

J U L Y 2 0 1 8

EAA Chapter 25

ON FINAL

MINNEAPOLIS/ ST PAUL, MN

“Flight Lines”

- from Mike York
EAA Chapter 25 President



I hope this note finds you enjoying the summer weather and in some fashion or another doing something aviation related. I've been fortunate enough to participate in a couple of group fly-outs. A small group of us flew to Osceola a couple of weeks ago after 3 aircraft gathered at Benson. Greg Cardinal and I gathered up in the air east of the Koch Refinery and headed to Bensen. We arrived about 30 minutes early and I took advantage of the opportunity to use the hose and a borrowed brush to give the Champ a bath. There is no water or electrics at my field. Norm Tesmar and Bob Poore showed up in the Cub and we headed to Osceola. Jeff Coffey flew up direct and we all piled into the airport car for lunch. The weather was

moving in from the southwest and we decided to depart. Jeff took advantage of his speed and went around the east side of the cities. The rest of us flew west around the cities and headed home. Another beautiful day for a fly-out. The next Saturday, I spent the morning with several other chapter members at Flying Cloud airport for the Young Eagles event. Kris Olson will update us on this successful event.

This weekend, I had the pleasure of aviating with Greg Cardinal and Dale Johnson, flying in the Pietenpol and Bob Ueek flying with me to Isle. Isle was very busy with a successful pancake breakfast. On the way back, we picked up Jim Fischer in his 140A with Dale Johnson, flying in a more comfortable left seat. Also joining the flock was Norm and Steve Schmidt in the Cub. We stopped for fuel at Milaca and made the trip home from there. In spite of the winds down low, the air was smooth above 2300 feet. A good time was had by all.

The presenter for this month's meeting is currently tba as I have not received a firm commitment. I will put out a separate announcement as we approach the 18th.

Mike York

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CHAPTER 25 EAA B-25 WORK PARTY

On May 17, 2018, Chapter 25 had three volunteers join a work party on the EAA Berlin Express B-25 with Chapter 237 being the lead organizer. The lucky souls this time were Peter Denny, Bruce Anthony and myself, Jim Fischer. I picked up Bruce at his house and met up with Peter at a McDonald's in Eagan. We had a brief breakfast and group photo then started down the road to EAA Oshkosh, Wisconsin to meet up with the rest of the work party. This weekend had a multitude of different chapters members who have volunteered to help restore the B-25. There were at least five different chapters represented with a total of 15 volunteers. The drive there was a little over 4 1/2 hours with one stop for food, gas and normal beverages. EAA has us stay at the Lodge at EAA Pioneer Airport within the confines of the Oshkosh airport. The lodging and food each day is free but the adult beverages are not (BYOB).

Upon arrival there were envelopes with keys and room assignments. Peter had his own room with Bruce and myself sharing a room. Each room has four beds, one desk, a clock, some storage lockers and a desk lamp. There is also free internet to keep us attached to the world. After settling in the room, we met other arriving volunteers in the common great room of the lodge. This room has about ten tables for eating next to a kitchen on one side and two couches, three large single chairs plus coffee tables and a large fireplace on the other side overlooking Pioneer field. The ceiling in the common room is open and over 18 feet tall with large logs used for ceiling tresses. Hanging from the ceiling is a old wooden aircraft fuselage of a 1929 Hendershott monoplane (as it should be), uncovered for ambience.

At 6:00 pm the volunteers met in the common room and then loaded into a van EAA provides

for our transportation. The next stop was a restaurant called "The Hanger " which is on the Oshkosh airport. Great meals, beverages and stories followed for the next hour plus. We all returned to the lodge for adult beverages and more stories. The schedule for the next two work days was passed on. A breakfast is provided at 7:00 am then the drive at 8:00 to EAA Kermit Weeks hanger on the airport where the aircraft to be worked on are stored. At noon a drive to the volunteers kitchen on EAA grounds for lunch. The cleanup for the day starts around 4:40 and we leave at 5:00 pm for dinner at the volunteers kitchen. A return to the lodge around 6:00 pm. After a long travel day for some or a requirement of rest in preparation of work, day one, most were in their rooms by 10:00 pm.

In the morning, the common bathroom and showers down the hall had the volunteers cleaning up in preparation of coffee and food, then work. The EAA van transported us to the volunteers kitchen for nutrition, then to the work place. The first day at Weeks hanger, we are informed to be safe, ask questions for work procedures and each person is given a task to start or finish. Peter was told to design and fabricate small boxes out of aluminum to match different control panels at four different stations in the B-25. This involved technical skills right up Peters alley. Bruce was assigned to work on the left vertical stabilizer on the B-25. I was told to finish work on the tail of the B-25 where all control cables go thru and finish repairs, then

