple enough, time will tell.

H-13D1, Bell 47, M.A.S.H. 4077: we have been doing the monthly run up along with clearing up the small discrepancies as they pop up. Still looking at the possibilities to display a mock-up 4077 M.A.S.H background to show off the H-13. If you have ideas along this line of thinking, sure would love to hear from you.

UH-1 (Huey): Additional volunteers that have past Huey experience are rolling up their sleeves and getting hands-on once again. Not sure if it's their first or second love affair. So work continues as in fuel cells are being removed for fuselage and tank inspection along with other needed inspections. The goal is to get an engine run up by year-end. [Here's a trivial history that many are not aware of, this very UH-1 Huey that we are working on served in two conflict wars (Vietnam and Desert Storm).] Another goal we are trying to achieve is on another Huey fuselage haul that is being worked on as a mockup simulator for kids and yourself to play in. This mockup needs to be as realistic as possible. But what's needed is more Volunteers (experience not required) just willing to help to make it happen.

Soon Maggie's Mob (F-100) will be evicted from the restoration hangar. She must make room for others to come in to be fixed, cleaned up and pampered like herself. Maggie's rolling out and shaking that old restoration dust off before heading out to her new dwelling. There in the Vietnam hangar, she is showing herself off to all who visit her. In fact, she will acknowledge you upon your visit. You have to come and see for yourself. You won't be disappointed.



## Finance Officer's Report

Tracy Bohrmann, Officer  
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(321) 268-1941

Hello Dear Members,  
The financial situation of the Valiant Air Command is on a secure footing. Attendance has been up through the first 6 months of the year, versus last year, as well as PX revenue. Many generous donors have come through

and provided support for individual projects, such as the F-14 repainting and the front VAC landscaping. However, there is always more to be done. Coming up we will need to have funds to replace, in whole or in part, the roof of the main hangar,

and work on the A/C systems in the upstairs offices and the memorabilia area, just to name a few. So keep those donations coming! Individual donations from our members are what makes the difference between just sustaining and the VAC growing and become better. I thank all of you for the support.

Tracy





## Personnel Officer's Report

Richard Jones, Personnel Officer  
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(321) 268-1941 ext.4100

This last quarter we've seen several challenges, I'd like to take this opportunity to thank our members and wonderful volunteers that keep us running as a well-oiled machine!

The 2018 Election time is upon on us already. The following Officers positions are up for election this year.

1. Finance Officer, Incumbent: Tracy Bohrmann
2. Procurement Officer, Incumbent: Robert Frazier
3. Personnel Officer, Incumbent: Richard Jones

Our elections will work a little different this year. We will begin the shift to an electronic ballot; this effort will avoid high costs and labor to the organization from mass Postal Mailings. It will also streamline the count and verification process of the ballots, removing the human error possibility that exists with manual ballots. All Voters must be able to login to the Club Express member website to be able to verify eligibility and to vote this year. Every member has a login to our membership website. Please try your login now to avoid delays or missed opportunity in the 2018 Election! URL: <http://vac.clubexpress.com/>. If you can't remember your login or password please email me at [personnelofficer@valiantaircommand.com](mailto:personnelofficer@valiantaircommand.com) or admin at [warbirds@valiantaircommand.com](mailto:warbirds@valiantaircommand.com) and we'll

send a password reset to your email on record.

Autobiographical stories, together with your original "Letter of Intent" with required endorsements, must be received at the VAC Headquarters by 5:00 P.M., 17 August 2018. The list of candidates and the position they are running for, as well as their autobiographical histories, will be emailed out Mid-September along with the Link to the 2018 Electronic Election Ballot.

On another note, our groundskeeper company decided to abandon us about 10 weeks ago, we have taken this task on with volunteers!! If you have that never-ending desire to do yard work in Florida, feel free to contact me. The more the merrier as this is a huge project every couple of weeks. Have a favorite rake, weed eater, edger or pole saw?? Come on out and show us how to use it and help out the newly formed Facilities yard group keep our place clean and pristine!!



Watch your email for system messages the next couple of months, and thanks so much for your continued Membership support of the organization.

