



Volume 14 Issue 5
June 2011

EAA Chapter 39
Rapid City, SD
www.eaa39.org

FLYBOY NEWS



Chapter 39's Fly-in Breakfast at Darrel Sauder's Hangar
(more on page 4)





President's Column

June, 2011

Dave Utter,
President, Chapter 39

May has been a wet month. I don't know if we set any records or anything, but the grass is green and the hay is growing. If I don't get at my yard with the lawn mower soon, I will just get out the hay equipment and bale the yard. Not ideal, but it will get the job done.

I missed the Sauder Breakfast due to travel to a graduation. I can't believe that time flies past so quickly. My son will be a senior and graduate in 2012.

AirVenture 2011 is going to sneak up on us as well. If you have not made that trip, this might be the year. Check the EAA website for details. They have most of the air show performers confirmed and are advertising 100 years of naval aviation. If you want to camp with the chapter, get in touch with Milo Schindler. He can tell you how it has worked in the past and what the plan for this year will be.

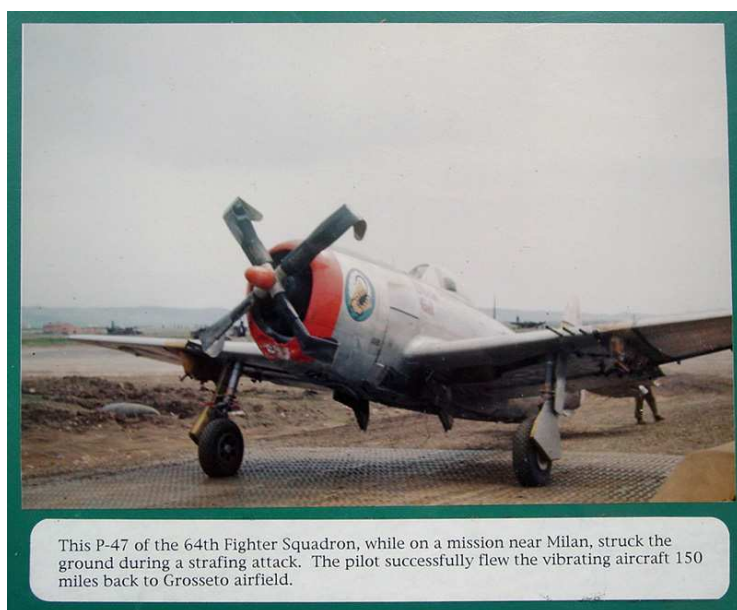
We have just over a month to sell the raffle tickets. Bring what you have sold. Darrell Sauder has the rest of the unsold tickets. This is a great raffle item and it would be nice for the chapter to make some money on the pedal plane.

If it stops raining long enough, get out and enjoy the skies. Summer is still coming.

Keep selling those raffle tickets. Bring ticket stubs and money to the June chapter meeting.



57 days to EAA
AirVenture 2011!



This P-47 of the 64th Fighter Squadron, while on a mission near Milan, struck the ground during a strafing attack. The pilot successfully flew the vibrating aircraft 150 miles back to Grosseto airfield.

Secretary's Notes

Jerry Peterson

No minutes were taken last month, as it was a safety meeting conducted by the FAST team.



pictures by Marty Larson

In South Dakota, the first heavier-than-air machine took to the air in Rapid City in March 1911. The photograph shows Norma Kraemer of Deadwood, who is kneeling, putting together in the Hogen Gallery an airplane that was made by her husband, Vern. Vern is on the left in the photo, with his back to the camera. Museum staff who are helping are Dan Brosz, left; Ronette Rumpca, standing behind Norma; and Kate Vandel, right. The South Dakota Pilots Association is promoting and supporting the 100th anniversary of flight in South Dakota, with Norma leading the effort on several fronts. Norma's book, *South Dakota's First Century of Flight*, is available in the Heritage Stores.

The SD State Historical Society posted some pictures of the new aviation exhibit that will be in place until September 11.

