



The Frederick Flyer

President's Message

Greetings, EAA Chapter Members



SolarImpulse.com

Bertrand Piccard and André Borschberg co-founded a company in Switzerland in 2003 to build and fly solar-powered aircraft.

In December 2009, test pilot Markus Scherdel test flew the experimental, solar-powered HB-SIA Solar Impulse for the first time. Markus did receive the Iven C. Kincheloe Award from the Society of Experimental Test Pilots for that flight, an award offered each year to outstanding test pilots.

In 2010 they succeeded in the first 24-hour flight of a solar-powered aircraft. In 2011, they made the first flight across Europe. In 2012, the first flight from Europe across the Mediterranean Sea to Africa and back.

Now, in 2013, the team is in the United States with a new model Solar Impulse HB-SIB with the wingspan of a 747 and four 10-HP motors, flying from San Francisco to New York with stops in Phoenix, Dallas, St. Louis and Washington D.C. (Dulles). All this with out a drop of fuel! Each stop will be for about ten days. Weather will play a huge part in this trip. The Solar Impulse cruises along at about 40 miles per hour. In 2015. the goal is to fly around the world!

I for one plan to enjoy the sight of this aircraft making history approaching and landing at IAD. How fortunate we are again to have an event in our backyard for us to see! I hope to hear from many of you who share the excitement and plan to witness this cutting edge experimental aircraft!

Wishing you clear skies,

Mark Gosselin
President EAA Chapter 524

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June Membership Meeting Program

Dave Hirschman will present the program for June, the topic of which is "The World's Best Places to Fly". Dave, a member of our Chapter and a writer and senior editor for "AOPA Pilot" magazine, will inform us on the hazards, methods and skills involved in shooting the spectacular aerial photographs that accompany his articles about flying small aircraft in some of the remote corners of the earth. Don't miss this one!



Ford Tri-Motor Committee Meeting Minutes

The Ford Tri-Motor Exploratory Committee held its first meeting on Friday, May 17. Present at the meeting were Doug Kelly, Mark Gosselin, Jerry Blake, Joe Halleman, Chris Gunther, Jack Fromm and Adam Smith. Mark Gosselin passed around a "Tour Handbook" planning document that he had obtained from EAA. One thing everyone agreed on at the outset was that interest in holding this event was still very high among all parties; our Chapter, Frederick airport, Landmark Aviation and AOPA. It was felt that our airport is an ideal venue and that there is great potential for exposing our Chapter to new recruits as well as for raising some much-needed revenue. The major roadblock at this point is that EAA has not committed to any dates yet for the tour stop at our

airport. Until we know the potential dates, we can't really commence planning in earnest or recruiting sponsors. Nevertheless, the committee voted to proceed on a tentative basis, pending the confirmation of timing from EAA. Doug Kelly will communicate to EAA the urgency of locking in some dates as soon as possible, at a minimum before our next Chapter meeting. Other committee members volunteered for various tasks and AOPA even committed some sponsorship money. If we do get the confirmed dates from EAA and we decide to proceed, it will require an all out effort from our Chapter membership to make this a success. Please consider attending the June membership where we will discuss this initiative in more detail.

Learn To Fly Day — Volunteers Requested

AOPA is hosting this year's edition of Learn To Fly Day on Saturday, June 8 (rain date June 9). The event will take place from 10:00 a.m. until 3:00 p.m. Sorry about the short notice. Things have been complicated by the threatened, and now postponed, tower closing. Once

again, AOPA is requesting help from our membership for flight line ground crew duties. Please let Mark know as soon as possible if you are willing and able to volunteer. Here is a link to their [Facebook event posting](#).



Upcoming Events - Neighboring Chapters

EAA Chapter 1384 is sponsoring the First Mid-Atlantic Gathering of RV's at the Carroll County Regional Airport (KDMW - Westminster, MD) on Saturday, July 13th (Rain Date - Sunday, July 14th).

Food and Drinks will be available, along with lots of prizes and FUN FOR EVERYONE!