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prep and clean for paint. The other duties assigned were, work on the new left installed engine connecting cables, wires and hoses, R&R rivets in various parts of the bomber, prep the right engine area for a new engine to arrive today, clean and prep many engine panels and install a lot of small items throughout the B-25. Close to 11:00 am the right engine arrived and was inspected. In the afternoon, Bruce moved on to helping clean engine panels and I was to work on engine mounts for the new engine. Around 3:00 pm the new engine was moved to the B-25 and ready for installation. Most work stopped as the engine was hung on the aircraft again. This took almost 30 minutes. All took a deep breath to see the B-25 was now a Twin Engine bomber once again. Now the engine needs to be connected to the cables, wires and hoses of the bomber. Work continued for most to other projects. I worked on cleaning panels and prepare a Cessna Skycatcher for an annual. Peter continued working on the boxes (don't tell him he was doing a great job... could go to his head). Bruce continued on many other small projects including cleaning panels. The work day finished with all of us being hungry and a drive to volunteers kitchen for the evening meal. Then return to the lodge for more of you know what, cold liquids. For the three of us, we

needed lights for our ball cap brim to provide more light on some of the projects we are doing. Fleet Farm had a set of three with our name on them. We split the package and then formed a secret society, "The Illuminious". Then each of us assigned a member number. On return to the lodge another volunteer asked to join and a number was given to the lucky soul. A large bonfire was ignited next to the lodge for extra enjoyment and more stories. By 10:00 pm the fire was weak and most had determined that sleep was the next scheduled item.

Day two was more of the same with breakfast at 7:00 am and work started at 8:00 am. A morning brief followed by more of the same jobs as yesterday, for most of us. The bomber needed a lot of scrubbing with scotch brite pads to prepare for painting. If you had nothing to do for a short time, a pad had your name on it. Lunch hour came and we all went to the volunteers kitchen for nourishment. Later, Bruce needed a change, so he asked for the next project. This was to move a few aircraft and bring a PT-22 to Weeks hanger. No he didn't taxi it, only hand power push/pull. Then he and Peter replaced a main tire on the PT-22. Next for Bruce was to polish the fuselage of the 22 and then remove spark plugs for an annual

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Young Eagles Update

By Kris Olson

EAA Chapter 25 cancelled our June 16th Young Eagles rides at Airlake due to weather. We decided the day before to start at 10 am instead of 9 am, with the weather forecast saying early rain ending at 9 am. That day, the rain and thunderstorms continued through about noon. We had a few kids signed up and let them and their parents know.

EAA Chapter 25 held a Young Eagles rides event at the Wings of the North museum at Flying Cloud Airport on Saturday, June 23rd from 9 am to 12 pm. We flew 43 kids. The pilots were Pete Gabrail, Mark Kolesar, Ron Sekenski, and Scott Hanson. Scott is with EAA Chapter 54 in Lake Elmo and was able to help us out. The ground crew were Jim Fischer, Ralph Goracke, Ron Hoyt, Marsha Drake, Mike York, Evan Heath, Josh Welter, and Kris Olson. Thank you all for sharing your time and love of aviation that day. The students, parents, grandparents, and friends had a great time learning about aviation and the kids enjoyed the rides. The weather was good that day. It was in the 70s and low 80s and got a little humid part way through the morning. Thank you to Josh Welter with Wings of the North museum and EAA Chapter 237. He was a big help coordinating the kids rides sign up. Thank you to Wings of the North Museum for offering us space inside and outside to run our Young Eagles rides and snacks and lunch for our crew.

Our next Young Eagles rides event is **Saturday, July 21st** at Airlake from 9 am to 12 pm. We have a few kids signed up and have room for more kids to sign up. We can use more ground crew help at our events.

The Girls in Aviation Day event run by the Stars of the North Women in Aviation chapter will be held at Flying Cloud Airport on **Saturday, September 22, 2018** from 9:00 am - 3:00 pm. Kids of all ages and their parents can attend the free event. Registration is open <http://www.starsofthenorth.org/girls-in-aviation-day.html>

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inspection. Peter continued back to work on the control boxes. I was assigned various small projects. The day ended at 4:45 pm with a review of what was done and a big thank you for helping. Once again this was followed by a kitchen visit and a return to the lodge. There was more social activity of stories and hydration.

On Sunday, travel home day, everyone is on their own schedule for departure, but a full breakfast was available at the volunteers kitchen from 7:00 am to 8:00 am. The three workers from chapter 25 did take advantage of the free meal before our journey home. The weather continued to be sunny with some clouds to landscape the sky.

Chapter 237 schedules the work parties to usually one per month. The sequence is one month of only chapter 237 members then the next month with any EAA chapter members as part of the work party. This is repeated throughout the year. To join the party, go to 237.eeachapter.org and register using a link to work party signups. This project was scheduled for ten years and will be done in 4 1/2 years thanks to the work parties efforts. The B-25 project is coming to an end this fall. EAA has given a green light to purchase a slightly used AT-11 (Twin Beech 18) to restore. That will continue the work parties. Also during the winter, regular maintenance work on the B-17 is done at the same time by volunteers. Yes you too can join the fun, the food, the work and the stories. This chapter has had at least six volunteers who have been there more than once. Your turn.



