Virginia Aviation History Project

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The Fighter Factory

by Linda Burdette

Some people collect stamps; some collect beer mugs; some even collect model airplanes. But Jerry Yagen is a little different. He collects World War II vintage airplanes and now has amassed one of the largest private collections in the world. What most would see as a passion or even an obsession, Yagen describes as a "strong hobby." He says he collects model airplanes just like other pilots – except his are on a scale of 1:1.

So how did he get into this extraordinary hobby? It began when he founded the Aviation Institute of Maintenance (AIM). AIM is part of the Tidewater Tech school system. About 15 years ago, a company called Dalfort (which incidentally also owned Braniff Airlines and the Hyatt Hotels) sold its maintenance school in Norfolk to Tidewater Tech. It was originally operated as Tidewater Tech Aviation. Tidewater Tech later purchased a maintenance school in Philadelphia called Quaker City Institute of Aviation and then opened a facility in Atlanta. With the purchase of this last school, the decision was made to change the name of the collective schools to Aviation Institute of Maintenance. It is now the largest chain of part 147 FAA certified aviation maintenance schools in the country with schools in Norfolk, VA; Philadelphia, PA; Atlanta, GA; Kansas City, MO; Indianapolis, IN; Orlando, FL; Dallas TX and Manassas, VA near Washington DC. Its graduates are awarded a 2-year Associates degree and are eligible to test for their A&P certificates.

In 1993, while building the AIM school system, Jerry Yagen attended a convention of Aerostar owners in Ontario, Canada. Yagen had been a pilot for years and flew his Aerostar extensively for business. At that convention, he visited the Canadian Warplane Heritage Museum and became interested in the acquisition of an early model aircraft of historic design. His idea was to use it to promote awareness of AIM at regional air shows. He first considered getting a T-6 or a Stearman, but ended up purchasing a wrecked Curtiss P-40E, an American lend-lease fighter given to Russia during the war. It was recovered north of the Artic Circle, near the seaport city of Murmansk, where it was lost in action defending the region from Germans attacking through Norway. Tidewater Tech set up a small restoration shop, with that airplane as its first project. The restoration was a success and the P-40E is still flying today. At that same time, Yagen also bought a Corsair, but it was never restored. He eventually found and purchased a flying

This Curtiss P-40E was the first aircraft restored by the Fighter Factory and is still flying.

Corsair and traded the first Corsair for a Douglas Bomber, which is currently being restored. After his initial purchases, Yagen realized that he needed to learn to fly a tail-wheel airplane. So he bought a Stearman. And the collection was begun.

That small restoration shop at Tidewater Tech became the Fighter Factory, a private aircraft restoration facility run by AIM. It operates with a permanent staff of thirteen craftsmen and mechanics in two separate locations: Virginia Beach for flight and display, and Suffolk, Virginia for maintenance and restoration.

This Stinson L-5 Sentinel Airplane was produced in 1944 and used mainly for reconnaissance, transporting personnel, and delivering supplies.

With the end of World War II, there were many military aircraft available to almost anyone that wanted to buy one for a few hundred dollars. Most of these went to scrap dealers that melted them down for their aluminum value, but some were saved by pilots who could not afford anything else to fly. The few that were rescued from the scrap dealers were the lucky airplanes that recently have proven to be most valuable.

The Fighter Factory engages in the discovery, examination, recovery and restoration of military propeller airplanes from the World War II era. Researching the history of a crash site and the aircraft itself is a time consuming process necessary for the restoration of the aircraft.

Searching, documenting and recovering World War II aircraft is a major commitment, requiring extensive labor, resources, and time. The Fighter Factory has at its disposal the necessary equipment to properly search for and recover these forgotten crash sites. There is a sense of urgency in searching, documenting and recovering these airplanes since many aircraft may be lost to the elements forever, and as time passes, it becomes harder to trace the history of these artifacts.

Strange as it might seem, many of these rare and unusual aircraft can still be found for free abandoned in remote parts of the world. Most people have no idea as to the possible value of such airplanes. However, even more important than their monetary worth is their historic value. Often they might be the sole remaining example of such an airplane. Almost any aircraft wreck, no matter how badly damaged, can be rebuilt back to a static museum display that looks as new as the day it left the factory.

Such a reconstruction becomes extremely expensive and usually is not practical unless it is an extremely rare type of airplane. Most often it is easier and less costly to search out another flying example of the same aircraft and just buy that. One shortcut is to find additional wreck sites of the same type and recover the parts needed to complete one airplane. It might require a dozen or more assorted crashed planes of the same model to find most of the parts needed to rebuild that one flyable example.

