

WINTERMAIL

EAA CHAPTER 25

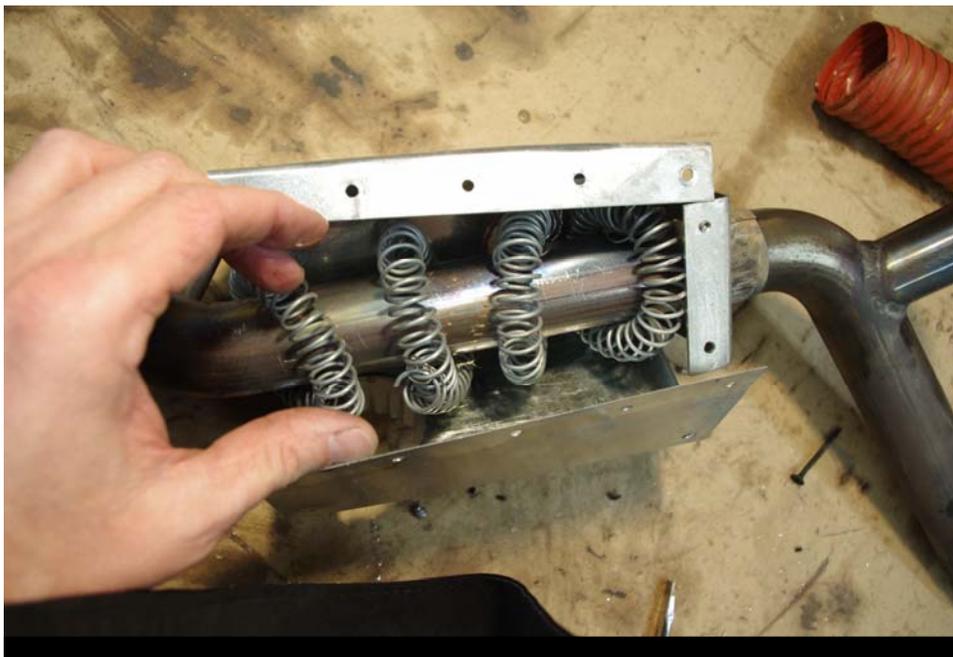
MINNEAPOLIS / ST PAUL, MN

JANUARY 2014

Improving the Heat Muff on My

Airplane

by Pat Hoyt



One of the challenges that I've had with my airplane is getting enough heat into the cabin during the winter.

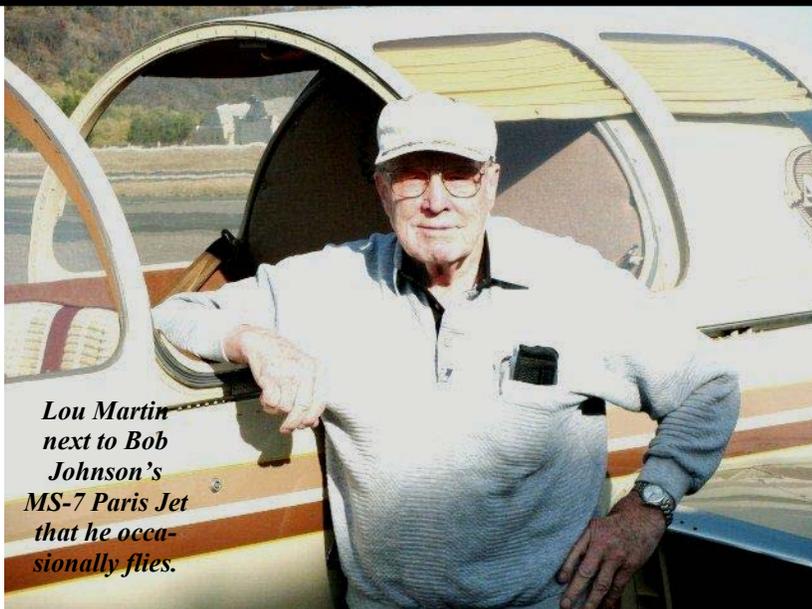
The original heat muff that I built consisted of a stainless steel box that enclosed a length of steel door spring that was wrapped around the exhaust pipe (as shown in photo to the left), with the idea that the spring would provide more surface area for (Continued on page 4)

They Expect Us Home in the Evening

Lt. Col. Lou Martin USAF (ret.)