<http://www.flickr.com/photos/southdakotahistory/sets/72157626586111749/show/>



Chapter 39

Officers

President	Dave Utter
Vice President	Marty Larson
Secretary	Jerry Peterson
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Newsletter	Molly Benkert
Web Editor	Daniel Peterson
Young Eagles	Gary Schroeder
Activity Cord.	Darrel Sauder

Tech Advisor Randy Daughenbaugh

Treasurer's Report

Milo Schindler

Balance brought forward..... 1886.87

Income

dues 15.00

Expenses

Sec. of State..... 10.00

Balance on hand1891.87

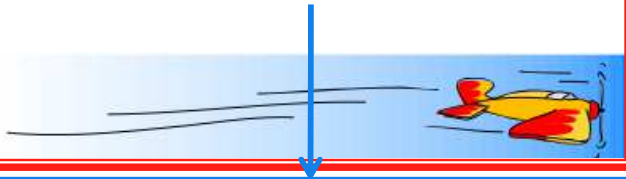
Can You Identify This Airport?



answer next month

Next Meeting:

Tuesday, June 14
following Tony Fremo's Open House



Tony Fremo's
Tri-State Aviation Open House
Tuesday, June 14, 6 until ???

A Garmin Sales Rep will be there with the latest panel-mount simulator to "play" with. Food and refreshments will be provided.



Chapter 39's Fly-in Breakfast

Many thanks to Darrel & Sharon Sauder! As usual, they did a super job hosting the fly-in (and drive-ins, due to weather) breakfast in their hangar. Both food and hangar talk were great.

A special thanks also to Spearfish Chapter 806! Ken and Mary Lou McGirr brought two of their grills and miscellaneous cooking items. Ted Miller, Black Hills Aero, brought tables and chairs. Craig Mickelson also came over. All of them helped with set up and cooking.

Upcoming Events

June 3-4 **National Biplane Fly-In**, Freeman Field, Junction City, KS

<http://www.nationalbiplane-flyin.com>

June 4 **Dakota Thunder Open House**, EAFB

<http://www.ellsworth.af.mil/airshow/fly-ininformation.asp>

June 11 **EAA Chapter 551 Bean and Brat Fly-in**,

10:00 a.m. - 2:00 p.m. Leaders Clear Lake, MN (8Y6) Contact info: Mark Priglmeier

notam@eaa551.org

June 21 **start of Air Race Classic**, Iowa City, IA (will come through Spearfish)

<http://www.airraceclassic.org/2011race.asp>

June 25-26 **Midwest Aerobatic Championships 2011**, Seward, NE

<http://eaa.org/calendar/eventdetail.aspx?id=9125>

June 27-July 1 **Short Wing Piper Club Annual Convention**, Spearfish, SD

<http://www.shortwing.org/2011convention>

July 8-10 **WW II B-17 Bomber Tour Stop**,

Davenport Airport, IA (flights and guided tours available)

<http://www.b17.org>



Darrel's Light Sport Trike

A Safety Note

By Darrel Sauder



Who is on the controls when you are flying your airplane? Duh; I am, you say. Are you sure you are the only one? That's what the pilot flying landing a Stearman in Washington DC thought until he flipped upside down on the runway. Seemed his passenger wanted to get a better picture of the landing so released his seatbelt, needed to rise up from his sitting position, so placed his feet on the rudder pedals (with toe brakes) for a little assist. He assisted the airplane right over on its back.

Almost all GA aircraft and certainly most Light Sport aircraft have small cockpits. Passengers have to place their feet and arms someplace. A natural place for their feet is slightly forward, resting on the rudder pedals, or very near them. Arms usually fall naturally in their lap. You are making a landing with a slightly nervous passenger. Let's throw in a gusty crosswind requiring constantly changing opposite rudder and aileron control inputs to keep it from drifting off the runway....a lot going on in a very short and critical time. All you need for a disaster is a little unknown or undetected input from your passenger. It has, can, and will happen.

How to prevent: Tie the passenger's hands and feet securely using either strong rope or duct tape. Handcuff his hands and feet to the seat supports. Render him unconscious. How about the novel idea of briefing the passenger to keep his hands and feet completely off the controls during all phases of flight but particularly during takeoff and landing?. You might explain to him the reason why. He could jeopardize the control of the aircraft causing very unpleasant circumstances to develop. You might suggest a good position for his feet is flat on the floor. It would be a good idea to include a comment before takeoff and landing like, "Hands and feet off the controls?" This is especially applicable in tandem seat aircraft where you can't shoot a reassuring glance at the limbs of your passenger.

Hope you never get any "unasked for assistance" when flying your aircraft. But if you do, bring your vocal chords up to their full potential and tell them to "get off the controls!"

