PIREPS

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WASP at Grand Island Army Air Base

By Penny Rafferty Hamilton, Ph.D.

LTC Paul Tibbets, Jr. (left) stands with WASP Dorothea Johnson and Dora Dougherty and their B-29 crew. The Omaha Glenn L. Martin plant built the Super Fortress. (Photo credit: U.S. Air Force archive)

Imagine Grand Island in 1942. A bottle of Coke was five cents. Casablanca premiered. America was now at war because Japanese bombers attacked U.S. ships in Pearl Harbor. Nebraska newspapers published stories about the Doolittle Raid on Japan, The Battle of Midway, and The Bataan Death March.

In Hall County, bulldozers and construction crews, joined by local volunteers, worked round-the-clock to build the new Grand Island Army Airfield (GRI). The new site was the old 1937 Grand Island Arrasmith Airport. It, too, had been built with federal help from the Works Progress Administration (WPA). The new Army Air Base was expanded to 2,125 acres. Over time, 173 buildings and structures were constructed. On April 1, 1943, the airfield was activated. Immediately, bomber crews began training.

Several Women Airforce Service Pilots (WASP) were eventually assigned to the new Base to serve as administrative, utility, cargo, and engineering test pilots. Several planes were flown by these accomplished women in support of the war effort. The Stinson Sentinel L-5 was often used nationwide for administrative missions. The UC-78 built by Cessna was used for advanced multi-engine training. The C-47 Dakota or Skytrain was a military transport. WASP did it all and then some.

Later, WASP flew the four-engine B-17 Flying Fortress heavy bomber. According to the Texas Woman's University archive, three were assigned to duty at GRI. One of these women was Eleanor Fairchild Stebbins. Her nickname was "Fearless Fairchild." At only 19, she was the youngest pilot in her class, 44-W-6. Classmates, Evelyn McNulty Perrin and Lorraine Lasswell, joined her in their war service.

Interesting History

Interesting WASP history regarding GRI and the new B-29 (Super Fortress) involved Lt. Colonel Paul W. Tibbets, the famous World War II pilot. He later flew the B-29 Enola Gay, named after his mother, to Japan with the atomic bomb. Built at the Omaha Glenn L. Martin factory, the B-29 was our newest, biggest, and most complicated bomber. Rushed to production, pilots felt it was unsafe, especially with frequent engine fires. Built with Wright engines, pilots quipped the B-29 had the "wrong" engines.

In the summer of 1944, Colonel Tibbetts personally invited two outstanding WASP, Dora Dougherty Strother McKeown, 43-W-3, and Dorothea "Didi" Johnson Moorman, 43-W-4, to train with him in the B-29. Long story short, after three days of tutoring, Tibbetts wrote a letter of invitation to the male pilots to see the WASP fly Ladybird. Both WASP flew and landed the behemoth before large gatherings of reluctant male pilots. They patiently answered many operational questions. Dora and Didi flew crews on orientation flights. And, as they often say, "the rest is history!"

As you marvel at today's GRI amenities, remember the aviation trailblazers who built our nation with a lot of sacrifice. During World War II, WASP flew every plane the Army Air Forces possessed. They flew every type of mission flown by male pilots, except combat. They delivered 12,650 aircraft to 78 different bases across our nation.

The author, Dr. Hamilton, is a graduate of the University of Nebraska and author of America's Amazing Airports and Inspiring Words for Sky and Space Women books. ■

Fremont Airport (FET) Apron Completed

By Tom Winter

The new terminal has a huge 9,600 square yard front apron.

Photo by Tom Winter

Rejoice with me when landing our planes at Fremont! I mean, did you ever feel cramped when landing at Fremont? For me, that would be a "yes!" Once, I even got on the common traffic advisory frequency (CTAF) to ask, "Fremont ground, where do you want me to put this plane?"

I did indeed rejoice last week to see that the new Fremont Airport (FET) apron is done. The $2.4 million project started in the spring and was already finished last month. A Federal Aviation Administration (FAA) grant covered 90% of the costs, with the city of Fremont covering the rest.