EAA 514678 Contact: pilotlou@aol.com

In my book Close Encounters with the Pilot's Grim Reaper, I wrote about narrow escapes I experienced during my 60 plus years and 19,000 hours of flying. This expose included obtaining a Private Pilot's Certificate at age 17, twenty-two years as an Air Force pilot (Continued on page 5)



Lou Martin next to Bob Johnson's MS-7 Paris Jet that he occasionally flies.

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Jan meeting, Nov minutes

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"Say Intentions"



-an update from Kim V. (Gudgeon Pin) Johnson, EAA Chapter 25 President

We are going to have a double treat at our Chapter meeting on the 15th this month to start off another exciting year in aviation. While I hope all of you had as fulfilling a holiday season as I did, it feels good to get back to our regular schedule and moving toward flying season again.

First of all, thanks to John Schmidt, we are going to have instructor Dan Lutgen, and two students, Brandon and Leah, from the Canby High School Aviation Dept. tell us how they won the General Aviation Manufacturer Association (GAMA) virtual aviation design challenge. This earned them an expenses paid trip to the Glasair manufacturing plant in Arlington, WA where they built two airplanes in two weeks under Glasair's two weeks to taxi (TWTT) program.

Next, thanks to Dan Carroll, Dr. Randle S. Corfman is coming to teach us "Survival Medicine for Aviators", which is heavily weighted toward winter flying. Randy is president of the newly formed Minnesota Pilots Association whose aim is to serve as an organization which brings together members of EAA, AOPA, flying clubs, 99's, etc., in order to generate a more active voice in matters pertaining to pilots and general aviation in Minnesota. The Minnesota Pilots Association is hosting the First Annual Great Minnesota Aviation Gathering at the Golden Wings Air Museum on March 21-22, 2014, to which Chapter 25 members are invited, so reserve these dates on your calendars.

Dr. Corfman speaks annually at the Montana Aviation Conference, and semi-annually at the Great Alaska Aviation Get Together in Anchorage on topics ranging from survival medicine to navigating the new FAA MedXpress medical certification process. Dr. Corfman is an AME and can bring us up to date on the medical certification process. Randy is a member of Chapter 237 at Anoka. All who attend will receive FAAST credit under the Wings program.

Don't forget to bring a package of: pre-cooked brats, hot dogs, hamburgers, buns, condiments, deli salads, beans, chili, chips, cookies, plastic utensils, paper plates, cups and paper towels, soft drinks and water and bring them to the Chapter meeting. We will need a couple of volunteers to cook.

Every Wednesday evening that there is not a Chapter meeting, there is a Chapter 25 Pietenpol building project in which you can participate. We start at 6:00 pm at Dale Johnson's workshop in Burnsville. Come ready to work and we'll give you a task to do in the building of a Pietenpol Air Camper. Find a Piet builder to talk to if you have questions about this.

There is no lack of opportunities for involvement in Chapter

(Continued on page 8)

ON FINAL



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This Month: Wed Evening Jan 15th—BSAEC at Airlake

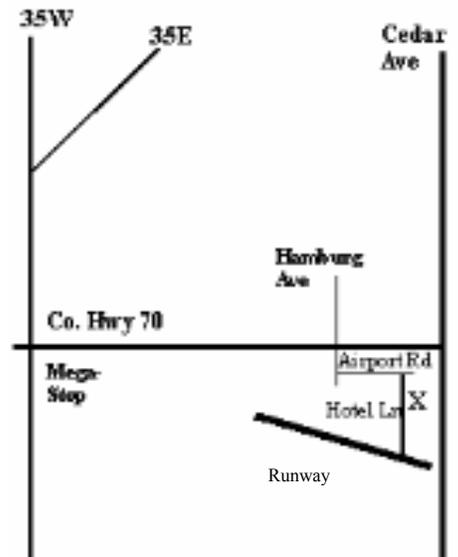
Grill on at 6pm, Meeting starts at 7pm

Please bring something to share: pre-cooked brats, hot dogs, hamburgers, condiments, deli salads, beans, chili, chips, cookies, plastic utensils, paper plates, cups and napkins, soft drinks and water. We also need a couple volunteers to cook!

Program: 1) Dan Lutgen, and two students, Brandon and Leah, from the Canby High School Aviation Dept. tell us how they won the General Aviation Manufacturer Association (GAMA) virtual aviation design challenge. 2) Dr. Randle S. Corfman is coming to teach us "Survival Medicine for Aviators", which is heavily weighted toward winter flying.

