

EAA CHAPTER 100



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December 2014 Newsletter

December Hangar Flying Event: The December Hangar Flying Event will be at the Dodge Center Airport Terminal at 1930L. If you want to volunteer to host this meeting call me. (Dick Fechter 775-7686)

New business: Election of officers, and pay 2015 dues.

Program:

- Project Reports,
- Demo of the new NOTAM system,
- EAA monthly
- video on X-Wind landings

January Schedule: January 9th, Dodge Center Terminal Building unless someone volunteers to have it at their shop/project. We still need a host for this get together too.

EAA Chapter 100 is a nonprofit association involved in the promotion of aviation through adult and youth education, hands-on training, building and maintenance of experimental aircraft, and through community awareness programs.

This publication by EAA Chapter 100, Inc is for the use, education and occasional enjoyment of its members and others. No claim is made for the accuracy or applicability of information herein. Editorial content is the opinion of the contributor not necessarily the position of either EAA Chapter 100 or the Experimental Aircraft Association.

Reader submissions and comments are strongly encouraged. "

New Technical Counselor: Wayne Trom has accepted this position vacated by Walter Mount's passing. Wayne may be reached at 507-374-6245 or at the Dodge Center Airport aircraft maintenance hangar during regular (and sometimes not so regular) business hours.

New Newsletter Editor: Well really an old one, Dick Fechter. I'm returning because — most likely — our previous editor will be voted in as our new president at the December meeting.

Board of Directors (BoD): Several years ago we made a new Board of Directors list. I don't remember if it was ever approved or who was on it. Therefore I'm proposing a few names of members I know are actively involved in the chapter. This is only a "DRAFT" list. If you are on the below list and do not want to be on the list, please say so. If you would like to be on the BoD and I missed you, please say so.

Branden McNeilus	Dick Fechter	John D. Puent
Dan Crandal	Gordy Westphal	Ronn Denouden
Dave Nelson	Greg Edlund	Stan Blankenship
Dave Griggs	Jeff Hanson	Tom Hall
Dwayne Hora	John Hanson	

Membership Information Update

If you have not yet paid your 2015 dues of \$10, please send this information along with your check to: Tom Hall, 331 Riverside Heights Rochester, MN 55906.

Steps to EAA Chapter 100 Membership:

1. Have a fascination or love of flying. You don't have to be a pilot or be building an airplane, you just have to be interested in the same.
2. Join the National EAA
3. Pay the \$10 chapter dues to our Secretary/Treasurer, (due the first of every year)
4. It would be "nice" if you would fill out our [questionnaire](#) and send it with your check. If you don't, please include your full name, address, EAA Number, E-Mail and phone number.

Chapter 100's donation to the AOPA Safety Foundation: Last month the chapter agreed to donate \$100 from chapter 100 to the AOPA Safety Foundation. I said I would match (up to \$100) so we sent in \$200. Then there were other matching donations so by the time the chapter's \$100 got to the foundation, it had grown to \$400.

Part of the email we got back from AOPA said: *On behalf of the AOPA Foundation, I would like to thank you for your generous donation. Your contribution makes it possible for us to preserve general aviation by promoting safety, increasing the pilot population, preserving community airports and improving GA's image.*

Please know that your support of the AOPA Foundation and the impact it makes on GA is truly something to be proud of. Thank you again for contributing to our work, and helping to ensure our freedom to fly.

Sincerely,
Bruce Landsberg
President, AOPA Foundation

Aircraft Engine Preheat. If you fly in Minnesota during the winter you better preheat that engine. I've found that using the cell phone switch from <http://switchboxcontrol.com> works great and I'm sure there are others. But if you want to call me with questions about the switch box I can tell you what I know about it.

Experimenter Magazine: The November issue of EAA's digital magazine *Experimenter* is ready for your viewing pleasure, leading off with a complete report on EAA AirVenture Oshkosh 2014's grand champion homebuilt - William Ford's beautiful Lancair Legacy. Also get the latest on Pipistrel Aircraft's newest electric aircraft, the WATTsUP; learn all about vortilons, vortex generators, and aerodynamic fence; and read the history of Quicksilver Aircraft and what its "new" owners have in store for this legacy ultralight company.

<http://experimenter.epubxp.com/i/418587>

Cloud ceilings and tops forecast: Here's a new website that gives lots of information, but one of the harder to get forecasts is cloud tops. Don't use http or www before this address and you will have to copy/paste the URL into your browser...

- ruc.noaa.gov/hrrr
- top left gray listing "Current and Forecast Graphics"
- HRRR-Aviation Hourly
- Pick zulu time column for "cloud top & ceiling height forecasts"

What happens if you get a "little" JetA in your tanks by mistake? This is from the Beechtalk forum thread "Do You Watch The Refueling Of Your Plane?" Quite obviously, the primary concern was having pure JetA pumped into your piston engine but the real query became how you detect if the Avgas is contaminated with a small amount of JetA.