So, FET crowded? Not anymore, with 9,600 square yards of spacious expanse! The last time I landed, I celebrated by taxiing onto and around the new apron, just because I could, before winding my way to the soon-to-be replaced terminal. I like the hominess of the present terminal, but the new one will face the big new runway.

The Fremont City Council approved the construction of the new FET Airport Terminal at its November 24 meeting. The Airport Advisory Committee had already approved the plan for the terminal by Davis Design of Lincoln, and unanimously approved the construction bid of Ronco Construction of Omaha. Engineering and management for the apron project was by Burns and McDonnell, an engineering firm in Kansas City.

The big new apron, finished in October, was 90% funded by a mix of federal and state dollars. The $1.6 million terminal will be entirely locally funded. ■

North Pole - Post-Christmas Report

Ann B. Richart, AAE

Like clockwork, Kringle Toy Works had everything shipshape and ready to go for the Christmas 2020 toy delivery run. Santa Claus was able to get an early first dose of the Pfizer COVID-19 vaccine in the UK in early December and the second dose from Dr. Anthony Fauci right here in the US two weeks later. This ensured that Santa stayed healthy as he entered homes around the world. Mrs. Claus made a special mask for Santa: red with a white fur lining. Of course, it had an inner anti-virus layer and an outer warmth layer. Santa made sure to wear it over his mouth and his nose, knowing that he still had to wear his mask to keep others safe even though he'd been vaccinated.

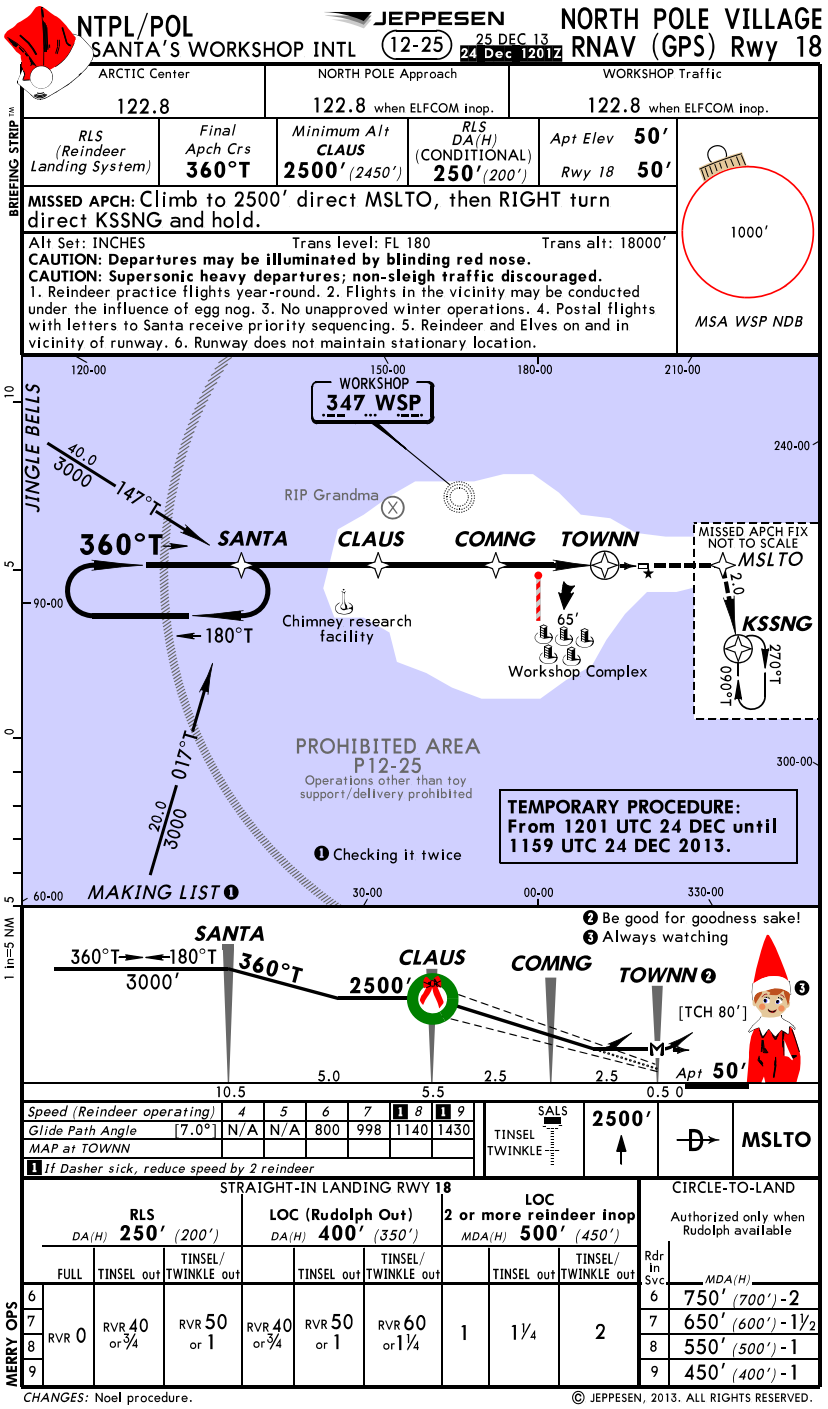
Dasher, Dancer, Comet, Vixen and all of the other reindeer had been kept safe in an NBA-type "bubble" since last summer, along with the elves in charge of caring for the reindeer and loading the sleigh. The Reindeer Bubble worked well with no new reported cases of COVID-19 in the bubble since July. While the reindeer had reportedly been suffering mental health issues as a result of the extended lockdown, their night out lifted their spirits and gave them a fresh outlook for 2021.

