

Tower Talk

2015 Newsletter Award Winner

John Livingston

January 2016

Upcoming Events:

January Events

- **2 - Saturday, 8:30**
Breakfast, Cedar Falls Family Restaurant
- **5 - Tuesday, 7:00**
Board Meeting, Airport Conference Room
- **19 - Tuesday, 7:00**
Chapter Meeting, Airport Conference Room

Iowa DOT Calendar:

www.iowadot.gov/aviation

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Runway Zero

by Warren Brecheisen,
Chapter 227 President



The Christmas Party was a fun event. The food was good. The fellowship was great and, as always, the gift exchange was the main event. Rich Shepard provided wonderful evergreen table and room decorations and Chris Roberts provided colorful boxes of candy as party favors. Thanks to both of them for lending a festive look for the party. The end of the year awards were presented to the chapter officers and, additionally, an MVP award was given to Marty Hoel for his excellent handling of the B-17 visit this past summer.

The calendar of events for next year has been completed. My philosophy on the calendar is that it's a dynamic document that can be changed as situations and opportunities present them-

selves. As currently planned, the first event, other than regular meetings and breakfasts, will be the spring picnic on June 4th. The chapter board will be working on the list of ideas from chapter members for further promotion of GA and this may affect the calendar by adding events or "work days".

As I sit writing this on Christmas Day, I'm looking at the snow (the weather guessers missed again) and wondering how long it will be before I will be comfortable flying again. I have criteria that I use to determine if I'm willing to fly which one might call minimums. They aren't always strict go/no-go criteria as there are some gray areas. I don't fly if there is ice and/or snow

on the runways. There are several reasons for this. First, I fly a tailwheel airplane and I feel it's simply not worth the risk to fly off of slippery surfaces. Second, I would have to remove the wheel pants to keep from accumulating ice in them that could lock up the wheels and, third, I don't want to get dirty water sprayed all over the plane (see Item 2).

I normally only fly in winter when the sun is out. While this isn't a strict requirement, my cabin heat system isn't very effective and needs the help of the "greenhouse effect" to keep it warm enough to be enjoyable. This, of course, is affected by OAT levels.

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Runway Zero from page 1

“It turned out to be a wonderful day to fly..”

I stretched my limits for ground level air temperature last Saturday. Before then, I wouldn't fly if the temperature at the airport was less than 25 degrees. John Bender had set up a flyout to go to Mason City for donuts and coffee and then proceed to Owatonna, MN for lunch at Cabela's. The temperature at ALO was 14 degrees when I

arrived and trying to preflight was miserable. I called John, who was already at MCW, and he sort of shamed me into going (the macho thing). The defining argument was that we were in a warming trend. It turned out to be a wonderful day to fly and I thoroughly enjoyed it. The point of all this is I feel we all should think about what conditions are

within our comfort zones for flying, especially in the winter.

Let's get some daylight between the tires and the ground!

Warren Brecheisen
President,
EAA Chapter 227

Your new chapter logo:

Look for the Chapter 227 logo in our promotional materials.



Thank you for voting.

*The Chapter 227 Christmas Party & Chinese Gift Exchange
December 12th, Cedar Falls Family Restaurant*

*Many thanks to Richard Shepherd for the magical holiday deco &
Rex Pershing, Master of Ceremonies*



B-17 Thank You by Marty Hoel

At the Chapter's annual Christmas Celebration Dinner, I was honored to be recognized for our successful B-17 event. I greatly appreciate this award, but I feel uncomfortable standing up to accept it. It was not I who accomplished this success. It was all of you, who participated and volunteered, who should be recognized.

**"...we are
all
grateful
to you..."**

Foremost among those who deserve credit is Chris Roberts. Chris was "everywhere doing everything". She was our liaison with Headquarters in Oshkosh, she worked at fund-raising, she was our media coordinator, she managed crew accommodations and she attended to a thousand details that would have been otherwise missed. Without Chris, this "bird would not have flown". We all owe a big Thank You to Gary Witcombe for organizing and coordinating all of the volunteers. This was a big responsibility and Gary took on the job. Gary participated in all of the meetings, took ownership of the task and he worked through the entire event to assure that all of the jobs were staffed. Thank You to Ann and Carl Campbell who stood-up and managed the concession tent. They, and their volunteers, were there from start to finish providing cool refreshments for the customers, and a profit for the Chapter. A special Thank You goes out to Bill Ramsey and to our other generous benefactors who contributed to the cause. Without these direct contributions, our event would not have been the financial success that it was. The foundation upon which this event was built, is Livingston Aviation. We parked in their front-yard and burned their fuel. Their participation and contribution was critical to this event.