Fly Safe!

Wisdom from Aviators *(submitted by Dan Benkert)*

There are only three things the copilot should ever say:

1. Nice landing, Sir.
2. I'll buy the first round.
3. I'll take the fat one.

As a pilot only two bad things can happen to you and one of them will.

- a. One day you will walk out to the aircraft knowing that it is your last flight.
- b. One day you will walk out to the aircraft not knowing that it is your last flight.



swarm of Mosquitoes---
the Magnificent 7 at the
Omaha Air Show

Ed. Note: Please continue sending me articles, pictures, links, and other info. How about some pix taken while flying around? Submissions need to be to me by the 25th of month for publishing in the next month's newsletter. Thanks!
teachmolly@gmail.com

Member Profile

Randy Daughenbaugh

My interest in flying probably dates from kite flying contests in Rapid as I was growing up. This led to control line and free flight model airplanes. In graduate school in Boulder Colorado, I was not able to afford power lessons, but I did join a glider club where I could afford the \$6-8 for an occasional tow. I had some memorable glider flights after I got the glider rating.

I am not sure when I got interested in building a plane. It may be from reading about the BD-5 in Popular Mechanics about 1970. Career and family got in the way of actually doing anything in this direction until our youngest was choosing a college. My wife, Mary and I were soon to be “empty nesters”! I realized that if I want to fly my plane after I built it, I should have a power rating. Since my office was about 500’ from the Boulder, Colorado airport, I spent lunch hours getting my power rating.

I also started studying all the different kinds of planes that could be built from kits. I did consider scratch built or plans, but decided that it would take me forever to gather all the materials and to be sure that they were the right grade for an aircraft. I also wanted a proven design with good handling and a good safety record.

There were a lot of kit choices. I got Kenneth Armstrong’s book, “Choosing Your Homebuilt – The one you will finish and fly!” for guidance in choosing and he pushed the idea of “mission”. The mission that I wanted my plane to fulfill was simple. It had to carry a passenger and needed STOL capabilities so I could fly it from my field. So low stall speeds and two place were the main criteria that I used when studying the annual kit directory in Kit Plane magazine. I narrowed my choices down to three and tried to figure out how to inspect some finished and flying examples of each.

I soon settled on the Kitfox. After trying unsuccessfully to get into a Model IV, I decided I needed to build the larger Series 5. The next choice was tricycle gear or conventional gear. At this point I had gotten my private rating and was working on a tail wheel endorsement flying a 1946 Champ. - A plane two years older than I was. It had no electrical and had to be hand propped, but it was so much more fun than the Cessna 172 that I had learned in that I fell in love with it and decided I wanted to build the tailwheel Kitfox.

I should mention that after flying the gliders for so many years that I was really disappointed in the handling of the 172. I later learned the expression “spam can”. I thought that all powered planes must have lousy handling. I felt much better after I got a chance to fly a Series 5 Kitfox. It wasn’t a glider, but it handled much, much better than the 172!

It took me 2500 hours over four years to build the plane. I didn’t do much on it one year when “life got in the way.” The Kitfox list was a great source of answers and advice while building. Mary was extra help when I needed it. And she provided encouragement when I needed that. I did everything - the assembly, the covering, the painting and the wiring. The wiring is my weak suit and it took me a long time to get comfortable with my wiring plans. The electrical is not covered in the kit directions because everyone puts different instruments into their plane so you are on your own for the wiring. I relied on a couple of books and advice from the Kitfox list and chapter 39’s Milo Schindler!

I did a good job building my Kitfox. But with all that I learned, I will do a better job on the next plane I build.

I hadn't flown for five years so I needed to get up to speed. Al Neal served as test pilot for my plane and as instructor in his Kitfox to teach me how to fly (again!). I thought I might be a bit rusty, but my flying skills had completely corroded away. I am sure that I was a bigger project than Al was anticipating. Al was hesitant to turn me loose because I didn't do "go-arounds" as readily as he would like me to. (Glider pilots don't do go-arounds!)

My home field has 400' cliffs not too far from each end of the runway. For this reason, the first flights were at Sturgis airport. I had about half the 40 hours flown off before I was comfortable enough to bring it home. The remaining hours went faster then.