Unfortunately, there was an outbreak in the workshop in November. Nobody's exactly sure where the exposure originated, but three elves fell ill. The first sign that there might be a problem was when Dingle Kringle exclaimed that the spiced nog tasted rather bland. The entire workshop was put in isolation. The elves continued their work and checked in with Santa and with the house elves on a daily basis using Zoom, Webex and Teams. North Pole Information Technology sprang into action to assist the elves in turning on their video and in eliminating the terrible feedback echo on the audio. Despite everyone's best efforts, Blingle Kringle had to be let go when he took his laptop into the bathroom with him during the daily briefing.

International Air Traffic Control had a team of their best controllers under quarantine for the two weeks prior to Christmas to ensure that they would have a full staff on duty for the big flight on Christmas Eve. Safe kitchens were busy making cookies for Santa and preparing carrots, oats and hay for the reindeer in a sterile kitchen. These were packaged and distributed at pre-determined snack points along the route. Santa was disappointed that he was not able to eat any cookies left out for him by boys and girls, just to be on the safe side.

Santa adjusted his route this time, making extra stops to visit nursing homes and other long-term care facilities first. Our elders had a very difficult year being cut off from their loved ones, and Santa wanted to show them some love.

Despite the challenges and hardships we all faced throughout 2020, Santa and his team were able to get the job done in a way that was safe for them and for all of us. Thank you, Mr. and Mrs. Claus, and to all of the Kringle's for your attention to health, safety and the mission! ■



Instrument Approach chart for Santa's flight

Max Returns

By Dan Petersen

Dan Petersen in the pilot's seat of the Boeing 737 Max, which was recertified in 2020 after being grounded in 2019.

If you are looking for anything uplifting in 2020, you could look at the return of the Boeing 737 Max as something positive. The Max has been grounded since March 2019 following two high profile accidents involving two separate foreign carriers. There was much blame tossed around and a lot of countries tried to put the primary blame, and in my opinion unfairly, on Boeing. What followed was a 20-month recertification process of the aircraft by the Federal Aviation Administration (FAA).

