Squawk 902

Vol. 36 Issue 11 https://chapters.eaa.org/eaa902 **November, 2023**

What's Inside:

President's Message
EAA 902
November 2023

Welcome to unpredictable fall flying weather. I want to remind club members of the challenge to bring a fellow pilot or aircraft builder to the club meetings so we can continue to grow this club. It is the club members that help with keeping the club going, not just the leaders of the club. I am always looking for new ideas, so please let me know your thoughts and ideas on making this club stronger.

At last month's meeting, we had the garage all set up with donated tools and airplane parts. We sold a few things, but there is a lot more. If you have any ideas on how to get rid of this stuff and make the club a little bit of money, please let me know.

During this month's meeting we will be holding election of officers and board members, so if you are interested, please let me know ASAP. The calling volunteers did a great job, but no new names have appeared. If you want this EAA Chapter 902 to continue, we need officers and board members to make it work. I am also good at appointing members, but I would rather have the members come forward voluntarily. Please come to the meeting on November 8 and help elect the new officers and board.

The holidays are fast approaching and the board decided to schedule our annual holiday event on Saturday, December 2, 2023, at 6 pm. We will be deciding on the menu at this month's meeting. Members can volunteer to bring the different food items, so if you have something specific you want to bring, please let us know at the meeting.

This year's holiday guest speaker will be Arty Trost. She has done a number of presentations and they are always very interesting. This summer Arty flew her Aeroprakt around the entire US coast line. She then flew to Oshkosh and across the northern part of the US back to Oregon accumulating a total flight time of over 135 hours. This should be a great presentation for members and their spouses/guests.

Thanks and hope to see you all at the next meeting on November 8, 2023.

Larry Stevens, President

EAA Chapter 902

Web Site: https://chapters.eaa.org/eaa902

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Show me the Money

October 2023

Chapter balance as of 09/30/2023 ---------- $7,010.05

General fund balance as of 09/30/2023 ---- $1,610.45

Income ----- Donation from EAA 1524 -- $1,466.88

Bottle Drop ---------- $500.00

Garage Sale ---------- $292.00

50/50 Raffle ---------- $32.50

Coffee/Pop ---------- $11.00

Expenses --- PGE---------- $33.68

Mowergas ---------- $40.00

General fund balance as of 10/31/2023 ---- $3,839.15

Young Eagle fund ----------$2,061.10

Ray Scholarship funds --Gavin ---------- $476.00

Jackson ---------- $2,862.50

Excess allowed funds returned to EAA ---- -$1,700.80

Jackson's Balance $1,161.70

Chapter balance as of 10/31/2023 ---------- $7,572.95

Cover:

EAA Chapter 902, meets on the 2nd Wednesday of each month at 7:00 PM. (6:30 For BBQ's)

Larry Stevens is Chapter President and you can reach him at (503) 632-1944.

Directions to Mulino airport:

From I-205 take exit onto Hwy 213 south-bound. Continue on Hwy 213 to the town of Mulino. The EAA Chapter Clubhouse is about 1/4 miles past the restaurant, on you right. **13801 S. Darnell Rd.**

Chapter Meeting: Next meeting on the 11th At 7pm

Mt. Hood Chapter 902 Experimental Aircraft Association

General Meeting Minutes October 11, 2023

President Larry Stevens called the business meeting to order at 7PM. About 40 members and guests were present.

Bob Armstrong talked about what he saw at the final Reno Air Races and what he was able to observe of the T-6 class collision in the landing pattern just after its race had ended. The event drew a packed crowd, in good part because it would be the last race to be held at Reno. The stores selling momentoes and memorabilia were sold out on Friday night before the actual races began.

As many as a half dozen other venues are being considered for future races, but it will probably require a few years before they begin.

Bob also discussed how the STOL Drags competitions are performed. Part of the air race program included a demonstration of the completions are performed.

Dave McVey will host a Builders Group meeting so members can view his RV-8 project in its present state of construction on November 4 at 10:00 AM.

Mt. Hood Chapter 902 Experimental Aircraft Association

Board Meeting Minutes October 18, 2023

The board meeting was held at the Arrowhead restaurant. President Larry Stevens called the meeting to order at 6:49 PM. Nine attendees were present.

Pete Gauthier plans to call the Aurora tower to see if they would like to speak about points that local pilots should be aware of when operating within the Aurora Class D airspace.

Tentatively, Dick Scott will present details of his aviation experience and/or EAA Chapter 902 creation and history. In the event that Dick cannot be available, Pete Gauthier will be a backup.