Yagen originally planned to use the AIM students to handle the restorations, but soon discovered that the young students had little interest in historic preservation. So he now has a permanent staff of 13 employees.

However, over time, he's learned that many companies outside the U.S. are very capable at restoration work and so now has a great deal of the restoration done overseas. There are currently restorations underway in New Zealand, Australia, Russia, Germany, and Italy. With the increase in airworthy aircraft at the Fighter Factory, his permanent staff now spends most of their time on maintenance and annuals.

When asked about the possibility of searching for aircraft on glaciers and ice floes in Iceland, Yagen discounts that avenue. The Fighter Factory already has the most common of those planes, owning 7 P-38's and 2 B-17's. He also pointed out that recently a flyable P-38 sold for $1.5 million, but a recent glacier recovery of a P-38 cost $4 million.

This P-51D Mustang, Double Trouble Two, was produced in 1945. It flew in the Reno Air Races from 1983 to 1985 and won the "Grand Champion Award at the 1986 Sun 'n Fun Air Show

Such well known fighters as the P-51 Mustang or the gull winged Corsair are today each worth almost a million dollars in restored and flyable condition. Rebuilt Curtiss P-40's or British Spitfires all sell for well over a million dollars. Bombers such as the four-engine B-17 are easily valued at more than two million dollars. The most valuable aircraft are from those countries that lost the war. Authentic German Messerschmidt 109 fighters must be worth at least five million, but unfortunately there are none flying. The only examples are the few in museums that are too valuable to ever take to the air. The Japanese Zero used throughout the Pacific is almost as rare. We can only imagine what a real German jet fighter introduced near the end of the war would sell for today. An aircraft company in Fort Worth is building a handful of such as replicas at a million dollars a copy.

Restoring an aircraft to its original condition is time consuming and requires a passion for this important time in history. While restoring these aircraft is important, tracing these historic planes is just as important if we are to learn and enjoy these relics from the past.

Yagen has traveled the world in search of WWII wrecks and abandoned airplanes. Any airplanes have already been recovered or destroyed in most heavily populated areas, such as a majority of the U.S. He has found that the airplanes can best be found in remote areas which were the site of air to air combat during the war. The most promising areas are eastern Russia where the Russians were fighting the Japanese, the more scarcely populated areas of western Russia, the islands of the Pacific, and North Africa. Airplanes can still be found occasionally in Alaska and Canada, but those are generally the results of accidents. Once the recovery team finds a recoverable airplane, they use heavy-lift helicopters to bring the aircraft out and send it to the U.S. or to other foreign countries for restoration.

This Boeing Stearman PT-17 "Kaydet" Primary Military Trainer is painted in the traditional pre-War Navy paint scheme with red bands to signify it as an instrument trainer. The Navy pilots nicknamed these aircraft "Yellow Peril" because of their color and the often inexperienced pilots at the controls.

The location of such crash sites becomes quite important to any museum trying to rebuild an airplane. It is even more important to any group trying to rebuild an airplane to a flyable condition. The many small pieces, forging, castings, and fittings scattered around a crash are invaluable to the restorer. At one site, the tail and left wing might have survived with minimum damage. At another location the right wing could be slightly damaged, while still at another place is a plane with a good cockpit section. The best crashes are those where the pilot survived in the airplane. That means there was a limited amount of damage and therefore more useable parts.

The search for crash sites has led to some fascinating use of modern technology. Synthetic Aperture Radar is a program of the Goddard Space Flight Center and a good example of how current technology can be used to help locate these valuable sites. SAR is an airborne detection system with the main mission of saving lives in the precious hours immediately after a survivable airplane crash. The Fighter Factory team first used it in Indiana. Toward the end of the War, the Americans captured a number of German airfields and transported the aircraft to Freeman Field in Indiana. These airplanes were to be used in test programs and a number were returned to airworthy condition. Even after the war in Europe had come to an end and the bombs were being dropped in Japan, the researchers at Freeman managed to make almost 2000 flights from Freeman in the aircraft that had been made airworthy. After the war, many of these planes were lost and many suspected that some of them had been buried at Freeman Field. Using the SAR, the team from the Fighter Factory and a partner company called Salvage 1 were able to identify underground locations with a high likelihood of having airplanes. They did find piles of parts, but no intact aircraft.