Central to the aircraft issue was a system that was added to the Max called the Maneuvering Characteristics Augmentation System (MCAS). The Max has much larger engines than the 737 NG, both in dimension and in thrust. Because the engines are bigger in diameter, Boeing had to move the engines further forward as well as up to give them more ground clearance. They also added eight more inches to the nose gear to create more clearance. More power and moving the engines forward would cause the aircraft to pitch up more than the NG when adding power.

This is where MCAS comes in. If the aircraft reached a predetermined Angle of Attack (AOA) with the autopilot disengaged and the flaps fully retracted, the MCAS would put in nose down trim to combat the pitch up to help prevent a stall.

In one of the accidents a faulty AOA gave erroneous information that caused the MCAS to activate. The pilot was able to reverse the nose down trim for a while using the Main Electric Trim with the trim switches on the yoke. The faulty AOA continued to direct the MCAS to activate. Eventually the pilots were unable to overcome the nose down trim and lost control. The main contention by many was that Boeing did not include any information about MCAS in the Aircraft Flight Manual. Boeing did not include this information because they viewed it as minor and did not want to overwhelm pilots with too much information.

Runaway Stabilizer

Prior to both of these accidents, pilots had been trained on runaway stabilizer procedures, which is when the electric trim activates continuously contrary to what the pilot would desire. A runaway stabilizer looks essentially the same as an MCAS failure and the fix is identical. Remember, MCAS only works with the autopilot disengaged. If the aircraft is continually trimming opposite of what I require it to do, I am not going to ask or care if it is a runaway stabilizer or an MCAS failure. I am going to treat it as a runway stabilizer and use the two electric trim cutout switches. It fixes both problems.

With the recertification of the Max, the FAA issued an Airworthiness Directive which required software changes and additional pilot training. Without going into too much detail, one of the biggest, and I believe best, changes to the software was to remove a single-point failure. Before, it only took one AOA vane to signal the MCAS to activate. Now, both AOA's have to agree within 5.5 degrees. If they differ by more than 5.5 degrees, the MCAS will not activate. Also, the MCAS will not continually activate if the pilot trims in the opposite direction.

I just completed my Max training at the Boeing facility in Miami. I thought the training was excellent and thoroughly enjoyed being put through several different maneuvers. We went through several procedures involving the Speed Trim System, MCAS, Airspeed Unreliable, and manual trimming procedures. I am always a proponent of training and felt that the training was very worthwhile.

The FAA has emphasized for a while now about preventing Loss of Control accidents, and we can all learn from these two accidents as well as others. Fly the airplane first! Everything else is secondary. I thought the Max was a great airplane before, I continue to think so today, and I look forward to flying it again. ■

Ski Country Flying

By David Moll

I became well versed in mountain flying since I lived and flew in the Rocky Mountain area for quite a few years. And no, not all of my mountain flying was in a jet; it included single engine Cessna's, plus I flew my Pitts S-2A into Aspen many times.

For years I've watched pilots unload passengers and baggage at mountain resorts, and I'm convinced some owners actually think: It's Aspen baby – let's bring all of our friends, their clothes, ski's/snowboards, and who cares if it doesn't all fit in the baggage area. One of the primary jobs of all pilots is to remember that loose baggage in the cabin can and will become lethal projectiles in mountain turbulence.

Another discussion that's just as important: A full passenger load reduces fuel onboard which can limit alternate airports in both good and bad weather. Most ski country airports have only one runway, so a disabled airplane can shut down your destination pretty quickly. Plus, if you have to circle because of the one-runway configuration, have you reviewed that scenario? Is it legal to circle? Is it safe to circle? Which way do you circle? And remember, your True Airspeed at that altitude is higher and will make that circle distance a little larger.

Departures

The safest rule of thumb for departures is to leave when the base of the clouds is above the top of the mountains on your departure route, so if you have any problems it's easy to maneuver around the mountains. However, in your pre-flight planning with that full load of fuel and passengers, have you looked at your climb rate in your single- or multi-engine airplane (if one engine fails) so you can maneuver around those mountains?

The only vehicle that meets all of the climb gradients at all the mountain airports is the Atlas Rocket. Yes, most jets can meet the gradients with both engines running, but in the seven type ratings I have, not one of them can meet the International Flight Rules (IFR) climb gradient of most ski country airports if one engine fails.