Saturday Jan 18th Young Eagles at Airlake, 9 am. To volunteer to help with young eagles, contact **Kris Olson:** 651-675-6826 ksimpson2@yahoo.com

Directions to BSAEC (Chapter Hangar at Airlake): South on I-35 to Hwy 70 (Megastop), then East to Hamburg Ave (3rd stop sign.) Right turn and South to airport perimeter road. Left on airport perimeter road then right on Hotel or India Lane. If the surface is firm, please park on space between hangars.



EAA Chapter 25 Meeting Minutes November 20, 2013

Presiding Officer: Kim Johnson

Location: Bert Sisler Aviation Education Center at Airlake Airport

Chapter Meeting Minutes

Kim Johnson recognized guests.

Lou Martin led the pledge of allegiance. We had a moment of silence for all who gave us this freedom.

The food coordinators were Kris Olson and Ned Lebens.

Kris Olson gave the treasurer's report; we show cash balance of \$16,440 as of 11/19/13. Kris is taking orders for 2014 EAA calendars.

Bill Brown had to make the tough call to cancel Young Eagles due to bad weather last Saturday.

Bert Sisler thanked all the volunteers who recently helped with the broken propeller.

Officer elections were unanimously approved. President, Kim Johnson; Vice-President, Ned Lebens; Treasurer, Pat Hoyt; Young Eagles Coordinator, Kris Olson.

Nomination was made and seconded for Gordon Duke to serve as 2014 Secretary.

There will not be a December meeting

Christmas party will be held at Dick and Joan Navratil's home on December 8th.

There will be a social party at the FBO December 13th from 5-9.

Program

Ed Chapman, Chief Aeronaut of Balloon Ascensions Unlimited. Spoke about piloting balloons.

Submitted by: Paul Brown



Thanks to Pat Halligan for sending this photo of Ed Chapman speaking at our November meeting. Note the balloon basket under the flag.

Final Approach Trivia Quiz from John Schmidt

The radial-engine growl of Waco biplanes stirs the romance of flight in the hearts of many pilots. True or False: the last airplane designed, built, and flown by Waco (in 1947) was a pusher, with tricycle gear.

Answer on page 7

Improving the Heat Muff on My Airplane

(From Page 1)

transfer of heat. This setup provided token heat at best, and for anything below about 45 degrees it was just about worthless. I needed to do something better...

I began by removing the exhaust pipe from the left bank of cylinders, along with the old heat muff. I bought some thin stainless steel sheet and some stainless steel hose clamps from the local Home Depot Aviation Supply Center, and brought the whole thing home to my workbench...

Carefully drilling out the old steel rivets allowed me to remove the innards that I'd originally used, while enabling me to re-use the original box and connections.

New heat muff guts were fabricated from thin strips of stainless steel sheet, cutting "tabs" and then bending them up in varying amounts, followed by wrapping each strip around the exhaust and securing it with a hose clamp (see photos #2 and #3). I made a bunch of these, with the idea being to force the flowing air to "not have an easy way through". I considered using Steel Wool as a heat-transfer material inside the heat muff, but a test with a propane torch quickly eliminated that idea in a rather entertaining manner (steel wool actually burns quite well).