The first evening flight at my home field was memorable. The sun was real low in the sky and everything seemed to be going well as I was flying base about to turn final. Then, I turned final and directly into the sun and could not see a darned thing. I powered up and got away from the trees and thought, "Gee, it would be nice to get home tonight."

After flying around a while trying to figure out what to do, I noticed that the landing strip was in the shade. I thought I would try again and this time on base, I was in the shade too and when I turned final, I could see everything very clearly. But....just as I was coming over the trees I noticed about a dozen deer on the field. I powered up, buzzed the deer, and went around again. (See Al, glider pilots can do go arounds!) The next try I was able to get on the ground.

If you are considering building, go for it! There are many sources of help. There is probably a mailing list for your choice of plane. People there have probably already solved any problem you will run up against several different ways and are glad to help. Also, there are many good books out there. I highly recommend the Tony Bigelis books. And of course the EAA has a lot of resource and we have real experts in Chapter 39!



Randy's Kitfox (taken from inside his hangar)

Member Project

By Larry Vetterman

I decided to get into the light sport area and after flying the Rans S-7, decided it was a good one to build. Presently the wings are built, and have been fitted onto the fuselage. I modified the wing tips from the standard factory setup by extending the spars one bay and using the hoerner style wing tips. The fuel tanks are installed and the wings are ready for cover.

The fuselage has a number of mods also. A 3.5 gallon header tank was installed in the baggage area, the left door was deleted and a window frame and window ala Cub style was installed. The ELT was installed farther back also, which should move the CG a little farther rearward. Why is there need to move the CG back you ask, well read on Mcduff.

The standard setup is for the Rotax 912, but I am installing the new Lycoming O-233 LSA engine. It is heavier than the rotax, (210 lbs. with starter, alternator and ring gear) but is rated at 115 hp at 2800rpm and has a 2400 hour TBO. I will build a very light weight exhaust system using 1.5 inch tubing instead of the standard 1.75 inch estimating it to weigh 6.5 lbs. The O-233 has been in development for some time and all the testing has been done in the Falcon by Renegade Light Sport. You can see more about this great LSA at <http://www.renegadelightsport.com>. If you go to Oshkosh this year, you will see the O-233 on a number of LSA aircraft. I plan to use the S-7 as an exhaust test bed for a number of designs so I am currently modifying the cowling so the engine and exhausts will fit in without further cowl mods. Right now the cylinders are sticking out of the original cowl @ 3 inches but fiberglassing is just another job that takes time and I plan to make the cowl cheeks T-18 style. I built the engine mount myself as there are none out there for this new engine/airframe combination, which was really quite simple once I got the dyna focal ring made. Lycoming moved the oil filter and fuel pump to a different location on the 233 so I had to wait until the engine arrived before I could weld it up. I only had to change one tube do to the new fuel pump location. Another new feature is no mags. It has a new Champion electronic ignition system, but still uses standard aviation spark plugs.

I do not have any pictures of the project at this time, but if any one is interested, give me a call and stop by. there will be more reports in the future.

UNDER THE NET

By Ed Pollard and Warren Holmgreen Jr



During World War II the Army Corps of Engineers needed to hide the Lockheed Burbank Aircraft Plant to protect it from a possible Japanese air attack. They covered it with camouflage netting to make it look like a rural subdivision from the air. Read more at <http://www.barnstormers.com/eFLYER/2011/167-eFLYER-FA01-net.html>

AirVenture 2011

July 25-31, 2011

Monday, July 25

Opening Day

Afternoon Air Show, 3 p.m.

Opening Day Concert-- [REO Speedwagon](#), 5:30 p.m.

Tuesday, July 26

Tribute to Bob Hoover Day

Afternoon Air Show, 3 p.m. (featuring aircraft and maneuvers made legendary by Bob Hoover)

Wednesday, July 27

Navy Day

Afternoon Air Show, 3 p.m. (featuring Naval aircraft spanning 100 years)

Thursday, July 28

Tribute to Burt Rutan Day

Afternoon Air Show, 3 p.m. (featuring Burt Rutan-designed aircraft)

Friday, July 29

Salute to Veterans

[Gary Sinise & the Lt. Dan Band](#), courtesy of Disabled American Veterans and Warbirds of America, at Theater in the Woods, 7 p.m.

Saturday, July 30

Mass Hot Air Balloon Launch, Ultralight area, 6 a.m.

