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EAA Chapter 569 Newsletter

Lincoln, NE



EAA 569 Contact Information

President

Harold Bickford H: 402-274-8038 habickford@gmail.com 72544 638 Ave. Auburn, NE 68305

Vice President

Tom Trumble
C: 402-540-6089
ttrumble@windstream.net
5545 N 17th St.
Lincoln, NE 68521

Secretary

Jerry Mulliken
C: 402-720-0125
jmulliken@speednet.com
118 S. 52nd St.
Omaha. NE 68132

Treasurer

Keal Bockelman
C: 605-695-6365
pilotkeal@hotmail.com
2717 S. 41st St.
Lincoln, NE 68506

Tech Counselors

Erick Corbridge 402-499-1039 Corbe99@Yahoo.com

Tom Henry H: 402-791-2116 W: 402-479-1540 TomHenry3@aol.com

Young Eagles Coordinator

Cristi Higgins H: 402-217-9763 higginschristi@msn.com

Newsletter and Web Editor

Doug Volkmer rv7doug@gmail.com 3720 Stockwell Circle Lincoln, NE 68506



Meeting Announcement

Date: Tuesday, March 5th

Time: 7:30pm

Program: Unmanned Aircraft

There is a growing interest in unmanned aircraft, commonly referred to as drones. The Nebraska Unmanned Aircraft Innovation, Research and Education (NU-AIRE) laboratory at the University of Nebraska has been conducting research and education on unmanned aircraft for the past 7 years. This program will provide an update on a variety of research projects, and highlight an educational program entitled "Flight to Maps". Wayne Woldt and Jacob "Buddy" Smith will be providing the evening program. Feel free to join the chapter meeting, and learn more about this emerging technology.

Place: Duncan Aviation Engine Shop 5000 NW 44th St – Lincoln, NE



President's Message Harold Bickford

Our March meeting -March 5, 7:30pm-will be at the Duncan MPI shop with a slight twist. We will be meeting in the adjoining room as Duncan has a class meeting in the main room we normally use.

Our presenters will be chapter 569 members Wayne Woldt and Buddy Smith. They will give us a look into the UAS (unmanned aerial systems) aircraft/drones and operating norms in use by UNL. Though primarily related to agricultural applications the program will give a good insight into UAS operations. More and more this aspect of flight is coming into use whether by universities, companies or people developing other uses for these platforms. Integrating the UAS into the National Airspace System is an ongoing program that will have a lasting effect across the aviation spectrum.

Tools for aircraft building are, for the homebuilder, always a case of "one more tool" that just needs to be in the toolbox. One such item is a dimple die for dimpling aircraft skins so as to be able to use countersunk rivets. Countersunk rivets can at least make for a really finished look and in higher speed regimes provide measurable drag reduction. Rivets are available in both solid and blind configurations.

Tooling for such an application can run from a few dollars (assuming limited areas such as skin edges) on up to around five hundred or better for larger systems. In any case a labor-intensive project is in the offing as skins and substructure all need to be dimpled.

Of course, even the aluminum metalwork on a Pietenpol would look better with countersunk rivets so the "one more tool" mindset kicked in. Dimple die sets are inexpensive through the various aircraft and tool vendors. The setting tools represent the cost in a system. In our shop

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the tool is an upgraded rivet squeezer which accommodates the dimpling dies. It is a take your time, one dimple at a time after drilling as needed to the proper size type of approach. See? The run-on sentence conveys the process! As we gain experience with the technique, results will be presented along with a how-to program at a future meeting.

Another tool is epoxy for bonding which works well with wood. Many vendors offer various formulations. Our favorite is T-88. It is a two-part epoxy which simply uses equal amounts of resin and hardener which take about a minute of stirring to mix together. It can be used in temperatures as low as 35 degrees F and has a cure time of 24 hours with maximum strength obtained in about 7 days. When mixed the shelf life is around 30 minutes at normal room temperatures so some degree of planning for quantity mixed and assembly time is needed. Slight good alignment pressure and produce effective joinery. Chemicals, water and solvents don't affect cured joints and those joints don't get brittle, shrink or mildew. It will also gap fill to about 1/16" of an inch. It is those properties which make T-88 an effective bonding agent. It is also why aliphatic resins (wood glue) are not used even though they typically have equal bonding strength, i.e. stronger than the wood.