The Schrantz family of Virginia Beach was among the visitors to the Virginia Beach Airport on a Saturday in September

The SAR is also useful in the remote areas. There are hundreds of square miles of remote swamp area or mountainous terrain that are difficult to search or even penetrate by foot. During the test and development of this radar system, known areas where there is an above average concentration of suspected military airplane crashes could be evaluated for possible overflight and monitoring. Such detection of actual wreckages can contribute to the continued development of automated target detection in the Search and Rescue processing system. Here is an actual application of searching for specific aircraft, whose precise location is unknown. With the cooperation of interested organizations such as Tidewater Tech, these highly probable sites could then be individually evaluated and analyzed by visual inspection. This would most nearly simulate the actual search for a downed and missing aircraft, while at the same time, provide additional benefit in the possible identification and likely recovery of an historic aircraft, which could find its way into a museum for future generations to enjoy. Unless these crashed remains are recovered from such remote areas, they will continue to deteriorate and eventually corrode so badly that any type of restoration will become completely impractical.

Eventually such an airborne detection system will become fully functional and highly practical. It is hoped that tests such as these along the way would contribute to the overall successful development of such a

system. Even though its primary purpose will continue to be that of saving lives after a survivable airplane crash, this is just one example of an economic and social benefit of such a system.

The Fighter Factory has more than sixty aircraft in its collection. Thirty of these are flyers and at least eighteen are under restoration to fly, or will be soon. Perhaps the most fascinating development on this front is the Fighter Factor's close connection with Precision Aerospace at Wangaratta, in Victoria, Australia. Precision Aerospace has developed a veritable production line of ultra-rare warbird restoration projects, and the Fighter Factory is a big part of this, with at least five aircraft undergoing work there. These aircraft include a Bell P-39 Airacobra, Vought OS2U Kingfisher, Vultee A-35A Vengeance, Kawasaki Ki-61 "Tony" and a Douglas A-20 Havoc. The remains of seven P-38's have also been collected from various locations in the South Pacific, and it is likely that a few of these aircraft will eventually be restored to fly as well.

A Fiat G.55 Centauro has also been acquired by the Fighter Factory from Stephen Grey's Fighter Collection. It is actually a composite, comprising the modified fuselage of a G.59 with wings thought to have come from the G.55 production line. It will be one of only two known representatives of the type when it is complete, and is being restored by Maurizio Longoni in Milan, Italy. Original Italian WWII fighter aircraft are as rare as hen's teeth, and none are flying currently. It is one of only two Italian fighters of any kind being rebuilt to airworthy condition in the world.

This deHavilland Tiger Moth was built in 1940 by the Morris Motor Co. in England under a license from deHavilland

The Fighter Factory has also taken on one of the most ambitious warbird restoration projects currently in the world: a deHavilland Mosquito. The project is based upon the remains of a Canadian-built FB26 variant, KA114. A Mosquito is made largely of laminated plywood, and most of this will need replacing before KA114 can fly again, although most of the metal parts can be re-used. The fuselage is the main problem. It is made in two halves: split down the central axis. It has to be formed over specially made 44' long concrete molds. No original molds are known to have survived intact. Such huge molds were deemed to be prohibitively costly and difficult to make. However a brave and enterprising individual in Papakura, New Zealand named Glynn Powell decided to try. The Fighter Factory is the launch customer for the first airworthy Mosquito fuselage to come from these moulds. The project is being managed by Avspecs located in Ardmore, New Zealand, and the quality of the workmanship is simply astonishing. The fuselage is now largely complete, and work has begun on the wings. The aircraft is several years away from its first flight, but is will likely be the first Mosquito to fly again since the tragic crash of RR299 in 1996.

The Virginia Beach facility also houses probably the most complete V-1 missile in the world. The V-1 was the world's first cruise missile. This particular missile was recovered from the Nordhausen munitions factory, which was hidden deep inside the Harz Mountains in Southeastern Germany. It was manufactured in 1944 by slave labor supplied from the nearby Buchenwald concentration camp. After being hidden for over a half century under this mountain, it was recovered after the unification of East and West Germany and restored

by a small firm in Munich. The Fighter Factory has tried to start the engine on its missile, but it wouldn't run continuously. Repairs are ongoing.

Yagen is particularly fascinated by the WWII years. He points out that there were only 5-6 years in WWII, but so many countries were building airplanes and, as a result, there were so many technological advances. It was the most fascinating and exciting time in aviation history.

