



VOLUME 3 ISSUE 6

CHAPTER 918—NORFOLK

MEETING

DATE: 5/9/2020
TIME: 7:00PM/1900
LOCATION: OFK FBO

JUNE 2020

EDITOR'S MEMO...

FIND JOY—30 Ways in 30 Days - Item number 13:

Make something by hand.

<https://chapters.eaa.org/EAA918>.

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EVENTS

CANCELED EAA Chap 1055
York, NE

CANCELED EAA Chap 569
Crete, NE

EAA's are world renowned for making things by hand, particularly flying machines. I would venture a guess though, that most members today are not builders - and that's okay. In this time of restrictions, and perhaps more time at home or with family, maybe a bird house for the grand kids would be a suitable project? Or perhaps starting a canoe project? Maybe a pedal-plane from plans available through the EAA. I can tell you from years of building things, the personal satisfaction of seeing that completed project is hard to quantify. Whether it's a new model (my problem...) or something more useful, try it.



Here's an example of "make something by hand". This is a 21" span Piper Vagabond model, powered by a Cox .049 engine. The model was designed in 1950, and that's the magazine article behind the model. It has not yet flown; one of these days when it's calm and yours truly steels his courage. Been a long time since I flew a control line model.

This month Randy is back with another story about Dotsuwa, his Cherokee 140. I'll sprinkle in a little of my own travels and maybe a safety lesson or two. I know there has been a fair amount of flying activity around Norfolk this month. The ag planes are in the air and working, keep your eyes and ears open for these yellow beasts as they work the fields in the area. Tim Miller has been flying his Yankee Clipper at every opportunity; I've been out a few times, with a trip to Sioux City for the two year transponder check, among others. Randy has been burning up the sky as well. Dave Amick has been learning to fly his Citabria from the back seat - a bit humbling he assures me. So even with some restrictions in place, many of our local pilots are keeping current in one way or another.

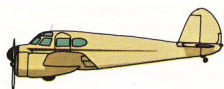
As noted last month, you will see that the monthly fly in breakfasts sponsored by EAA chapters 1055 out of York, and chapter 569 out of Lincoln (Crete) have been canceled. Air Venture is also canceled, primarily due to the logistics of getting the grounds ready and keeping volunteers safe at the same time. The gatherings will be missed but it is important to stay safe. Whether you agree or disagree, keep in mind others may not be as comfortable as you may be.

JHL

MEETING MINUTES

As you all know, the May meeting was also cancelled due to the COVID event, so not a lot to share in that regard. All of the other chapters around are also idle though Chapter 80 in Omaha and 569 in Lincoln are holding meetings via ZOOM teleconference app. It is a great alternative, if anyone is interested here.

After conversations with Randy and Bruce, it has been decided to cancel, or at least reschedule the planned Young Eagles event in June. With guidance from EAA Headquarters as well as the state of Nebraska, keeping a safe distance and minimizing risk is our prime concern. Hopefully we can gather for a meeting on the 9th of June, even if it is out of doors at my or someone else's hangar. Perhaps a cook out?



DENSITY ALTITUDE, HIGH ALTITUDE AND SERVICE CEILING

I borrowed the photo below from the Short Wing Piper Club News. The Tri-Pacer in the photo is climbing out of Leadville, Colorado, the highest federally funded airport in the United States. The field elevation at Leadville is 9934 feet, with a runway length of 6800 feet. Based on the amount of snow in the background on the mountains, I'd say this photo was taken in late May or June, and it can get warm, even at the high elevations in Spring.



While not an every day occurrence, especially in this day and age, it speaks well of the Tri-Pacer, and the capabilities of the pilot. So, that's our opening for a discussion on aircraft performance, as we come into the summer flying season.

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Missouri River west of
Sioux City over the nose of
the Zenith. Nice day!



Seen on the ramp at Norfolk,
a Hughes 500D. I have many
hours and many fond mem-
ories flying this 'sports car'
of helicopters.



Getting ready for another
adventure...

CONTINUED ON PAGE 4

ADVENTURES OF DOTSUWA



THE CONTINUING ADVENTURES OF DOTSUWA

By Randy Neuharth

Well it's the near the end of the month and time for another chapter in the **Adventures of Dotsuwa**. I don't know about you but I am really hoping that as the weather warms up the pandemic will cool down. It has been a bit difficult to really plan any real flying adventures but let me tell you what Dotsuwa and I have been working on.