Chip Lock will be present with his RV-12 and demo rides will be available.

We will take an official picture of all airplanes in attendance at 1330 hours. We are expecting 50-100+ RV's!

Updates to this event will be posted on our [Chapter 1384 website](#).

EAA Chapter 1041, The Gettysburg Barnstormers, will host their Wings, Wheels, & Pancakes Fly-In/Drive-In Breakfasts on June 1 & 2 and September 28 & 29 at Gettysburg Regional Airport (W05).

Breakfast will be served both days starting at 8 am through 12 Noon. Menu includes pancakes, eggs, ham, sausage, homefries, coffee, tea, & juice. Adults \$ 7.00, kids under 12 \$3.00.

This is the 150th anniversary of the Battle of Gettysburg during the Civil War. And this year, avgas will be available right at the airport. Antique & classic car display, hangar flying, fun for everyone.

Join us for the best breakfast around! For more information, contact Ellie & Jim Sheen at 717-360-6382 or sheenej@comcast.net

Regress Report — Baffling Problem

That's not a typo in the title of this article. Unfortunately, this is the opposite of a progress report.

My Van's RV-8 is approaching the ninth anniversary of its first flight. It's a pretty low-time airplane – fewer than 300 hours – but still I have been pleasantly surprised that I have had almost no maintenance issues. With every inspection and preflight, I have been on the lookout for things that are known problems with my model or the Van's series of aircraft in general. Things like the lower cowl hinges for those that choose to go with the stock cowl attach method. The eyelets on those hinges are prone to breaking off. Mine are all still present and accounted for. Naturally I was starting to feel pretty proud of myself for avoiding all of the well known pitfalls so far. That is until I looked under the hood while beginning my current condition inspection. That brought me down to earth quickly.

I discovered two cracks in a piece of aluminum angle that forms part of the oil cooler mount. For those of you not familiar with Van's kits, this is one of those areas that is notoriously problematic. It is well known in the RV

builder community that if you go with the stock cooler mount shown in the plans and included with the baffle kit, you are pretty much guaranteed to experience cracking sometime down the road. The plans call for the cooler to be mounted to the engine baffles behind the #4 cylinder. It seems pretty obvious that hanging a relatively heavy component like an oil cooler off of some thin aluminum sheet might entail some issues. The Van's design doesn't help much. I'm not sure if later kits have been improved but back in my day, all they offered was a single piece of .032" aluminum to be riveted to the baffle to serve as a doubler. Most builders have opted to go with other solutions, either improving the design of the baffle mount or going with the more drastic step of mounting the cooler to the firewall. The latter solution has its own set of compromises so I did not choose to go that route. I decided to engineer my own modified baffle mount. In addition to not being very strong, the Van's design had another drawback in that the cooler, being mounted directly to the baffle wall, had a good deal of its surface area blocked by the #4 cylinder, which it was almost touching. That compromised its cooling efficiency (another known problem of the Van's design). My idea



was to build a box out of .049" aluminum square tubing and angle that would serve as a plenum to space the cooler away from the cylinder as well as form a strong and rigid mounting surface for the cooler. So I ordered the materials, dusted off my welding skills and made me a plenum. It took a little thought to work out the riveting details – some blind rivets were called for – but in the end, I was really happy with the arrangement. I thought with all that beef and all that surface area to spread the load, there was no way I was ever going to have any cracks.