Two-engine jets must have a 2.4% second segment climb gradient after one engine fails. How good is that? Assuming you rotated at the goal line on a football field, you will not be high enough to go through the goal posts on the other end. I just looked at an Area Navigation (RNAV) departure for Aspen that required 500 feet per nautical mile (NM) from field elevation of 7,838 feet to 16,000 feet, which at 120 knots is 1,000 feet per minute (FPM). If the chart I looked at is correct, that's an 8.3% gradient.

Turbulence in the mountains can be far greater than here on the flatlands. In my Pitts with a five-point seat belt harness pulled as tight as I could get it, I've been in turbulence so hard my head hit the canopy going over the Continental Divide. I've been in unforecast rotor turbulence so strong I could not stop the descent at full power in a Turbo Cessna 206 for about 2,000 feet with just me as the passenger. Both of these events were in absolutely clear weather with light winds on the surface. Mother Nature can be really dangerous when she wants to be, but at the same time, will create the most beautiful sight when you see a perfectly formed standing lenticular cloud. Nothing is prettier!

Ski country airports are beautiful to fly in and out of. But if you're not familiar with mountain flying, I strongly suggest taking a mountain flying course so you don't become a statistic. ■

Nebraska Pilots

2021 PASSPORT PROGRAM

Now is the time to join the 2021 Nebraska Pilots Passport Program! Beginning January 1, touch downs at listed airstrips will qualify you to log points in your Passport. The Nebraska Pilots group Facebook page will provide the online community for you to share your adventures with other pilots and post your quarterly points earned.

Ways to earn points in the 2021 Passport Program:

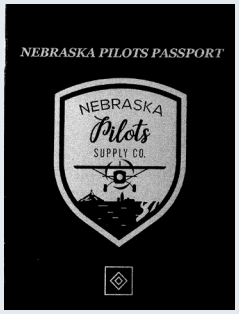
- ☐ 1 Point: touch down at a qualifying Nebraska airstrip
  - Mission: land at as many different strips as possible (1 point allowed per airport)
- ☐ 1 Point: spend money in the local economy during your stop (e.g., Avgas, meal at a local restaurant, pilot supplies in the FBO, snacks, etc.)
  - Mission: support the local economies and experience more than the runway
- ☐ 1 Point: attend a Nebraska community fly-in event
  - Mission: support Nebraska community non-profit organizations
- ☐ Bonus Point: volunteer at the MayDay STOL Races in Wayne (KLCG)

If you have any questions, feel free to reach out via phone, text, email or Facebook messenger:

Mitch Schneringer
Mobile: (402) 680-5595
Email: nebraskapilots@gmail.com

Fly Safe!

PLEASE SUPPORT PROGRAM SPONSORS LISTED WITHIN THE PASSPORT



Concealed Carry and Airports

By David Moll

This year, in an era of social unrest and voices raised to defund the police, Americans have responded. We've seen over 17 million guns sold just through October, which is a record number. You know that some of these 17 million guns are going to pilots, and possibly some will be concealed.

The rules for concealment are pretty simple. If you hide a handgun in your car's glove box, or hide one on your body, it's concealed and, therefore, you need a permit. Does the Federal Aviation Administration (FAA) care if you own one and have it in your Cessna? No, but local or state regulations can be very limiting when it comes to bringing a gun into their city/state.

New York's summarized law for non-residents is as follows: "... if you stop in New York and spend the night in a motel/hotel/campground, etc., you are in violation of New York law and can be arrested if found with a firearm." (Handgunlaw.us) If you need a weather alternate for landing your plane, and you know somebody onboard has a firearm, remember what New York can impose.