The February fly-in was a cold one. The wx trends of this year continue reflecting the overall conditions of 1997-98 and 2009-2010. We had folks fly and drive in while the overall cold effect had an impact. In contrast our busiest fly-in ever was the February 2016 fly-in when an unexpectedly mild wx pattern provided a great opportunity for people to come from far and wide. Go figure!

As ever, many thanks to our crew of volunteers who make this event happen every third Saturday. We simply couldn't have this signature event without them. Long term forecasts indicate March could be nice so we'll be ready!

We look forward to seeing everyone at the March meeting and gaining some insight into how UAS activity fits in with the airspace picture and our flying activity. On to March!

Harold Bickford, Chapter President

The Blue Bird of Happiness Auditions for Madame Butterfly

By Tom Winter

What is more romantic than lovers parted? Nothing is more romantic and that is why stymied Love is the stuff of opera! An archetype is Madame Butterfly, abandoned by her American Lieutenant. And there are tears, as in La Boheme, or A Furtive Tear in Donizetti's opera Elixir of Love. In Donizetti, the love

potion worked, but will the lovers ever be reunited?

The Expensive Mistress has drunk the potion (I suspect it was just 100 LL, chased with SAE 100, just like the elixir which was actually just a glass of wine), but she is lamenting, feeling jilted and abandoned, and she sings the McGuire Sisters' song:

"Summer dreams
Where do they go
When winter comes
Their promises are gone
And still they linger on."
And finally:
"So my love was only true
When the skies were blue"

Her lament continues "You loved me in fair weather, you kissed me after every outing, even saying "Love ya Honey" after each date. And now just look at yourself, you four-flusher. Why don't you call? What have I done? Here I am, a Cioyour Cio-San to Lieutenant Pinkerton, ready to sing Un Bel Di Vedremo: some beautiful day, I'll hear you park your bicycle, I'll hear you unlock my prison, I'll at last see the sun as you haul up the wide hangar door. And we'll be together again.

Oh you shameless cad! Your Madame Butterfly cannot soar without you!

And for her lover, too, it's so sad, thinking of that faithful mistress, imprisoned in her castle waiting for

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her lover to come free her at last. And her lover, himself imprisoned in black ice, is alike dreaming of blue skies. Oh, the places we've been! The adventures we've shared! The panoramas we have admired! The expanse of Lake Michigan! All those flights over the sand-braiding Platte! The sunsets, seen from the sky! The sight of our shadow mirroring our rise over the runway. Yes, Cio-Cio-San, it is love, and I am pining for you!



EAA Headquarters

Three People, One Aviation-Enthused Family

The Shetterly Squadron is scheduled to make its debut at EAA AirVenture Oshkosh this year, but it will not be the first time AirVenture attendees have seen the members fly in Oshkosh. The team consists of Greg, Joe, and Jeff Shetterly. The group is unique in that not only is it a father and sons act, but they don't fly the same type of aircraft.

"We're flying three completely different airplanes, so especially when it comes to formation aerobatics, the airplanes act quite different when you're maneuvering vertically. ... It's an interesting challenge to get three airplanes to fly well together," Joe said.

Greg, EAA 535127, flies a DR-107 One Design, Jeff, EAA 727110, pilots an SNJ-6 called the *Radial Rumble*, and Joe mans an RV-8 making for one spectacular show spanning the spectrum from homebuilt competition aerobatic

airplane to antique warbird. Depending on the air show and the air space restrictions, they have different routines, which consist of combinations of solo and formation aerobatics.

Joe has flown at AirVenture three times: heritage flights in the A-10 in 2011, in 2013 in his RV-8, and in 2016 he performed with Greg.

"The first time that I got to fly over AirVenture as a part of a heritage flight was mind blowing, to say the least," Joe said. "I mean, I found myself in formation with aviation legends such as Steve Hinton and Kevin Eldredge and flying in formation with an F-86. I had a very distinct moment there that I'll never forget where I'm looking down and seeing Oshkosh with everyone gathered. ... I'm in this formation and I just couldn't hardly believe that it was me and that I was getting to do that."

Greg has more than 20,000 hours of flight time under his belt, which he accumulated over his 42 years of professional flying. He grew up listening to aviation stories told by his grandfather and uncle, so it was only natural to want to share the love of aviation with his family. Greg taught his wife, Micki, and their two sons to fly and now all three of them are flight instructors. Micki serves as the team safety officer and announcer, and flies her Citabria or Champ to shows as a support aircraft. In 2013, Jeff bought his T-6 and the family decided to start the beginning of what is now The Shetterly Squadron.