And, most importantly, we are all grateful to you, the Chapter Members who each gave so generously of your time and effort. You are the real strength of our organization. You sacrificed your personal plans to accommodate the schedule, you came out, you worked in the hot sun, you cooperated with the folks who were trying to manage the event and you accommodated an occasional frayed-nerve. You did a million jobs and you attended to every detail. It is because of you that we have enjoyed this success. Thank You! - Marty Hoel

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Tech Notes - Plumbers Friend (or Nightmare) - Part 1

by Mike Lewis

Your amateur built aircraft will undoubtedly provide you with the opportunity to exercise a fair bit of plumbing expertise. Even the kit-builts usually leave a great deal of the necessary plumbing up to the builder to create. Let's discuss a few of these.

Perhaps one of the more significant plumbing opportunities deals with the fuel delivery system. There is a fairly obvious axiom regarding firewall forward plumbing. That is that lines that connect between the engine and fuselage must be flexible. That engine moves around pretty dramatically. That being said, we need a flexible fuel line between any fuselage mounted components (fuel pump, gascolator etc.). There are a couple of common options for the type of line commonly used. The old standby was Aeroquip 303 hose used with 491 series fittings. This is a synthetic rubber hose reinforced with wire and a cotton braid. The 303 system is pretty user friendly as far as making up your own hoses. The downside of this type of hose is that it does deteriorate with age. Some mechanics recommend changing 303 hoses every ten years, others say as often as five years due to the unknown time it may have been sitting on a shelf.

Another option is Aeroquip

601 and 816 fittings. This is also a rubber hose, but it has a stainless steel overbraid, making it slightly lighter and capable of smaller bend radii. It is still however a rubber cored hose with the life issues of the 303 hose.

An improved option is Aeroquip 666 hose and appropriate fittings. The 666 is a Teflon lined hose with a stainless steel overbraid. Being Teflon lined, the 666 hose has an essentially infinite life. The downside is somewhat more initial cost. I used the 666 in my RV-4. I had all hoses custom made by Aircraft Spruce. As a practical matter, hose assemblies of 666 had to be fabricated by a hose shop (read high buck equipment required!).

With typical Lycoming or Continental installations you will want to use a fire sleeve. It would be pretty difficult to design your fuel system on those engines so as to keep your fuel line far enough away from the exhaust system. Perhaps there may be some auto conversions (top carburetor) that would allow adequate separation, but even then a fire sleeve might be prudent. Again, your hose fabricator can make the assembly complete with fire sleeve.

You might want to reference

the November 2015 Tech notes for comments on end fitting options. The only other comment I'd pass out is if you are going to have custom hoses made, particularly with elbow fittings, make sure you have them properly specified, i.e. length, fitting orientation etc. It can be a pretty costly error if you do not define them correctly.

For fuel lines where both ends are connected to fittings on the airframe, i.e. from tank to selector valve, and selector to gascolator, and maybe a fuel boost pump in there, the common practice is to use soft (3003-0) aluminum tube. Typically these are 3/8 outside diameter x .035 wall. Fittings are the AN type 37° flare fittings. You can use a flaring tool such as the Rolo-Flare 37°, (I believe the chapter has one).

I have heard of guys using an automotive 45° flaring tool and allowing (hoping?) the fittings will pull the flare back to 37°. It may work most of the time, but if you do that please don't fly over my house!

Next month we'll discuss some of the other plumbing opportunities you will encounter in your homebuilt project.

***“An
Improved
option is...”***

***“...make
sure you
have them
properly
specified...”***

NEWSLETTER INFORMATION

If you have an article, picture, or anything else you would like to share in a future newsletter, please contact:
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