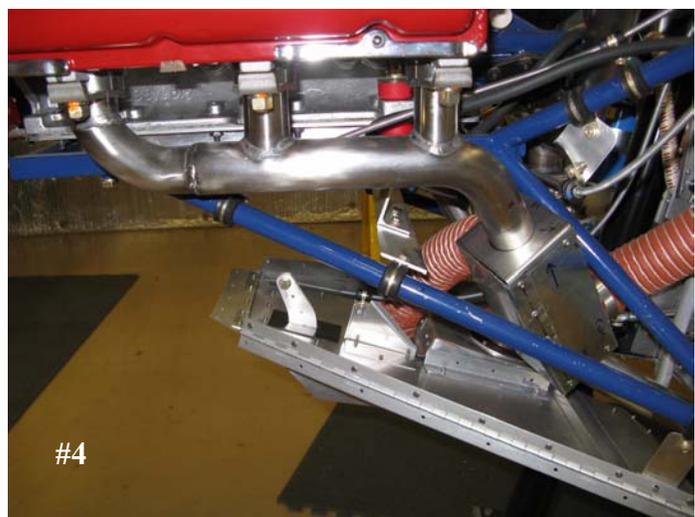
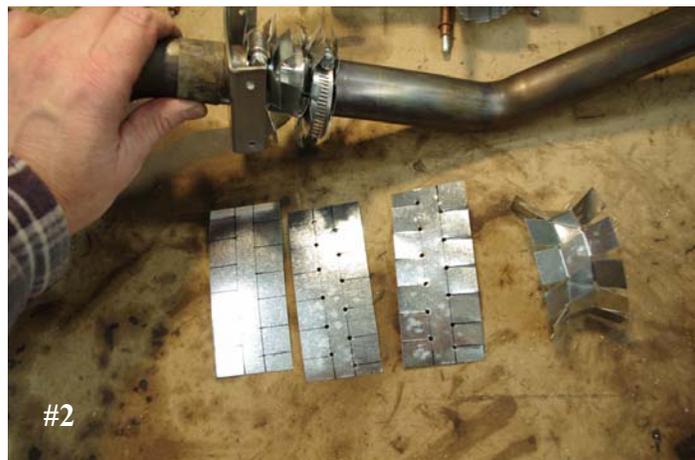
I also fabricated two stainless steel "airflow directors" inside the heat muff. One inside the air inlet and the other inside the air outlet. The idea behind these is to force the air to "take the long way around", picking up more heat. Before re-installing the heat muff on the exhaust, I used a pneumatic hammer to tap down a portion of the muff's housing that was too close to touching my engine mount. Now I've got a good clearance between the two pieces. Photo #4 shows the final installation, which is also lighter in weight than the original setup.

Test results are good. I am able to get much more cabin heat now than I did before. While doing touch-and-go's the other day in about 25 degree weather I would run the cabin heat for a little while, and then turn it off. Additionally, the carb heat is much improved. I have an analog carb temperature gauge on the panel and can see the needle move when I turn on the carb heat. Have not had any issues with Carbon Monoxide (I use 2 of the credit-card sized CO detectors).

Still, when it's really cold outside I don't like to fly too far out, no matter how well the cabin heater works. Last thing I want is to find myself in some kind of "survival situation" while sitting out in some field someplace in the middle of winter...

This makes winter flying more comfortable, and working through this has given me some ideas that I will use on my next airplane.

Patrick Hoyt
N63PZ



They Expect us Home

(Continued from Page 1)

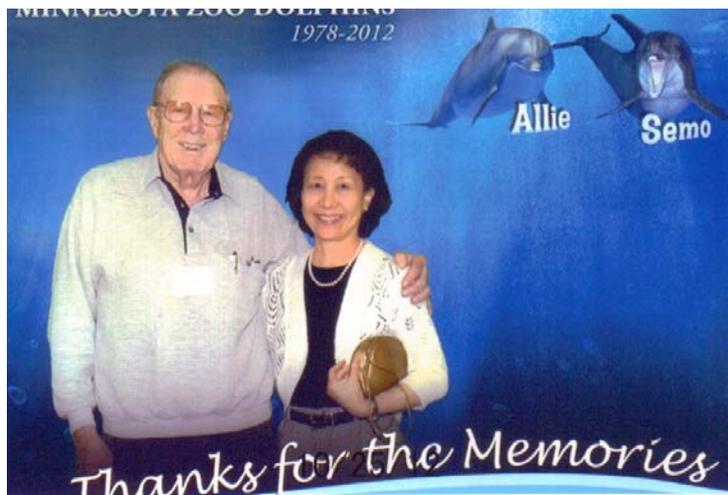
(including 169 combat flight hours in Vietnam), five years as a captain for Japan Airlines, three years as a charter pilot in Iran, nineteen years as an FAA Inspector Pilot, ten years as a war bird pilot with The Planes of Fame Air Museum in Minnesota and flying gliders in Germany, Japan, California and Minnesota.

This experience, particularly as a pilot in the U.S. Air Force, exposed me to the inherent dangers associated with challenging flying. I knew that it was possible that I might become a statistic in a fatal accident as many of my close friends had. However, I accepted this reality even though I knew it would leave behind grieving family members and colleagues who shared in this romantic approach to aviation and the dangers associated with it.