Three chapter members: Jim Fischer, Peter Denny and Bruce Anthony, starting their work party trip.



Tail area Jim finished repair and prepared for paint on the B-25. Picture of finished area.

Member's Plane

Rans S-10 Sakota N2074D -- Old 74-Duck
 Owner and pilot: Gordon Leon Duke
 Old 74-Duck is a Rans S-10 Sakota. This is a very small aerobatic two-seat airplane. I say two-seat with a grin because the cabin is a mere 35 inches wide. You had better like the person with whom you are flying because there will be a lot of arm, elbow and leg contact.

I purchased Old 74-Duck in December of 2007. It had been built by an A&P in Pennsylvania who completed the required fly-off and received a certificate of air-worthiness in 1999. Unfortunately, the airplane had a hard life and passed through seven owners of varying skills. The seller was forthright about its condition but offered me a good deal. I knew I had a lot of rebuilding ahead of me but like most of us, the reality turned out to be much greater than my expectations.

I pulled the engine off and sent it out for a professional rebuild. I pulled out the panel and replaced gauges and wires. I replaced gear legs, wheels, tires, struts and all the lexan panels. I replaced all fuel lines and electric wires. I repaired the fabric and rebuilt the carburetors. I replaced all of the coolant system. I added an engine monitor, radio, transponder and elt. This took 7 years.

74-Duck weighs in at a very light 420 pounds, empty. Add a little fuel and a small pilot and you can pull a lot of G's. I try to fly aerobatic at about 650 pounds or less. This gives about 8 positive and 4 negative G's. With two people, aerobatics are prohibited due to the increased weight. Gross is about 850 pounds under a utility category.

The engine is a Rotax two-cycle 582. I have grown to respect and admire this engine. It is very light weighing 65 pounds and producing 65 horsepower. The coolant system adds some weight to this but the over-all package is still very light. In addition, this engine uses premixed oil; so there are no oil related issues such as maintaining flow and pressure while

inverted. Basically, this engine doesn't know or care if it is upside down.

The carburetors are Mikuni pumper carbs. These were used on old Harley-Davidson bikes and on personal watercraft (Ski-Doos). They do not have floats but instead rely on very careful fuel pressure regulation through a Mikuni fuel pump and a fuel return system. This means that the carbs function well upside down.

The fuel system is very complex with three tanks. The header tank has a flop-tube that allows the fuel pick-up line to follow the gas and the apparent gravity. The fuel will feed reliably in almost any attitude. The two wing tanks were intended to use gravity flow to the header tank, but I found that this was not reliable so I added by-pass in-line fuel pumps and return lines. I also added a low-fuel warning light. If the light comes on, then the header tank is half-empty. The remedy is to turn on the fuel pumps.

The airplane has very large full span ailerons with spades. The spades balance the forces on the ailerons and protect against flutter. They also allow the aileron pressure to be adjusted to the pilot's preferences. A full roll should take about three seconds but I haven't been able to do this yet. The rudder is ridiculously large and effective as would be expected on an aerobatic airplane. Of course, all of this means that the pilot must stay in control of the airplane at all times. It cannot be trimmed for hands-off flying. Blink your eyes and the airplane will be in a different attitude.

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I have not yet flown 74-Duck in an International Aerobatic Club (IAC) sanctioned competition. I am practicing and hope to compete this fall. Even though the Rans S-10 was designed to be competitive in aerobatic competition and it is inexpensive and it is light-sport eligible, few show up in competition. I will be an unusual airplane among a gaggle of Pitts biplanes. Time will tell if Old 74-Duck is up to the challenge.



Trivia

The town nicknamed 'Yodaville' is the one of the most frequently- and intensely- aerial-bombed cities in the world. Where is it located?

Answer on pg. 8




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Trivia answer from pg. 7

The Urban Target Complex or R-2013-West - Nicknamed "Yodaville" after the call sign of Major Floyd Usry, the military commander who came up with the extraordinary idea of constructing the installation. - - was built in 1999 about five miles north of the U.S. and Mexican border in southern Arizona, near Yuma, specifically for the air force to practice bomb, rocket and missile targeting. One Army instructor told Air & Space Magazine in 2009 that "The Close Air Support

training we do here at Yodaville is some of the most realistic any pilot or ground controller will get.' (You can find it on Google: Maps).

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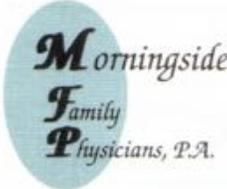
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Fly Out Pictures



Dale Johnson and Greg Cardinal



Milaca Municipal Airport

Upcoming Aviation Events

Some web sites to find local aviation events:

<http://www.dot.state.mn.us/aero/events/flyins-and-events.html>

<https://wisconsin.gov/Pages/doing-bus/aeronautics/trng-evnts/flyins.aspx> , click on a month to download the Wis. events calendar.

<http://www.socialflight.com>

<https://www.eaa.org/en/ea/events>

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