Other States' Permits

How do we prevent some of these legal issues? The answer is education, and a very obvious solution is to enroll in a Concealed Carry class. Because pilots fly to different states, does a Nebraska Concealed Carry Permit work in all fifty states? Absolutely not, but the Concealed Carry classes provide information regarding states where it is honored. Here is a map showing states that presently honor a Nebraska Concealed Carry permit: https://nebraskashooters.com/wp-content/uploads/2020/07/NEB-Reciprocity-2020.jpg. This map changes from time to time as the political environment changes, but over the years more states now honor other states' permits.

Carrying concealed at an airport, even though the state honors the Nebraska permit, could be asking for trouble if you are not positive what is allowed on the ramp area. Walking from your airplane to the Fixed Base Operator (FBO) without your Concealed Carry isn't a big deal and you should never make it one. Carrying concealed means nobody should know you are carrying. This not only includes seeing the gun, it also means you should not be arguing it's your legal right to carry it from your airplane and into the FBO. An unloaded gun in a small lockbox you can carry works very well in areas where you haven't fully researched all the rules.

I teach Concealed Carry classes at Nebraska Shooters and it's a fun one-day class to attend. You learn training and education for self-defense, legal requirements to carry in Nebraska, and where to find laws such as I noted above for New York. You also learn how to make good decisions while carrying, and develop the knowledge, skills and attitude to be safe. Plus, you'll shoot about 60 rounds in practice and another 30 rounds to qualify for the permit.

Carrying concealed is not for everybody. But each person who does carry is representing the entire gun industry, and that is why attitude is so important. If you have questions, please feel free to email me at david@nebraskashooters.com ■

History of Flight

By David Morris

I recently received a telephone call from an aviation enthusiast who wanted to share his thoughts about how ships and airplanes have worked together throughout history to determine the outcome of conflicts.

He was absolutely correct. Before the advent of aircraft, fleets of warships from some of the most powerful nations were navigating the oceans of the globe. Along with the performance of these warships, flying history shows that aircraft were often the deciding factor in the outcome of conflicts.

I find it interesting how history reveals that as airplanes were first employed as instruments of war, crews tossed small, improvised bombs over the side onto an enemy on the ground. To hit an intended target was often a matter of luck.

Throughout the history of flight, many of the most significant advances have generally occurred more rapidly during times of war – especially those involving technological advancements. History shows that modern airplanes, often traveling at trans-sonic and supersonic speeds, can arrive over the intended target without being detected; not to mention their ability to deploy the ordnance with such accuracy as to minimize damage to surrounding areas.

Modern-day materials allow for stronger, yet lighter, aircraft structures, making it possible for aircraft to travel farther than ever before. We have seen aircraft reach record-breaking speeds while operating on the edge of space where a thinner atmosphere allows for less speed-reducing friction.

As we continue our efforts to keep up with modern day advances in aviation, many of us often think about Wilbur Wright making his first flight on December 14, 1903 that lasted 4 seconds and travelled 112 feet; and 3 days later his brother Orville flew for 12 seconds, travelling 120 feet. I find it mind-boggling to think about the advancements in aviation in the lifetime of a human being. ■

Aviation Art Contest 2021

By David Morris

There is still time to get involved in the upcoming Aviation Art Contest 2021. This year's theme, "A Friendlier World With Air Sports," is an opportunity for those between the ages of 6-17 to pick up your favorite art supplies and share your dream of a friendlier world with air sports.
All entries must be postmarked by January 19, 2021. For further information and/or an entry brochure, contact David Morris at the NDOT – Division of Aeronautics by emailing david.morris@nebraska.gov or call 402-471-2371. ■

Events Calendar

Opportunity to meet your local Designated Pilot Examiners (DPEs). Hastings (KHSI) airport is hosting a meet and greet for Certified Flight Instructors (CFIs) and pilots
February 6 at 12:00 noon. Lunch provided.
Go to flyhastings.com for more information.

York Airport (KJYR),
EAA Chapter 1055 Fly-in breakfast
(free-will donation) on the
1st Saturday of the month, 8:00-10:00 AM.

Crete Airport (KCEK),
EAA Chapter 569 Fly-in breakfast
(free-will donation) on the
3rd Saturday of every month, 8:00-10:00 AM.