However, as I grew older, and acquired a family, a house, an airplane, several automobiles, kids in college, material trinkets and a reasonable amount of wealth, I realized that my becoming an accident statistic would encompass consequences that would be more calamitous. It would leave behind grief-stricken love ones who would be responsible for arranging my funeral, working with a probate court, settling life insurance claims and making many difficult financial and managerial decisions. The thought of this potential aggravation being suddenly thrust upon them caused me to be ever more careful when flying. We owe it to those who love us to fly safe. Always keep this mantra in mind. "They expect us to come home in the evening." (Nowhere is it written that we must experience an aircraft accident.)

Over the years, flying has become markedly safer and aircraft have become prominently more reliable, but as the number of accidents has decreased, the primary cause of them has remained primarily pilot error. This unanticipated fact is mainly due to an ever-increasing onslaught of individual complacency, or a feeling, "That it can't happen to me!" Modern aircraft are so reliable that real in-flight emergencies are rare. There are veteran pilots flying today who have never experienced a real aircraft emergency except in a simulator or training device. This lack of exposure has the possibility of leaving some pilots with an unanswered question as to how they will react when suddenly confronted with a life-threatening situation and as a result they may react in a hurried inappropriate manner when taking action to correct the problem.

To help illustrate the insidious danger of contracting the complacency virus I have listed a few examples of experienced pilots who had fallen victim to it and were forced to suffer the calamitous consequences. If it happened to them perhaps, it could happen to you. If I took the time, I could fill a book with similar examples.



Lou Martin and his wife Chieko in 2010. Chieko was a senior flight attendant for Japan Airlines who Lou met when flying as a captain for Japan Domestic Airlines in 1972.

1. Professional golfer Payne Stewart died when his Learjet lost pressurization causing everyone onboard to pass out. The aircraft crashed after flying 1,500 miles on autopilot when it ran out of fuel.

2. Senator Paul Wellstone died when it appeared his pilots had become so engrossed in trying to locate the airport, through a low ceiling and snow showers, that they allowed the aircraft to stall and crash.

3. A B-737 experienced pressurization problems when en route to Athens, Greece. (The captain apparently thought that the pressurization warning horn was a gear problem.) The aircraft, on autopilot, continued its climb to 35,000 feet and everyone onboard passed out from lack of oxygen. After running out of fuel, it crashed but since it had flown several hours un-pressurized at minus 65 degrees Fahrenheit all the bodies were found frozen.

4. A Hawker Beechcraft crashed in Owatonna, MN, killing eight when the pilot appeared to react in a slow unprofessional manner when attempting to make a go-around after landing in a strong tail wind generated by a passing thunderstorm.

5. New York Yankee's pitcher Cory Lidle was killed when his aircraft flew into a high-rise apartment after he apparently misjudged the distance required to execute an in-flight U-turn over the East River.

6. It was reported that two NWA pilots over flew the Minneapolis Airport by 150 miles in an A-320 because they were distracted while working on their laptop computers.

7. Singer John Denver was killed when his Long EZ crashed after running out of fuel.

(Continued on page 6)

They Expect us Home

(Continued from Page 5)

Before taking off it was reported that he failed to top off his tanks even though he was recommended to do so.

8. Luke Bucklin crashed in Wyoming after taking off in snow showers and a forecast of turbulence and icing conditions over the mountains. He crashed at an altitude of 11,000 feet while attempting to climb to 15,000 feet in a non turbo-charged aircraft.

9. The number three engine on a B-747 failed when departing San Francisco. The copilot making the takeoff apparently mishandled the emergency so badly that the aircraft nearly crashed. It was reported that he had not performed a takeoff in an actual aircraft in more than a year and only experienced a similar emergency in a simulator.

10. A B-727 experienced pressurization problems when departing Chicago in IMC conditions. It appears that the flight crew became so distracted in adhering to ATC instructions that they did not recognize the problem. After the passenger oxygen masks deployed a flight attendant came to the cockpit wearing a portable oxygen mask. With the flight crew about to pass out the first officer donned an oxygen mask and initiated an emergency descent.

In 2008, I was in the process of revising my book *Close Encounters with the Pilot's Grim Reaper* when I experienced another unexpected inexcusable close encounter. I included this event in the revised book and reprint it below as I feel that it epitomized the need to prevent our brain from slipping into a "screen-saver" frame of mind.