***Do you know what this is?  
Here is the answer!!***



The Canberra jet engine can only be started with a cartridge resembling a large shotgun shell. The cartridge is filled with an explosive charge that burns for 8-10 seconds and causes the jet engine to spin up to proper rpm for starting. Black smoke comes from the engine when the cartridge is fired.



***"To Honor the Past, Educate the Future and Preserve Our Heritage"***

## Gift Shop News

Anita, Louise, Lorraine, Rich  
Email: VAC-PX@valiantaircommand.com  
(321) 268-1941 ext. 4112

Did you know that each month we feature different items on a "SPECIALS 20% OFF" display table? Stop in today and often - check everything out. Many new items are here and more are on the way. Shop for anyone for any occasion. Have you seen our new D-Day commemorative magnets and key chains in stock? Start thinking of items you'd like to put on layaway for Christmas! (Yes, the end of the year isn't that far away.)

Anita, Louise, Lorraine, Rich



*Our ever changing discount table*

*These magnets are about the size of a business card*



# MEETING? LUNCHEON? PARTY?

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A WEEK  
9AM TO 5PM**



Our facilities can support several hundred people in our Warbird Hangars. Be part of history as you hold your event surrounded by vintage aircraft. Go back in time as your guests browse the displays and exhibits.



Valiant Air Command Warbird Air Museum, 6600 Tico Road, Titusville, FL 32780  
**(321) 268-1941 • [www.valiantaircommand.com](http://www.valiantaircommand.com)**

## Curator's Corner

Don Leathers, Curator  
Email: Don.leathers@valiantaircommand.com  
(321) 268-1941 ext. 4114

The F-100D Super Sabre currently under restoration will be completed soon. The refueling probe, main gear compartment door, and pitot are yet to be completed and assembled to the aircraft. Some minor decals will also be positioned on the outside of the aircraft. Our expert painter, Larry Mathis, a VAC member known otherwise as "Picasso," has a few other areas to finish as well.

This aircraft replicates an F-100C that was flown by the 174th Tactical Fighter Squadron of the Sioux City, Iowa Air National Guard while assigned to Phu Cat Airbase in Vietnam. The aircraft number was

54-2007 and the nose art title was "MAGGIE'S MOB." Photographs taken by S/SGT Larry Mathis, during his Vietnam tour in 1968, were used as a reference for replication of "007." A vote taken among the volunteers working with Larry elected him to be the pilot of "007."

One of the photos taken for this article shows Larry sitting in the pilot's seat and wearing a rebel flight helmet in honor of his father, a Navy Veteran from Tennessee, who was called "The Rebel". Another photo includes Larry surrounded by some of the people who have worked with him during this high-quality aircraft restoration.



L to R: Bob Westman, BOB Dambrauskas, Peter Massaras, Larry Mathis, Norm Daniels, Don Leathers, Pete Jolly

# MiG-15 Jet Fighter

*Dr. F. J. Erik Kramer, VAC Historian*

The MiG-15 is a single seat non-supersonic interceptor-fighter, codenamed "Fagot" by NATO. VAC, however, does not feature this fighter in its collection, but the two-seat trainer-fighter version, defined by NATO as "Midget UTI".

The MiG-15 is considered the 4th best fighter plane of our times, tied with its opponent of the Korean War, the F-86 Sabre. The MiG-15 fighter was one of the most produced aircraft since WW-II.

The two famous Russian designers Mikoyan and engine designer Klimov traveled in 1945 to the United Kingdom to buy the Rolls-Royce Nene jet engine. Stalin commented on this unusual mission by saying: "What fool will sell us its secrets?" To Stalin's amazement, the British Labor government and its Minister of Trade, Sir Stafford Cripps, were perfectly willing to provide technical sensitive information and even a license to manufacture the Rolls-Royce Nene-engine to the USSR. Sample engines were purchased and delivered to the Russians with detailed blueprints. Following evaluation and adaptation to Russian conditions, the windfall technology was tooled for mass-production as the "Klimov VK-1 turbojet engine" capable of a thrust of 5,952 lbs.