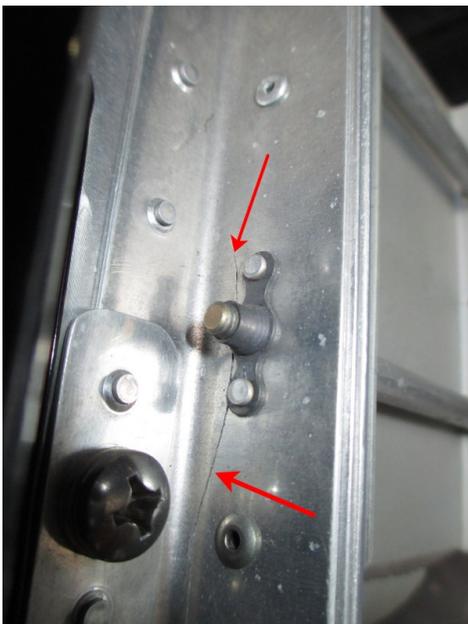
That's why it was so disheartening to find these two pesky cracks. And it's not just the blow to my pride. Almost all phases of building an airplane are fun. Then there are phases that don't qualify as fun, but at least can produce satisfying results. Fiberglass work, for instance. It's hateful stuff, but at least after you've gotten a part to fit perfectly and feel silky smooth, you can stand back and admire the the beauty of it all. Not so with the engine baffles. That job just has no redeeming qualities! Fitting and mounting them is just an exercise in tedium and frustration. Well guess what? There is just one thing worse than fitting and mounting them – removing, repairing and re-mounting them.

Now that I've resigned myself to the nasty job ahead of me, the question remains: why did the cracks develop and

what kind of repair can I do to prevent them from returning? Initially I was at a loss to understand how the cracks could have happened. The piece of angle in question is part of a sandwich comprised of four layers of .032" aluminum plus the .049" square tube! This is by far the beefiest part of the whole cooler mount. The other three sides of the plenum are riveted to a just a single thickness of the baffle wall. Also, I thought the location and path of the cracks themselves were a little unusual. I would have expected them to develop from a rivet. I was stumped until an idea occurred to me while looking at the pictures. In the picture shot at a right angle to the mount, I thought I could see a slight bending of the nutplates. Those nutplates are flush riveted through the piece of angle, not through the whole sandwich. Perhaps I didn't countersink the angle deeply enough for the rivets and the heads were projecting slightly above the surface of the angle. That would mean that the tension of the bolt would try to bend the nutplate and introduce some stress into the leg of the angle. I could see where that might produce just that kind of crack.

If that's the case, it gives me a couple of ideas on how to rectify things with the repair. I'd be interested in hearing from other Chapter members if they have any better theories or ideas.

- Jack Fromm





Upcoming Events

Chapter Meetings

June 6, 2013 @ 7:30 p.m. — Monthly General Meeting

June 13, 2013 @ 7:00 p.m. — Board Meeting

Other Events

May 22, 2013 — Cub Scout Program at the AEC

June 1&2, 2013 — Wings, Wheels & Pancakes - Gettysburg, PA

June 8, 2013 — Learn to Fly Day - KFDK

July 13, 2013 — Mid-Atlantic Gathering of RV's - KDMW

Chapter Program Schedule — 2013

Month	Program
January	Learning My New Gyrocopter Claudius Klimpt
February	Stalls, Spins and Fear in the Cockpit Tom Proctor
March	Banquet Speaker Adam Smith
April	Adventures of a DAR Bobby Thomas
May	Evolution of the Wright Brothers' Control System Jerry Blake
June	The World's Best Places to Fly Dave Hirschman
July	
August	Electric Flight — Part II Rodney Martz
September	
October	
November	
December	

Refreshment Volunteers — 2013

Here is a list of volunteers supplying refreshments for 2013. The Board of Directors thanks you for your support (and munchies).

January	Jack Fromm	July	No meeting
February	Charlie Becker	August	Joe Halleman
March	Banquet	September	Jack Fromm
April	Peg Jones	October	The Paks
May	Bill Barci	November	OPEN
June	Ernie O'Roark	December	OPEN

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Tom Young
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Workshops

EAA SportAir Workshops

March 2-3, 2013 — RV Assembly

EAA Events

Go to EAA Events at: <http://www.eaa.org/news>

Go to EAA Aviation Calendar of Events at: <http://www.eaa.org/calendar>

Go to AirVenture at: <http://www.airventure.org/index.html>

Go to EAA SportAir Workshops at: <http://www.eaa.org/sportair>

Chapter Website

The EAA Chapter 524 website can be found at: www.524.eaachapter.org.