However it's becoming more and more expensive to keep these airplanes in flying condition. Even at the Fighter Factory, only a portion of the airplanes are still actually flying on a regular basis. Others have not been flown for as long as 2 years. Almost all of the airworthy aircraft make regular appearances at air shows up and down the US East Coast though, so it is not too difficult to see some of them in the air during the year.

The Fighter Factory is not currently a museum. However, that may change in the near future. Yagen plans to move all the operation to the Virginia Beach location, even though some of the maintenance is still handled in Suffolk. In Virginia Beach, he plans to recreate a WWII air field. The main building is constructed in the 1930's Art Deco style with 17,000 square feet. The two hangars on either side are 15,000 square feet each. They have ordered steel for a second story in the center section. The final result will have over 60,000 square feet in the building. A few years ago, Yagen purchased a museum in France. The artifacts are now in storage and will be displayed in the expanded facility. The airport facility recently received an approval from the City Planning Commission to operate a museum and Yagen hopes that the City Council will grant final approval next year. In that event, he plans to open the facility as a public museum, including renting out the main building for dinners, reunions, etc.

At the Virginia Beach Airport, even the wind sock fits the mood!

But the building and expansion doesn't end there. The former Luftwaffe hangar at Cottbuss, Germany, was dismantled and shipped to the U.S. and awaits restoration at the Virginia Beach Airport. It will eventually house the fleet's former Luftwaffe aircraft. The hangar was built in 1939 as a prototype for a locally developed design which could be shipped easily by rail. Also, the derelict WWII aircraft control tower at the former RAF Goxhill Aerodrome in Lincolnshire, England has been carefully taken down and shipped to Virginia Beach, where it will eventually be restored.

What about the runway? Well, there are 107 acres of land associated with the airfield. The runway is 5,000 x 200 and is composed entirely of grass. Grass surfaces are much safer for operating aircraft with narrow wheel spacing. There are no plans for any other surface in the near future. The air port is private and

pilots must have permission from Yagen to land there. However they enjoy having people come by to see the airplanes. They merely ask that visitors make prior arrangements before "dropping by."

So what's the next route for this amazing facility in Virginia Beach? Well, Jerry Yagen says that he's developing an interest in World War I airplanes and hopes to expand the Fighter Factory's inventory even more. One man's strong hobby has become a treasure that will preserve vital aeronautical history for years to come. Thanks to all the great folks at the Fighter Factory!

Sources:
Interview with Jerry Yagen, December 16, 2006
Warbird Digest, September/October 2006, Fighter Factory's New Home, by Richard Mallory Allnutt
Fighter Factory Web Site, www.fighterfactory.net

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A Life in Three Elements: Recollections of a Naval Aviation Cadet

The following is an excerpt from Admiral Dewitt L. Freeman's book, A Life in Three Elements: Recollections of a Naval Aviation Cadet.

THE CUBAN MISSILE CRISIS

I was looking forward to VF-41 (Black Aces) making the upcoming Med cruise with Air Group Seven aboard USS Independence (CVA-62), but that was not to be. The Russians were observed shipping missiles into Cuba, as well as a number of Mig-21 fighters. President John Kennedy called their bluff and the ships were stopped and some turned around. This was a tense time. The Air Defense Command told Secretary of Defense McNamara that it did not have a fighter that could handle the Mig-21s which Cuba was already flying.

Solution? Simple – Mr. McNamara directed the Navy to loan one of its F4 squadrons to the Air Defense Command! And guess which squadron the Navy picked? You guessed it! Soon, a phone call from CinCLant Fleet ordering me and my squadron to NAS Key West, Florida under the command of the Air Defense Sector Commander at Montgomery, Alabama. When the CinCLant Fleet Duty Officer forwarded this directive on the phone, I asked if we were to take a load of missiles (four Sparrows, six Sidewinders), he didn't know – all he knew was that we were to proceed post haste, but he would get right back to me – Oh, yeah – we WERE supposed to take missiles! Certainly simplified the logistics of the move.

Things happened fast. Within hours the missiles were hung and I had the first division in the air, while transports were arriving to carry the enlisted men, their tools and spare parts. The last airplane, which had to be patched back together out of maintenance, arrived just before midnight that evening, flown by the exec, CDR Oberg.

The Defense Command arrived the next morning, in the form of a major general and several staff officers from the Montgomery Sector Headquarters and they briefed us on their procedures, which we were to use while under their command. A trainer arrived and was staked down at the edge of the taxiway near the west end of the east-west runway at NAS Key West. This trailer was outfitted as a ready room, complete with rows of