Russian pilots and their MiG's were sent to Korean war on the Trans-Siberian railway; their aircraft stripped of all Russian insignia

and wording, the pilots dressed as civilians, guarded by secret police. They did not fly from Korean airfields, but from Chinese bases across the border so as not to create an international incident. No doubt the MiG-15 was an unpleasant surprise to the Allied in the West when it appeared over Korea. Its performance was superior to that of any Western fighter, despite some shortcomings in handling, equipment and armament. On the other hand, one person could rearm MiG-15 cannons in less than 15 minutes. A blast of the MiG's three cannons was much more destructive than any of the opposing fighters. It was one of the first successful jet fighters featuring 35 degrees swept wings, allowing high transonic speeds. The configuration, with the high-set swept wing, high tail plane and nose intake may have been inspired by the German WW-II Ta-183 design. MiG-15 easily outclassed straight-wing jets, like F-9F Panther and the F-80 Shooting Star. At the beginning of the Korean War, MiG-15 fighters destroyed numerous NATO-forces aircraft.

First production example flew on 31st December 1948. It entered Soviet Air Force service in 1949 and by 1952 it had been provided to a number of Communist satellite nations, including North Korea where it was used extensively against United Nations forces. In winter of 1950, the MiG-15 was deployed against American Air

Forces in Korea. The original mission of the MiG-15 was to intercept B-29 bombers operating during daylight missions. On November 8, 1950, 1st Lt. Russell Brown, flying a F-80, shot down a MiG-15 in the first all-jet dogfight in history. It became clear, that the MiG-15 was superior to any aircraft then in the US inventory. However, as soon as the F-86 Sabre was fully employed into service, the MiG-15 lost its dominance with a claimed loss ratio of 10 to 1. Records show that 757 MiG-15 went down at a loss of 86 F-86 aircraft. This high loss ratio of the Soviet fighter only had been achieved when inexperienced Chinese- and North Korean pilots flew the MiG-15's. Therefore, the total weighted average of all losses including Russian flown MiG-15's and inexperienced Chinese and Korean pilots combined, is closer to 6.8 to 1.0. In any case, the MiG-15 and F-86 were the best effective fighters of the Korean War. While the MiG-15 could out-climb, and fly higher than the F-86, allied pilots, most with WW-II experience, were better trained and had available better equipment installed in their Sabres. This contributed to the much favorable kill-ratio against the Soviet fighter.

The MiG pilots, enjoying the support from the ground and the tactical advantage of an aircraft with superior high altitude performance were able to dictate the tactical situation, at least until the battle had started. They could decide to fight or stay out as they wished. The advantage of disposing of radar control from the ground also allowed the MiG fighters, if desired, to pass through the gaps

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# MiG-15 Jet Fighter

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in the F-86 patrol pattern. Initial encounters with American aircraft led to the development of the MiG-15bis (improved). Its new VK-1 engine had 1,000 lbs more thrust than the RD-45 engine of the earlier version and was equipped with hydraulic operated ailerons. Armament changes were introduced together with some additional overall improvements. Nevertheless, the MiG-15bis poor turning performance and high mach instability limited its dogfight performance. In aerial combat against the F-86, the MiG-15 suffered high losses, although against the B-29 it was very effective and did prevent the heavy bombers to continue operating in daylight. The MiG-15 was also a very successful export aircraft, operated by 31 communist nations such as Poland, Czechoslovakia, East Germany, China, North Korea and Vietnam to name but a few. License built versions of the MiG-15 also existed like the Chinese J-2, Czech S-102/3 and Polish Lim-1. Total number of MiG-15 fighters built in the Soviet Union is 12,000, but when licensed foreign production is added, the total construction output surpasses the impressive number of 18,000 fighters. There is no mention of the MiG-15 being involved in any combat against American aircraft in the early stages of the Vietnam War.

The plane's armament included one cannon and two NS-23KM guns. The cannons were mounted in the forward fuselage on a carriage, which could be lowered. Two 100-kg or 50-kg bombs could

be suspended under the wings. To increase its flight range, the aircraft could carry two external fuel tanks with a capacity ranging from 250 to 600 liters.