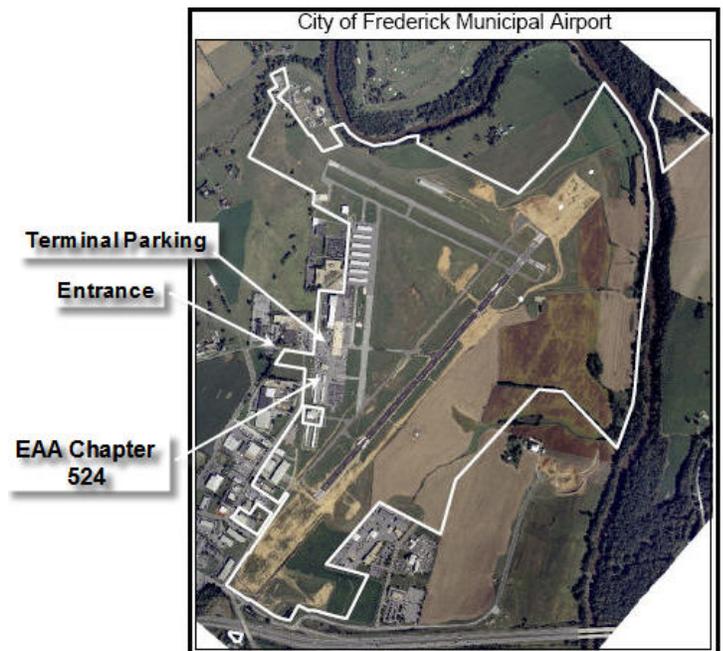
The website has contact information and details about current Chapter events.

Also on the website, you can find archived newsletters and a membership join/renewal form.

The webmaster can be contacted at EAA524@gmail.com.

Chapter Meeting Location and Time

Chapter 524 meets the first Thursday of each month at 7:30 p.m. at the Aviation Education Center, located at the Frederick Municipal Airport. As you enter the airport, park in the Terminal Parking lot. Walk south past the Frederick Flight School (yellow building). There are signs on the end of the second row of hangars for the Chapter. Additional information can be found on the Chapter website:



Aviation Education Center
 Frederick Municipal Airport
 111 Airport Drive East
 Frederick, Maryland 21701

EAA Chapter 524 Membership Application

Annual dues are \$50 for individual or family membership. Fill out this form and return it with your dues to the Chapter Treasurer.

Cash or check accepted. Make check payable to **EAA Chapter 524**. Bring the form and dues to the next meeting or mail to **Neil Dickinson, 119 Heritage Lane, Sykesville, MD 21784**.

If you have a question about your membership, contact the Treasurer at 443-340-3401 or RNeilDickinson@netzero.net. These dues help support the Chapter and are not applied to the national organization.

I. Registration Information (Print please)

Last Name _____ First Name _____

Member Status: New ____ Renewal: _____ No Changes: _____

Membership Type: Individual (\$50.00) _____ Family (\$50.00) _____

Other name(s) if Family Membership _____

EAA Membership Number _____ Member Since: _____

Phone Number (H) _____ (C) _____ (W) _____

Address _____

City _____ State _____ Zip _____

E-mail Address (for receiving notices & newsletter) _____

Aircraft/Projects/Interests _____

II. For Official Use Only

Status: New ____ Renewal ____ Individual: ____ Family: ____

Dues Paid: Check ____ Number _____ Cash ____ Amount \$ _____

Date Received ____/____/____ Fiscal Year (Jan. – Dec.) 20 ____

Treasurer's Initials _____ Roster updated ____/____/____ Deposited ____/____/____

----- Cut here. Keep Section III for your records -----

III. Member's Receipt for EAA Chapter 524 Dues

Date paid ____/____/____ Dues paid for fiscal year 20____

Renewal – Individual/Family Membership Dues: \$50.00_____

New – Individual/Family Membership Dues: \$50.00_____



Aviation Education Center
Frederick Municipal Airport
111 Airport Drive East
Frederick, Maryland 21701