Electing chapter officers and board members will occupy the time normally allotted for Tech Tips. Mike Harfst and Gary Dunfee will call chapter members to determine those willing to accept those positions.

Minutes: Len Fierling moved to accept the minutes from the September 20 Board meeting as presented in the October newsletter. Seconded by Bob Armstrong, and approved by acclamation.

Treasurer's Report: Steve Miller presented his treasurer's report for October 18 which showed a general fund balance of $2,447.27 (itemized separately in newsletter) Len Fierling moved to accept the report which was seconded by Bob Armstrong. A vote was called and the report was approved.

A Garage Sale was held to convert the donated tools and aircraft parts into funds for the chapter and raised $92. About the same time a used tail wheel left over from a chapter Fly Market many years ago was sold for $200.

Christmas: the Christmas dinner meeting will again be held in the Clubhouse - on December 2nd (first Saturday) at 6:00 pm.

Young Eagles: Larry told applicants for the Young Eagles scholarships that active participation in chapter activities would help them get approval. A replacement printer for the Young Eagles certificates will be purchased for $189; the Board had already approved spending up to $250 for it.

Larry will ask Dan Forney to provide KISS instructions for operating the chapter's router/projector system.

Builders Group will be hosted by Dave McVey on Saturday, November 4. He is normally making his 5 mile run at 9 am. After the meeting it was decided the group would meet at 10.

Next board meeting location. The November 15 meeting will again be held at the Arrowhead around 6 pm for those eating, and the business meeting will begin approximately 7 pm.

The meeting was adjourned about 7:39 PM.

WOMAN WITH WINGS

Bendix Winning Duo

Until 1936 the Bendix Transcontinental Air Race, run in connection with the National Air Races, had been a strictly "stag" affair. This was neatly overthrown by a young women who had started her aviation career a brief eight years before. Louise Thaden was doing aviation publicity as head of the women's division of the Penn School of Aviation in Pittsburgh in 1928. In 1929, flying a Travel Air biplane, she won the Women's Air Derby from Los Angeles to Cleveland. She had previously established a women's altitude record of 20,200 feet and a speed record of 156 mph. In 1932 with Francis Marsalis, she made a re-fuelling endurance record of 198 hours. In 1936, she started the Air Marking program with the Bureau of Air commerce.

Also in 1936, she become the first women winner of the Bendix Trophy Race, which she completed in 14 hours 55 minutes for a new women's transcontinental record. Her co-pilot in this effort was Blanche Wilcox Noyes, who shares the glory of this accomplishment. Louise Thaden was awarded the Harmon Trophy as the world's outstanding flyer in 1936. In 1937 she established a women's 100 kilometer speed record with a figure of 199 mph. Her long successful career in aviation has proven an inspiration to many girls who aspire to aeronautics as a life work. THE GIRL WHO BECAME A LEGEND

Perhaps the most brilliant of all the women stars that glittered in the aviation firmament was Amelia Earhart. She became a legend in her time, and even now—years after she disappeared—her name is a familiar one to thousands in this country. She started to fly in California in 1920, and first attracted public attention in 1928, when she flew the Atlantic as a passenger in a Forker Tri-motor. She earned her transport license in 1929, and was a competitor in the women's air derby from Santa Monica to Cleveland during the air races. She became aviation editor of Cosmopolitan Magazine in 1931 and was named Assistant Traffic Manager of TWA. It was in this year, too,that she married George Palmer Putman. She also made an altitude record in an autogiro, reaching a height of 19,000 feet.

In 1932, she took off solo from New York and after a flight of 13 hours 30 minutes (a record) landed her Lockheed Vega in Ireland. This flight of 2,026 miles was the longest ever made by a woman, Three years later, she soloed across the Pacific Ocean from Pearl Harbor to Oakland, California, a flight of 2,400 miles, which she accomplished in 18 hours 16 minutes. this flight was done in a Lockheed Vega monoplane. In April 1935 she flew from Burbank to Mexico City, a goodwill flight of 1,700 miles. After a brief stay in Mexico City she flew to Newark, 2,400 miles to the north which she reached after 14 hours. In the latter part of 1935 she became a visiting faculty member at Purdue University. In 1936, the Amelia Earhart Fund for Aeronautical Research at Purdue received a Lockheed Electra, completely equipped with all the latest navigational and radio devices. She projected a global flight of some 27,000 miles in this aircraft. Her first attempt at globe circling came to grief in Honolulu when a tire blew out on take-off, damaging her plane. The Lockheed was shipped back to the factory to be repaired, and in early 1937, she was ready for a second try. She elected to fly eastward this time, and flew to Florida, where she left the American Mainland. The flight progressed satisfactorily until the plane reached Lae, New Guinea. There Amelia and her navigator Fred Noonan checked over their equipment for the long over-water hop to Howland Island, admittedly the most dangerous of the entire trip. They took off on June 1, 1937 headed eastward toward the infinitesimal speck which was Howland Island. The next morning messages were received indicating that the plane had missed the island and was unable to locate any sight of ships or land. Then the signals ceased, and an intensive search, lasting fifteen days and covering thoroughly all the ares where the plane could have possibly have been down, was instutituded. There was not a trace of plane or survivors, and the hopeless project was abandoned. Proof of her enduring fame is the fact that even now a group has been formed to explore Saipan, hoping to solve the mystery of her disappearance.