The MiG-15 jet fighter was notable for its simple and reliable structure, high flight and operating characteristics, and powerful armament. Its maximum speed, the rate of climb, ceiling, and flight range were the best among Soviet fighters at the time and superior to many foreign aircraft, as well.

As outlined before, the MiG-15 was originally intended to intercept American bombers like the B-29. To ensure the destruction of such bombers, the MiG-15 carried two 23 mm auto guns: with 80 rounds per gun and a single 37 mm cannon with 40 rounds. These weapons provided tremendous punch in the interceptor function, but their limited rate of fire and relatively low nozzle velocity made it more difficult to score hits against small and maneuverable enemy jet fighters in air-to-air combat.

The MiG-15 arguably had sufficient power to dive at supersonic speeds, but the lack of an "all flying" tail greatly diminished the pilot's ability to control the aircraft as it approached Mach-1 speeds. MiG-15 pilots understood very well not to exceed Mach 0.92, the speed whereby the flight surfaces become ineffective. Additionally, the MiG-15 tended to spin after it stalled, causing the pilot to lose control of his aircraft. In later versions of the MiG-15 all "flying tails" had been installed. This Soviet jet fighter was in production from 1948 until mid-1950. The MiG-15 developed

further into the more advanced MiG-17. Again this design would surprise the West when in the Vietnam War of the 1960's it proved effective against supersonic fighters such as the F-105 Thunderchief and the McDonnell Douglas F-4 Phantom-II.

We may conclude that the MiG-15 is a true icon of military aviation and provided experienced pilots with an impressive top-tier jet fighter, when employed to its full strengths, being more than a match to any other aircraft in the game.

## **General characteristics:**

Crew: 1 or 2. Length: 33 ft 2 in  
Wingspan: 33 ft 1 in.

Height: 12 ft 2 in. Wing area: 221.7 ft<sup>2</sup>. Empty weight: 8,113 lb. Loaded weight: 11,177 lb. Max. Takeoff weight: 13,458 lb. with 2 × 160 US gal. drop tanks. Fuel capacity: 380 US gallons.

Power plant: 1 × Klimov VK-1 centrifugal-flow turbojet, 5,950 lbf.

## **Performance:**

Maximum speed: At sea level: Mach 0.87 equal to 669 mph.

Speed at 9,840 ft: Mach 0.9 or 688 mph.

Cruise speed: Mach 0.69 equal to 528 mph.

Range: 1,565 miles: at 39,360 ft with 2 × 160 US gal. drop tanks.

Service ceiling: 50,840 ft. Rate of climb: 10,080 ft/min.

## **Armament:**

2 × 23 mm NS-23 autocannons in the lower left fuselage, 160 rounds in total. 1 × 37 mm N-37 autocannon in the lower right fuselage, 40 rounds total; 2 × 220 lb bombs, plus drop tanks, or unguided rockets connected to 2 underwing hardpoints.

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# I flew a UFO in Argentina!

*By Larry Champion*

When I was assigned to the 58th Weather Reconnaissance Squadron of the Air Weather Service (AWS) at Kirtland AFB (Albuquerque), NM, most of our operational missions were flown from deployment sites. Normally, we would deploy for 30-90 days to various sites located in lovely places like Pakistan, Turkey, Panama, and Alaska among many others.

On one such deployment to Mendoza, Argentina, My pilot and I were by far the most successful discovering and collecting certain reconnaissance/intelligence objectives. Later, this would become very important to my Air Force career. On one such mission, we became the only crew to discover the radioactive cloud from a certain nuclear test that was our prime objective for this deployment.

According to the AWS weather forecasters' briefings, we were expecting the cloud to be at a very high altitude, so we were dressed in the full-pressure suits required for flight above 50,000 feet. We typically filed a flight plan that listed the altitude as "Visual Flight Rules On Top (VFR O/T) above Flight Level 600 (that's above 60,000 feet)", which meant that we would be effectively out of any ground control and/or flight following requirements. Controlled airspace did not extend above 60,000 feet. That worked out well for our classified missions because nobody on the ground needed to know where we were going or how high we were flying. On this mission, that secrecy worked out well, as we will note a

little later.