Night Air Show featuring Daher-Socata Fireworks and "Wall of Fire," 8:30 p.m.

Sunday, July 31

Military Scramble: Organized departure of military aircraft



AirVenture NOTAM

The EAA AirVenture Oshkosh 2011 NOTAM is now available for order or download. The free 32-page booklet is an absolute must if you're flying an aircraft to Oshkosh this year. It outlines all arrival/departure procedures, radio frequencies, Wittman Regional Airport details, and much more. Although many of the procedures are similar to previous years, there are updates in nearly every area to enhance safety, efficiency, and convenience for the thousands of airplanes expected at the World's Greatest Aviation Celebration. The EAA AirVenture NOTAM is required reading and should be part of a pilot's preflight preparation.

<http://www.airventure.org/flying/>

For the next six months, The Farmers Airship will be criss-crossing the United States on the Covering Communities Tour! And it will be at Oshkosh.



Covering Communities flight seeing tours will range from \$375-\$950/person, plus taxes. Specific rates and tour options will vary by location. For more information, go to

<http://www.airshipventures.com/tour/>

Builders Corner



Welding Techniques

From Jump Run Enterprises LLC

TIG vs. Gas "The two most popular methods to tack and weld your airframe are Tungsten Inert Gas, or TIG, and Oxy/Acetylene, also referred to as Gas welding. Both methods have ardent proponents, and I will not even attempt to get into which is better than the other. I personally choose to TIG weld wherever possible. TIG is the more modern of the two techniques, and allows for very fine control of heat and the weld puddle. Gas is the more traditional method of welding. Thousands of aircraft which were welded using gas are still flying, and its still a very acceptable method to weld your airframe."

Practice, Practice, Practice: "Regardless of which way you decide to weld, (TIG or Gas) I would highly recommend you obtain the necessary training, and practice until you are proficient. Also, have an experienced welder inspect your practice welds as you progress. This will ensure you are on the right track, and aren't practicing bad techniques."

Purchasing Practice Tubing: "Several aircraft materials suppliers also offer a "Bargain Bag" of assorted tubing pieces. I would suggest looking at your plans, and purchasing several feet of the actual tubing you will be using. The bargain bags typically include allot of very thick walled tubing that is not very useful for practice."

Welding Terms: "Stress relieving, and torch normalizing, are terms that are commonly used to describe the process of post heating your welded joints. The problem with trying to define these terms is that reliable sources will disagree about all of these things."

Setting Pressures On Your Gas Torch: "One tip on Gas welding, that isn't talked about much, is the proper way to set the pressures on the gas torch. The following technique works for any torch and any combination of tip sizes."

Go to their web site for a short video on selecting the proper TIG welding amperage and/or to purchase their DVD on airframe construction.

<http://www.jumprunenterprises.com/JRE/welding-techniques.html>

Dan Moudree sent this YouTube Presentation. It Includes the beginning of home built airplanes. It came to him from an EAA member in Ontario OR



<http://www.youtube.com/watch?v=tSiOMHL5BUA&feature=youtu.be>

Cool Links

Aviation Demo Reels

Submitted by Al Neal



<http://www.sleepingdogtv.com/>

Luftwaffe Over New York, a WW2 Secret

Submitted by Dan Benkert



<http://www.veteranstoday.com/2011/03/11/86523>

Woodpecker vs F-16

Submitted by Dan Benkert



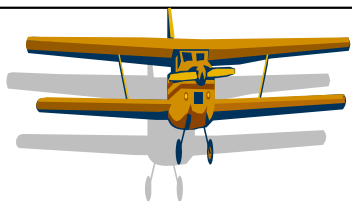
<http://www.lostaviators.com/?p=1248>

Unusual Planes You Won't See at an Air show

Submitted by Al Neal



<http://www.mediafire.com/?w9m6fygzbvw1t10>



For Sale...New 36'x42' Miracle Truss Hangar, located at Hot Springs Airport. Heated, bifold door and paid 40 yr lease, which can be re-negotiated w/ city \$65,000. Larry McIntyre 605-484-3571

Classified Ads

Continental 0200, disassembled, cam shaft and followers are yellow tagged. Crank shaft magnifluxed and mics to factory specs. 2 cylinders serviceable. Case and all parts clean. No accessories. \$3000.00 Milo Schindler 605-381-1600