Submitted By
DOWN WIND LENNY

G.L.O.C

~~Got Lots of Cash~~

~~Got Lost Over Canada~~

G-Induced Loss of Consciousness

When the F-15 and F-16 fighters entered the USAF inventory, senior leadership soon recognized a threat to operations that was somewhat unexpected. Namely, we now had fighters in our inventory that were capable of experiencing G levels above those of Viet Nam era aircraft. While the cadre of fighter pilots in the USAF was generally in good physical condition, a program to train all fighter pilots in techniques to remain alert and functional while pulling 8-9 Gs was initiated throughout all squadrons in the world. This short article will highlight some of the high G threats to pilots of fighters capable of pulling the G loads mentioned above.

The average pilot, of any airplane capable of pulling Gs beyond the general aviation levels, is capable of functioning at normal capacities up to 4 Gs or thereabouts. One must remember that in normal flight conditions that we experience in our experimental aircraft (cruise flight), we are experiencing the effect of gravity on our bodies of 1G. That means if your head weighs 10 pounds your neck and back muscles are very likely conditioned to move your head with little effort or discomfort about what your head is doing. If you need to look for traffic at 9 o'clock you just turn your head and scan the horizon. Easy peasy! But at 45° of bank (typical BFR maneuver) your body will experience 1.4Gs and at 60° of bank you'll be pressed into the seat at 2Gs of force. Using my last flown fighter as an example, the F-16, if I engage the afterburner and pull on the side stick controller (SSC) it is possible to experience 9-9.5Gs of force. The onset of an increase in loading is under the control of the pilot based on how aggressively he pulls on the SSC. That means if the pilot pulls hard to defeat an attacking enemy or avoid being hit by a surface-to-air missile, his head will go from weighing
10 pounds to 90 pounds in less than a second.

That's the worst case scenario. What happens with a less aggressive onset of G-loading? The first physiological thing that happens is called tunnel vision. With no G-suit or anti-G straining maneuver, the first thing you would notice is a loss of vision. Our eyes need blood to function, of course, but as G-loading increases less blood is supplied to your eyes (and brain). Many times I have experienced a loss of peripheral vision as Gs increase and the more you pull on the SSC, the more your vision "collapses" to the point where your field of view is similar to looking through a straw. You're still awake, aware and functioning, but your eyes are starved for blood and they progressively fail from the perimeter to straight ahead. On numerous occasions young fighter pilots will literally go "blind" as everything on your body is still functioning normally except your vision. The good news is that your vision will quickly return as you perform anti-G straining maneuvers or ease off on the Gs.

In the 1950s pilots of high performance aircraft began to wear G-suits (speed jeans). These are one of the signature "garments" of fighter pilots from that era to today. They are simply a pair of Nomex pants worn—