After a night take-off, we flew west to Santiago, Chile, and then headed north to our search area well off the coast of Antofagasta, Chile. We started our search routine at an altitude of about 65,000 or 70,000 feet per forecasts by the nuclear scientists and the weather forecasters. After flying various patterns along a north/south path, followed by an east/west path without any luck, we decided to try different altitudes. We finally found the radioactive cloud at about 35,000 feet. Once inside the invisible cloud, it was my job as Navigator to establish the size of the cloud. We performed our north/south and east/west paths to determine the extent of the cloud using onboard instrumentation.

Once we found the center of the cloud, we started circling and collecting particulate and gaseous matter from the cloud. Now came the "fun part". As we were circling inside the cloud, we were also in the Jet Stream that was flowing toward the South American mainland. Remember, we had filed that we were going to be flying above 60,000 feet in uncontrolled airspace. Well, as we were circling and I was gathering "pieces of the cloud" at 35,000 feet, we were blown by the jet stream back over the coast. After a while, we were well inland and I started getting worried about violating controlled airspace, so I called back to our command post and noted that we were "breezing along with the breeze" and asked if there would be a change in orders.

Our control responded that they were "working the problem" and we should continue as we were. My job at this time was simply to change the filter papers that were collecting particulate matter from the nuclear explosion every 10 minutes and to take a 2-minute sample of the gaseous matter every 10 minutes... boring...

As I was enjoying the view of Lake Titicaca, we saw 2 fighter jets in full after-burner passing through our altitude. Of course, we were flying in full blackout mode without any exterior lights on. We suspected that they were looking for us at the extreme altitude that we had filed in our flight plan and weren't expecting us to be at only 35,000 feet. Very soon thereafter, we received orders to return to base. We then reported how many filter papers we had filled and how many pounds of pressure we had accumulated in the gas collectors, along with an abbreviated report of instrumentation readings. When we arrived back at Mendoza, the scientists were ecstatic to see our reports. Now they had a lot of stuff to analyze. Party time! OK...now back to the subject of this article...

We flew the RB-57F which was a highly modified version of the Valiant Air Command's Canberra. The RB-57F was a rare aircraft, only 21 were built, with a huge wing and four engines. Because we were so rare, we were readily identifiable to some people but not by the public at large. Because most of our missions were classified, we didn't want our working area to be general knowledge. We were therefore restricted to always flying at or above 50,000 feet

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## I flew a UFO in Argentina!

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when on training missions. We didn't attract much attention at such altitudes.

One of our operational missions in Argentina required us to fly at 1500 feet above sea level in a remote area that was generally at about 1000 feet elevation, so in that area, we routinely flew at about 500 feet above the ground. Upon completion of that particular mission, we would often stay at low altitude and harass the larger 4-legged animals of the Argentine Pampas. On one such mission, my pilot who was an avid skier wanted to check out the ski slopes. Now comes the bad part...

We stayed at about 1000 feet above the ground and headed for the ski slopes near the town San Carlos de Bariloche. There was not much to see there, so we headed back. We were still at about 1000 feet above the ground when we flew over the town. We then climbed to 50,000 feet and returned to Mendoza.

When we saw the local paper on the next day, we saw that there was a "flying saucer scare" at San Carlos de Bariloche...uh, oh...

This occurred in about 1968 or 69. At that time, Argentina was experiencing similar phenomena that the USA experienced in the mid-1950s of seeing 'flying saucers' everywhere. We frequently read in local Argentine newspapers that police had seen a flying saucer that had landed and little men in green spacesuits were approaching. Police then mowed them down with their .45 caliber machine guns. Of course, there were never any dead little men in

green spacesuits found later.

Side note here: When we flew at the extremely high mission altitudes there, we wore full-pressure suits, which were an adaptation of the same space suits that the Gemini Astronauts flew. Our "space suits" were green! A common joke (?) among our flight crews was that if we ever had to bail out in Argentina, we would be naked when we landed. We sure didn't want to approach the local police wearing green space suits. OK, back to my story...