"Author's final Note: I thought that when I retired from professional flying the PGR would give up on me, but I was wrong! Following a book-signing visit to Owantona, Minnesota, I was flying back to Air Lake Airport with a planned over fly of Stanton Airport (the homeport of the Minnesota Soaring Club). Approaching Stanton at 3,500 feet, I switched to their radio frequency to decide if it would be feasible to land and make a glider flight. I made a visual check for airborne gliders and observed none but noted a long line of gliders on the ground waiting to be launched so I decided to continue toward Air Lake. I momentarily directed my attention inside the cockpit to change radio frequencies and when I again looked up there was a Schleicher ASK-21 (a two-seat German glider), slightly above, but heading directly at me. We missed colliding "head-on" by about 75 feet. This near miss was so fleeting that I did not have time to initiate evasive action. I do not believe the glider pilot observed my aircraft as I was in his "blind-spot" directly below his nose. As we



Lou Martin in front of the Wildcat fighter he flew to Newton, IA for an air show in 1995.

passed the thought passed through my mind of how shocking it would have been for my wife and family to be informed that I was killed in a mid-air collision. I was with my wife when she was informed that her mother had suddenly died and was able to hold her in my arms and comfort her, but I would not be with her during this heartbreak. In addition, a tragic irony would occur when investigators sifted through the wreckage of my C-150, as they would find unsold copies of my book *Close Encounters with the Pilot's Grim Reaper*. As I lay in bed next to my wife that night, it was difficult to erase the image of the glider I almost collided with and how terrible she would feel to have the space next to her empty for the rest of her life. The PGR never sleeps and cockpit complacency is his "siren-call" to strike."

Remember, they expect us home in the evening!

Lt.Col. Lou Martin USAF-(Ret.) has also written: *Wings Over Persia and My Life in Ladysmith Wisconsin 1928 to 1948*. Lou can be contacted on the "EAA Speaker's Bureau webpage" a Google search on Lt.Col. Lou Martin and E-mail pilotlou@aol.com.



Stuff for Sale/Wanted

Wanted: Your dusty old VFR instruments for my Pietenpol project. Please contact Ned Lebens 952-567-3329 or nlebens@gmail.com

For Sale: Ellison EFS-2 Throttle Body Injector
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Thanks to Pat Halligan for sending this photo from the Christmas party at the Navratil's on Dec 8th

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Answer to Final Approach Quiz (See page 3)

True. The Waco Model W Aristocraft was a four-seat monoplane, with a 215hp Franklin mounted in the front and a shaft-driven pusher propellor in the rear. It featured all-metal construction, twin tails (think Ercoupe), and partially-retractable tricycle landing gear. Although the company had orders for 300 aircraft, only one was built before the doors were closed.



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Chapter Events

Jan 15th Chapter Mtg at BSAEC, 6 pm
(see page 3 for map & directions)

Jan 18th Young Eagles at Airlake
contact Kris Olson (see p2) if you can volunteer

Future meetings 2/19, 3/19, 4/16, 5/21,
6/18, 7/16, 8/20, 9/17, 10/15, 11/19, 1/21

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“Say Intentions” *from page 2*

25 activities. We will work it out so that you can participate at your own level of availability. We are looking for a Food Coordinator, a BSAEC hangar maintenance task force, newsletter writers (write a story about an aviation experience or an interview someone about their aviation interest) and a librarian.

Four of my goals for Chapter 25 continue to be:

Encourage Chapter 25 membership by young men and women with an interest in aviation.

Encourage younger members to get actively involved in Chapter 25 activities.

Have all members get to know each other better.

Perpetuate the Chapter 25 Mission of furthering interest in building custom aircraft and supporting all with an interest in aviation by sharing our knowledge and experience.

“Each morning when I open my eyes I say to myself: I, not events, have the power to make me happy or unhappy today.”

—Groucho Marx, American comedian

Looking forward to seeing you at the meeting!



Classic Flying Quotes... *from Jim Ladwig*

1. There is no problem so complex that it cannot simply be blamed on the pilot. ~ *Dr Earl Weiner*
2. To invent an airplane is nothing. To build one is something. To fly is everything. ~ *Otto Lilienthal*
3. Safety second is my motto. ~ *Locklear*
4. Speed is life, altitude is life insurance.
5. The man who flies an airplane ... must believe in the unseen. ~ *Richard Bach*



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