over the flight suit with bladders (think heavy duty balloons) in the legs. They are connected to the aircraft's pneumatic system through a single push to latch tube and as the G-loading increases the bladders fill up with air. As the load decreases, the air in the bladders is allowed to escape. The sole purpose of the G-suit is to make the pilot look cool! Actually, the purpose is to put pressure against the pilot's thighs and calves and help keep the blood where it's needed (heart, eyes and brain). It gives the pilot additional G tolerance of 2-3 additional Gs and if you began to experience tunnel vision at 4 Gs the G-suit would boost your tolerance to 6-7 Gs. It does vary somewhat based on pilot physical condition, smoking, drinking etc. I flew in F-4s with an Academy graduate who was a line backer and had no neck (fire hydrant) and he claimed the G-suit was more of a nuisance than help. Not sure I believed him. Incidentally, the Blue Angels do not wear G-suits during their aerial demonstrations because their control sticks are between their legs and when the diamond, for example, is in extremely tight formation with a foot or two between w47ingtips, they do not want the G-suit inflatinThat brings us to 4th, 5th, and 6th generation fighters. In the F-16 there is a switch that the pilot selects in either the Category 1 or Category 3 position. That switch tells all the computers and flight control systems "Hey Hal, I'm carrying two external wing tanks and six 500 pound MK-82 bombs plus four AIM-9M heat seeking missiles. Even if I try to pull 9 Gs, don't let me"! Lots of damage could occur and maintenance would really be upset as I limped back to base. But once all the bombs are gone and you jettison the tanks (real combat) you could flip the switch and be King Kong! What we learned in the early years of the F-16 deliveries is that pilots were going from 1 to 9 Gs in short order and were putting themselves to sleep. The good news is as soon as they passed out (lack of blood/oxygen to the brain) they quit pulling on the SSC so the airplane went to 1 G flight and they would wake up soon thereafter. It wasn't immediate, it took up to a minute or so for them to wake up, get their feces coagulated and resume flying the airplane. The bad news is if they were at low altitude the aircraft would impact the ground while they were waking up. I observed this twice in my career. It's not fun.

So the Air Force mandated that all pilots of advanced fighters had to go to centrifuge training with recurrence training every three years. I can personally verify that this resembles Spam in a can! After a day of training you come out of the centrifuge with blood blisters on the bottom of your arms and sweat dripping from your brow. You strap in and the technician gives you a sissy switch. As long as you have the button on the switch pushed in, the G-loading on the centrifuge will slowly increase (just like a suicide bomber). Of course you are filmed on live cameras so all of the other pilots are laughing the rears off at how dumb you look. The training is good, but painful. Each attendee is reminded on how to perform his/her anti-G straining maneuver and force blood from south to north.

Essentially, you are tightening every muscle in your calves and lower legs, thighs and midriff with the goal of staying awake. You are grunting and breathing in gulps like an Olympic weight lifter and watching the G-meter climb towards 9 or 9.5. Everyone wants to be the top dog in G tolerance which doesn't speak well for our common sense. Like I said earlier, it hurts. Once the training is over you realize what your personal tolerance for G onset is, how to properly strain and most importantly, how to stay awake during high G maneuvering! Actually the real downside to the training is that the older you get, Lt Colonels and Colonels, there's a very real possibility that you will soil your under britches when you're in the sweat box and incur the wrath of the next person in line. But like they say, rank has its privileges! Later in the evening when everyone returns to the barracks you will often hear one of your classmates down the hall in the head practicing his anti-G straining maneuver. Then you realize he is most likely downloading some of the wonderful chow hall mystery meat!

In conjunction with centrifuge training the Air Force placed a full array of Nautilus conditioning equipment in each squadron and "suggested" all pilots build muscle mass and condition upper body muscles specifically to withstand high G maneuvering. Most of us complied but it did tend to cut into our regularly scheduled racket ball games.

What is the reality of pulling 9 Gs in a fighter? Air-to-air warfare has changed dramatically from when I was "in". In F-16 squadrons we would train not only in air-to-ground missions (dropping iron on bad guys) but also air-to-air fighting. Dog fighting is a holdover from both World Wars, the Korean War and Viet Nam. Every fighter pilot worth his salt dreams of becoming an Ace (5 kills). Few do. While we drop our jaws and marvel at air show demonstrations of F-16s, F-22s and/or F-35s, the capability of modern fighters to "turn up their own asshole" is not something to realistically expect in warfare. I'm sure the pilots are still completing centrifuge training, but the likely hood of needing 9 Gs in a dogfight over the Middle East is very unlikely. Weaponry today is very often launch and leave. Much of the focus of modern day military aircraft is stealth. That's why they are so hard to see at air shows.

Dave

QoM

(Question of the Month)

Question: Before an early morning flight, when the overnight air temperature has been below freezing, no water is found in the fuel during the preflight inspection. After landing some hours later after a flight in clear, sunny, VFR conditions, with air temperature now in the 50s, a check of the fuel finds it is contaminated with water. Where did the water likely come from? Why did the pilot miss the contamination on the early morning preflight?

Club Member Help

Chapter Flyouts.
Link at. https://chapters.eaa.org/eaa902/yearly-fly-outs

Next Board of Directors Meeting

- The board will meet next on November 8, 2023 7pm

Next General Meeting
Chapter 902

- Wednesday November 15th, 2023 7pm