I made several suggestions, several of which came from my recent experience "overseeing" the reestablishment of fuel service at my home airport KGNF after a very negative experience with the previous FBO. One poster asked me how to detect a "contamination" of avgas with JetA rather than a mis-delivery of the pure jet fuel. So, today, I went to the airport and did some experimentation. Here is what I found.

First, all of my "tests" were done with a 4% dilution of Avgas with JetA; i.e. 96 parts of avgas to 4 parts of JetA.

First finding. You won't find any dilution of color or enough difference in smell from the pure Avgas to detect this small amount of JetA.

Second. You "might" detect the oiliness of the JetA by rubbing your fingers together with the sample. Not too sure though because even pure Avgas has a little oiliness to it before it evaporates.

Third. I dipped the end of a piece of paper towel into each; straight Avgas and the Avgas with 4% JetA. After about 90 seconds, the avgas had evaporated, barely staining the paper towel. the sample with JetA was definitely left with a stain and an oiliness but not enough, IMO, to make a definitive judgment.

Then, I struck gold. I have no idea how I got the "idea" but I dipped a paper towel in each mixture. Then, I "cleaned" the outside mirrors on my truck. As I rubbed the pure Avgas on the mirror, it acted like Windex, immediately cleaning the mirror. As I rubbed the Avgas on, a slight prism of color formed on the mirror in the bright sunlight that ran from pink to green to blue, but that prism of color would disappear almost immediately leaving the mirror squeaky clean.

Same procedure with the 4% dilution of Avgas/JetA. The prism was noticeably brighter and covered almost the entire mirror. After completely wiping the mirror the haze of pink, green, and blue remained and didn't go away until I again "cleaned" the mirror with straight Avgas.

Now, understand, I had the advantage of bright sunlight. I didn't try it with artificial light or in shade, but I suspect that as definitive as the color was, you could detect it. Even after I cleaned the mirror with the Avgas, the prism of color remained on the edges of the mirror where I had failed to remove all the contaminated mixture.

This needs to be "tested" in different light conditions, but I think it might be the golden egg we have been looking for and if you are going to use it, you need to run your own test so that you know exactly what you are looking for.

I'm going to start carrying a small mirror in my luggage compartment and test a sample of the fuel going into my airplane with a paper towel and the mirror. You won't need more than an ounce of fuel to do this.

Anyway, the rest is up to you.

Jgreen

Amos N Andy Show: This is a hilarious episode about flying from the 1950's. <https://m.youtube.com/watch?v=9IYCIXtGZr8>

How Rotax Builds Aircraft Engines (from AVWeb.com) http://www.youtube.com/watch?feature=player_embedded&v=1Vx4cYj6nsQ

Batteries — Dying Young (from AVWeb.com). I started to put this battery article/ information into the newsletter but it just got too long, so here is the link. I think it is very good information if you rely on aircraft batteries. <http://www.avweb.com/news/features/Batteries-Dying-Young223129-1.html>

Aviation Economic Reality: (from AVWeb) A pilot who is also a professor at a major university applies academic rigor to an analysis of the future health of general aviation. The hard numbers make for some stark reading. Here is the link...
<http://www.avweb.com/news/features/GAs-Difficult-Climb-Back222927-1.html>

Seven ways flying is hurting your body: https://www.youtube.com/watch?v=5pnSKYIEN9c&feature=player_embedded

CFI Newsletter: Gene Benson sends out a very good and free newsletter – Vectors for Safety. You can get on his mailing list by going to <http://www.genebenson.com>. Below came from one of his latest articles.

In February of 2012, A Piper turbo Arrow lost engine power shortly after takeoff from Kalispell City Airport, Kalispell, Montana. The airplane was over a residential area at the time. The pilot did a good job of executing a forced landing on a residential street. The pilot and his two passengers received only minor injuries. Though there was substantial property damage to a house and to vehicles, no one on the ground was injured.

The pilot stated that he had fueled the airplane with 45 gallons then taxied to pick up his passengers. He said that he performed a complete engine run-up and preflight checks. He reported that the takeoff was smooth and normal, but that between 300 and 500 feet AGL the engine started to sputter and lose power. He selected the longest street on which the airplane could make a forced landing. He said that he lowered the flaps, and slowed the airplane to a minimum controllable airspeed.



The airplane collided with a number of vehicles and trees, and in the process, the left wing separated from the fuselage. The airplane rotated inverted, and embedded itself into the front of a house. The pilot egressed through the pilot's side window, and he assisted with the egress of his passengers.

Investigation by the NTSB determined that the magneto's distributor block bushing was worn to an extent that it provided significant radial play between the bushing and distributor block. The bushing, which holds the distributor gear axle in place, was worn to such an extent that it would permit the distributor gear to intermittently disengage from the drive gear. Once the distributor gear disengaged from the drive gear, the internal timing of the magneto would be off, which could disrupt the normal ignition sequence and operation of the engine. The NTSB accident report includes the following, "If the pilot had switched to the right magneto, engine power would have likely been restored. The most recent magneto overhaul was performed in 1989.