I have had my Instrument Rating since 2001 and unfortunately I have not really used it. Suffice it to say that I am pretty darn rusty and truth be known, quite apprehensive about actually flying in instrument conditions. Since the installation of the Garmin 400 GPS several years ago, along with the ADS-B out, I decided it was time to get current and start doing some instrument flying. With the help of Rich Clausen I got some actual instrument time and was able to get current and start to feel a bit more comfortable in the clouds, which is a whole different animal than flying under the hood. Flying approaches with the GPS is a whole lot easier than when I first learned using ILS, VOR, LOC and the dreaded NDB. The Garmin 400, even though NON-WAAS, is a very capable box.

After getting some time with Rich I decided I really needed to go solo. On Saturday the 23rd I filed a round robin trip from Norfolk to Wayne and back to Norfolk with GPS approaches to both airports. It was a soft IFR day, with breaks in the clouds, so you could catch glimpses of the ground from time to time. That helps with the comfort level. Using the auto-pilot (wing leveler) helps. The ceilings were 1200 feet with unlimited visibility under. A good practice day.

On Sunday the 24th, I needed to take the plane to Wahoo for a new audio panel install. It was another good day to get some practice. Ceilings were about 1200-1500. I filed for 5000 guessing I would be able to get on top. Wrong! It was pretty solid most of the way there. Once I got to the initial approach fix, I expected to be given a lower altitude since the approach altitude was 2900 to start. Omaha approach kept me at 5000. What was going on? As I listened to approach talking to other aircraft, I figured it out. Approach had a plane in a holding pattern at the Scribner VOR at 4000. I could see him on my iPad screen thanks to ADS-B in. Once past him, approach gave me lower and cleared me for the approach. I was able to break out at about 1000 feet and cancel IFR. Interesting and fun stuff. I am finally starting to feel a bit more confident in the clouds. Now to get some more practice.

I need to add a big thank you to John Linke for flying down to Wahoo under the clouds to pick me up. It was a nice adventure for both of us. John's Zenith is sure a fun plane.

Until next time. Happy flying.



DENSITY ALTITUDE...CONTINUED FROM PAGE 2

In June 1985, I flew over to Aspen, Colorado for a fly-in and air show. The field elevation at Aspen is 7838 feet, and I was flying my Volkswagen powered KR-2. Under normal conditions, the 1835cc VW put out 60 to 65 horsepower, at sea level. It was cool in the morning when I



landed there. The show finished up around 1500, so along with a bunch of other folks, I taxied out and headed for home in Grand Junction. The ship climbed out nicely, and we turned west out of the valley for home at about 11,000 feet MSL. After landing, I decided to see what the DA was at Aspen when I left - would you believe 11,000 feet?

All of this to share some insight into aircraft performance and pilot expectations. I had flown the KR for 2 years at this time, and was very familiar with the airplane and its capabilities. It did not have a lot of high altitude performance, so I learned to use the ridges and valleys to maneuver around the high country. I suppose the service ceiling of the airplane was 10,000 feet. I managed 15,000' one day while flying to Greeley, Colorado.

SERVICE CEILING: *Maximum **DENSITY ALTITUDE** where the best rate of climb airspeed will produce a 100 foot per minute climb at maximum weight while in a clean configuration with maximum continuous power.* (Definition from the Pilot's Handbook of Aeronautical Knowledge.

The downside to that story is once on the east side of the 'big rocks', I encountered a down draft over Estes Park that ate up that extra altitude very quickly. At full power and climb speed, I was descending at 2500 feet per minute! This was at 1000 in the morning...

The service ceiling of the Piper Tri-Pacer 150 is listed as 15,000 feet. With 29 feet of wing, and 2000 pounds gross weight, that might be doable in standard conditions. You remember that, huh? At 15,000 feet, the standard temperature would be around 15 degrees F. In any season but winter, that might be tough to meet. The venerable Cessna 172 ('67 Continental engine) has a service ceiling of 13,100 feet, at a gross weight of 2300 pounds. The later (1970, Lycoming powered) version lists the same service ceiling.

We all know that engine performance suffers with altitude, and the air molecules are farther apart so the wing has to work at a higher angle of attack to maintain the lift required for flight, whether climbing or cruising. It is interesting to note in the definition of 'service ceiling' that it is predicated on density altitude, not altimeter altitude. That day I took off at Aspen, I was solo, and about half fuel and had no trouble. Had I been trying to climb out of the valley at gross weight, we'd not have made it.

So, as we warm up moving into summer, be aware of temperature, wind, turbulence, weight and performance. Revisit the POH to familiarize yourself with what the airplane is capable of doing. Can you imagine a 300 foot per minute downdraft, when you only have 100 foot per minute climb? Terry firma can rise up to meet you before you can extricate yourself. Even here in relatively flat Nebraska and Iowa, DA's can reach 5000 feet around Norfolk and Columbus, and significantly higher as you fly farther west. On a hot day, you may find you run out of climb-ability at an altitude much lower than you anticipated.

Be safe out there...

JHL