Joe said he is looking forward to performing with his dad and brother at AirVenture 2019. They hope their performance and family story will help generate interest in aviation for years to come.

"We are all passionate about aviation and flying and, specifically, about sharing it with the younger generation," Joe said. "So, that's really the point of everything that we're doing here ... to share a passion and to point out that across the spectrum of age and gender and types of flying ... there's something for everyone to enjoy."



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Swing Under the Wings

By Dennis Crispin

Swing Under the Wings – The annual Valentine's dinner dance at SAC Museum was a rip-roaring success. YOU SHOULD HAVE BEEN THERE!!!

The food was good, the music excellent and the comradery great. We shared a dinner table with some really nice people.

The event is done in the style of a 1940's/WW-2 USO party. Many of the celebrants were in authentic period dress.

Linda and Edi are conspiring to reserve a table for EAA 569 next year.



The action was heavy on the crowded dance floor all evening long.



A ten-piece swing band with a pretty girl singer – right out of 1942!

More photos from Swing Under the Wings are in the Photo Gallery at <u>www.eaa569.org</u>. Thanks to Dennis for sharing his photos.



Harold and Edi enjoy the fine buffet dinner.



Dennis & Linda by the nose of the B-29 Lucky Lady.

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Minutes of the Club Meeting

The meeting was brought to order at 1930 on February 5th, 2019 by president Harold Bickford.

New member Owen Roberts-Day was welcomed. Owen teaches English at Lincoln High School.

No business was conducted.

George Czarnecki of Central Cylinder Service presented pictures and videos of his 22 foot 1957 shovel-nosed unlimited Lauterbach hydroplane powered with a v-12 Allison engine. The boat had been mostly in storage until George and his crew restored the hull and engine. The boat has many aviation-influenced details. To learn more about this effort and find videos of the boat in action, check out the Miss U.S. U-36 Unlimited Hydroplane facebook page.

Respectfully submitted, Jerry Mulliken, Secretary

For Sale

Lycoming O-235 core for sale. It's missing three cylinders and is taking up space in my hangar.

Also, a pair of 600x6 wheels, brake disks and axles.

Somebody call and make an offer.

Contact Ed Bowes @ 402-730-3396.



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Click on picture to enlarge

For Sale

Pristine 1946 Cessna 120 \$29,500

This airplane has won many trophies including "Ladies' Choice" at the national convention of the Cessna 120/140 association. See attached equipment sheet. To receive a photo album by email contact:

Dr. Jim Smith, St. Joseph, MO smithdocjim@gmail.com 816-262-8370



Events

York Airport (JYR), EAA Chapter 1055 Fly-in breakfast on the 1st Saturday of every month. 0800 - 1000.

Crete Airport (CEK), EAA Chapter 569 Fly-in breakfast on the 3rd Saturday of every month. 0800 - 1000. Mar 6, FAA Safety Seminar (Introduction to VMC Club Meeting - Mastering the Art of Aviation), Fremont Aviation (KFET) 1203 West 23rd St, Fremont, NE 1800 - ? ; Click here for more info.

Apr 2 - 7, Sun 'n Fun, Lakeland, FL; http://www.sun-n-fun.org/

Apr 3, AOPA Peaks to Pavement Seminar (Applying Lessons from the Backcountry), Bellevue West High School 1501 Thurston Ave, Bellevue, NE 1900-2100; Click here for more info.

Jun 1, Nebraska State Fly-in, Gordon, NE (KGRN).

Jun 22-23, Midwest Aerobatic Championship, Seward, NE (KSWT); If you would like to volunteer, call or text Tom Trumble @ 402-540-6089.

Jul 22 - 28, AirVenture, Oshkosh, WI http://www.airventure.org/

Builder's Report

By Doug Volkmer

just doesn't want to go away, I've still been managing to get out to the airport and make some progress on the RV.

In January, I installed the wings on for good.

Each wing is held on by four 1/4 inch and four 7/16 close tolerance bolts. Close tolerance bolts are used where a tight fit is required. These bolts are very hard to put in.

What I found that worked for me Despite the wintry weather that is (a) putting the bolts on dry ice, (b) a little LPS #2 oil on the shank and (c) light taps with the rivet gun.

> I've moved on now to installing the flaps. Next will be the ailerons and then eventually rigging up the controls.

> We're getting there! I hope it's worth it. They say it is. Something about an RV grin that doesn't go away. 😥



John Cox 2279 County Road 2425 DeWitt, Nebraska 68541-2518