Apparently, the Argentine Air Attache in Buenos Aires asked our Air Attache if we had any B-57s in the vicinity of Bariloche. Because our mission in Argentina was so sensitive, our Attache replied with a "no comment". After a couple of days of this intransigence on the part of our diplomats in Buenos Aires, this developed into the dreaded "International Incident".

I still have one of the newspaper articles that describes the incident. It says that the 'flying saucer' was not a Canberra or a U-2 and that it stopped in mid-air, did a couple of barrel rolls, then left at a high speed. I believe that is typical of many UFO stories in which people let their imagination run away. Just for the record, it was us in the RB-57F Canberra. The RB-57F is incapable of doing barrel rolls, and of course we can't stop in mid-air. Our red-line (maximum) airspeed is 190 knots, so we couldn't have left "at high speed".

On Monday morning at 10 am, we received a telegram from our headquarters in the good old USA. It was addressed to our Site Commander, my pilot, and me. The telegram read: "You are relieved of duty. LAN Chile Airlines leaves at 2 pm today. You

have reservations".

OK...here's where my background story at the beginning of this article comes into play. As we were getting ready to return to the USA, I saw our Customer's site leader. I said, "Hey Bob, it looks like we are in trouble, can you help"? He said that he would try.

When we arrived back at Squadron headquarters, our Commander explained a few things while we stood at attention and answered him with "yes sir" or "no sir" or "never again sir" for a couple of hours. Then, the Squadron Commander told us that we would be flying out to California so the Wing Commander could explain a few things to us. Yes, we got the same treatment in California and could see our careers going down the drain.

We remained close to home base for a couple of months before we received another call to "report to the Commander's office". My pilot and I thought "well, this is it. We're done". Cue the gallows music...

When we arrived in the Commander's office, he was all smiles. It seems that our Customer Site Lead did, in fact, help us. He wrote a letter up his chain of command saying that my pilot and I had done a great job and should be commended. Well, that letter went up his chain of command to the Pentagon and over to my chain of command starting with a 4-star General. Each General and Colonel below wrote an endorsement saying that my pilot and I had done a splendid job and all involved (including my Wing Commander and Squadron Commander) should be commended for a job well done... WHEW!  
Carry on....



## Some photos from 2018 Warbird Air Show Media Day



Joe Rues, WWII Prisoner of War, and Dorothy Hukill, Florida Senator, enjoyed the Media Day festivities



The Dirty Flight Suit B-B-Q was catered by Hooters and these young ladies were the servers



These 3 planes from the Tora, Tora, Tora group gave rides to the Media all morning



The Tora, Tora, Tora pilots flew in formation when giving rides to the Media



Fly with Paul Schulten in his Christen Eagle and get your picture taken with Paul and Orville the Eagle



The "The Movie Memphis Belle" was open for the media to experience what it was like inside a B-17

# Some 2018 Warbird Air Show Photos



*Jet Truck*



*Jet Truck*



*Jet Truck*



*Jet Truck*



*Jet Truck*



*Jet Truck*



*Jet Truck*



*Jet Truck*

## 2nd Quarter Review - April, May, June 2018



*Norm Rathborne watches over the VAC Table*

The Valiant Air Command sponsored a hole at the USATS Charity Golf Tournament. This was formerly The Bristow Charity Golf Tournament. The USATS Charity Golf Tournament benefits Frogman Outdoors who provide ill, injured and wounded SOCOM Veterans with a recreational rehabilitation opportunity through guided saltwater fishing trips.



Bob & Lynn Foraker and Barb & Norm Rathbone waiting in line to lay the Warbird Air Museum wreath at the City of Titusville's Annual Memorial Day Ceremony hosted by American Legion Post #1 and the Titusville Flag and Memorial Committee. It was held Monday May 28th 10:00 a.m. at Veterans Memorial Park in Titusville. We were one of many civic organizations participating.



*Nakajima B5N "Kate", one of the Tora, Tora, Tora Squadron's aircraft participates in the recreation of the attack on Pearl Harbor at the 2018 AirShow*



Two of our Museum Members, Lorraine Juhl and Kevin Quinlan, manned the VAC information table at a car show in Melbourne.



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