The engine manufacturer recommends that magnetos be overhauled or replaced 5 years after the date of manufacture or last overhaul, or 4 years after the date placed in service, whichever occurs first, without regard to accumulated operating hours since new or last overhaul."

The NTSB Probable Cause finding states, "The partial loss of engine power due to magneto malfunction. Contributing to the accident was the lack of adherence to the manufacturer's recommended magneto overhaul schedule."

The NTSB criticized the pilot for not switching magnetos. The body of the NTSB report includes an excerpt from the Pilot Operating Handbook for the airplane that lists switching magnetos as the fifth item in the engine roughness checklist. Yes, switching magnetos probably would have, in retrospect, restored good engine power. But we must remember that the pilot was less than 500 feet above the ground over a residential area. He apparently made a decision to execute a forced landing rather than to troubleshoot the problem. His decision resulted in an accident with only minor injuries and some property damage. I would say that was a pretty good decision. He made a decision to land and he put all of his skill and knowledge into making that work. Far too many loss-of-control accidents have resulted from pilots failing to fly the airplane at a critical time. He flew the airplane all the way down and is alive to tell the story.

But I would be critical of his management of the airplane maintenance. The NTSB report includes the following, "Review of the engine maintenance records showed that the magneto was last overhauled on July 18, 1989, and had accumulated 324.65 hours since overhaul. Review of the S-20 Series Magneto Service Support Manual showed CMI recommends magnetos be inspected after the first 500 hours in service and every 500 hours thereafter. In addition, magnetos should be overhauled or replaced 5 years after the date of manufacture or last overhaul, or 4 years after the date placed in service, whichever occurs first, without regard to accumulated operating hours since new or last overhaul."

Now I realize that many pilots fudge a bit on the time between overhaul for components. But the manufacturers know their products and have a reason for specifying when they should be overhauled or replaced. When the manufacturer says something should be overhauled or replaced in five years regardless of how much time is on it, extending that to 22 years is definitely pressing our luck. The pilot was the owner of the airplane so was therefore responsible for maintaining it in an airworthy condition. We do not know if he knew about the life limit on the magnetos. If not, he should have. We do not know if whoever was maintaining the airplane recommended overhauling the magnetos or not. In any case, magneto overhauls are not cheap but the failure to grossly ignore the manufacturer's recommendation could have avoided this potentially tragic accident.

Click [here](#) to read the preliminary accident report on the NTSB website.

FAA Safety Briefing Magazine: We sometimes find ourselves at odds with the FAA, but we must admit that they do a good job on their "Safety Briefing" publication. The Nov/Dec. issue is no exception and is very appropriate for those of us living in cold weather country. It is probably more important for those pilots who might be flying into cold country and are not familiar with the subtleties involved. Click [here](#) to read or download the current issue from the FAA website.

DWI as a pilot: Under 14 CFR 61.15, all pilots must send a Notification Letter (MS Word) to FAA's Security and Investigations Division within 60 calendar days of the effective date of an alcohol-related conviction or administrative action. In 14 CFR 61.15(c), alcohol-related convictions or administrative actions refer to motor vehicle actions (MVA).

With the Holidays upon us I would like to share a personal experience with my friends about drinking and driving. As you may know some of us have been known to have brushes with the authorities from time to time on the way home after a "social session" out with friends.

Well a couple days ago I was out for an evening with friends and had several cocktails followed by some rather nice red wine. Feeling jolly I still had the sense to know that I may be slightly over the limit. That's when I did something that I've never done before - I took a cab home. Sure enough on the way home there was a police road block but since it was a cab they waved it past. I arrived home safely without incident. This was a real surprise as I had never driven a cab before, I don't know where I got it and now that it's in my garage I don't know what to do with it.



Make Someone's Christmas BLUE (as in "Angels")

A Gift that'll leave 'em weak in the knees

Mall of America

http://www.flyaces.com/?utm_source=Campaign+Created+2014%2F11%2F25%2C+7%3A40+AM&utm_campaign=Mailing+12-1-2014&utm_medium=email

A fella by the name of Tom ? has been building a Zenith 601 this past summer at the Dodge Center airport. He decided he wasn't going to complete the project so Wayne Trom has been trying to sell it for him. After three months and no luck, Gordy suggested a gift be made to EAA 100 - which he has done. It is air-frame wise pretty well put together but has been disassembled for storage. Gordy, Stan, and Alex have moved it into Gordy's hangar as it is a more suitable place to show the project to anyone interested in purchasing it. Attached are some photos of it.

Anyone interested in taking a look at it can give Gordy a call (507-259-8018) to set up a time to check it out. They have reviewed the parts and feel that \$1,500.00 (negotiable) is a good starting price as many areas of it could use new skin.







