



Thun Field Thunder



EAA Mount Rainier Chapter 326 Newsletter

June 2013

174

**Next Meeting
Cap Building at Thun Field**

Tuesday, June 11th, 7PM

Program:

Arnold Ebneter

Refreshments:

Norm Pauk

Longest nonstop flight in a lightweight plane world record set by Arnold Ebneter

At age 82, **Arnold Ebneter**, flew his Jabiru 2200-powered home-designed and built aircraft, dubbed 'E-1', from Paine Field, Everett, Washington, to Fredericksburg, Virginia, (2,327.85 miles) to set the new world record for the longest nonstop flight in an aircraft weighing less than 500 kilograms (1102.31 lbs). The flight covered 2327 miles without stopping over a time of 18 hours and 27 minutes. He broke the record by just under 114 miles. The flight covered 2327 miles without stopping over a time of 18 hours and 27 minutes. He broke the record by just under 114 miles.

The previous World Record for the Longest nonstop flight in a lightweight plane was set in July 1984 by American Frank Hertzler, who flew 2,213.95 miles (3,563.02 kilometers), according to the FAI website.

Ebneter, now 82, first imagined the E-1 while studying at Texas A&M University in the 50s, but didn't complete building the aircraft until



2005 with the help of CAD and flight simulator programs.

E-1 is a strictly all metal, stressed skin, tapered low-wing aircraft powered by a Jabiru 2200, a four-cylinder four-stroke horizontally opposed air cooled engine.

Ebneter said he made the plane of metal because it was the lightest and most reliable material. He could also seal the wings so they could carry fuel, something called a "wet wing." He spent \$25,000 on building his lifelong dream.

His plane weighs 263 kilograms (580 pounds) empty. With Ebneter in the cockpit and just enough fuel in his tank to beat the record, the plane weighed 498.9 kilograms.

The E-1 has a 74-gallon fuel capacity, but Ebneter said he used 58.5 gallons for the July 25-26 flight due to the weight limits for the record attempt.

"We put the airplane on a scale when fueling and stopped at 500kg," said Ebneter, a former United States Air Force fighter pilot.

Top speed for Ebneter's E-1 is 175kts, and when he landed in Virginia at the end of the flight he figured he could have flown another 100 miles as 2.5 gallons remained in the tank.

Ebneter started flying when he was 15 years old. He grew up on a farm that was beneath the flight path between Chicago and Indianapolis, where many airplanes of the time flew low.

"People now fly as a way of transportation," he said. "I just wanted to fly for the sake of flying." He spent 22 years in the Air Force, 15 of them as a fighter pilot and the rest as an engineer. He flew 325 missions and retired following the Vietnam War as a lieutenant colonel.

After he finished his military service, he worked designing and testing balloons. In 1952, he was a test balloon pilot for General Mills, where he once flew 325 miles overnight.

He gave his plane the same registration number as that balloon: N7927A. In 1974, he came to work for Boeing when they were developing the 767. In 1977 he started his job at Harvey Field.

Ebneter has previously won two awards from the Fédération Aéronautique Internationale (FAA): The Wright Brothers Master Pilot Award and The Charles Taylor Master Mechanic Award. He still works out of Harvey Field a few days each week as a flight instructor and FAA inspector.

"As much as anything else, building the E-1 was an engineering exercise," Ebneter said.

Another version from a second writer...

For Arnold Ebneter, EAA member # 450548, designing and building his own airplane was a lifelong dream. First conceived with a slide rule in the 1950s while attending Texas A&M University, he completed the project, the E-1, with CAD and flight simulator programs in 2005.

A native of Portage, Wisconsin, Ebneter, 82, lives in Woodinville, Washington. He recently flew E-1 from Paine Field, Everett, Washington, to Fredericksburg, Virginia, to set an unofficial record for the longest nonstop flight in a small aircraft (less than 500 kilograms).

Ebneter departed Paine Field, Everett, at 2 p.m. July 25, then flew 18 hours, 27 minutes without stopping - a distance of 2,327 miles - to Fredericksburg, where he landed the next day at 11:30 a.m. local. If confirmed by the National Aeronautic Association and reaffirmed by the world governing body of flight records, Federation Aéronautique Internationale (FAI), the E-1 would break the record of 1,930 miles for the weight class set in 1984 by American Frank Hertzler in a Vari-Eze.

E-1 is strictly all metal, stressed skin, tapered low-wing, powered by a Jabiru 2200 engine. It has a 74-gallon fuel capacity, but Arnold said he used 58.5 gallons for the July 25-26 flight due to the weight limits for the record attempt. "We put the airplane on a scale when fueling and stopped at 500kg," Ebneter said.

Average speed on the flight was 127 mph, meaning the E-1 sipped fuel at only 3gph. Top speed for the airplane is 175 kts, Ebneter said. When he landed in Virginia, he figured he could have flown another 100 miles as 2.5 gallons remained in the tank.

According to a story in the Everett Daily Herald, Ebneter began flying at age 15, motivated by watching planes fly low and slow on the family farm

between Chicago and Indianapolis. He also spent 22 years in the Air Force, 15 as a fighter pilot, flying 325 missions and retiring as a lieutenant colonel.

After the military, Ebneter designed and tested balloons. As a test balloon pilot for General Mills, he once flew 325 miles overnight. In honor of that flight, Arnold gave E-1 the same registration number as that balloon: N7927A.

May Meeting Recap

Visitors:

Kent Johnson - Retired Airline pilot, flew F-8 Crusaders in the Navy and is interested in general aviation.

Jim Gipson is from Lacey, has his private pilot license and is interested in general aviation.

Mike Latta is also interested in flying and is involved in the restoration of a 1942 Interstate Cadet.

Norm with Treasury Report:

Beginning Balance: \$7,159.74

+ 75.00 (dues)

- 966.00 (for Air Academy)

Ending Balance : \$6,268.74

Andy Karmy is trying to catch up on taking pictures of members and adding to the website. If you have not had your picture taken or would like an updated one, give Andy a shout. Better yet, email him with your photo attached.

Dave Fritzsche noted that there is an Eagles Nest picture of our Emerald Ridge HS kids in the latest edition of Sport Aviation.

Joe Andre announced he is STILL MISSING the Propeller Torque Wrench from the tool crib. If you have it or know who has it please let Joe know.

Randy handed Joe a new Mag Timing light and a slightly-used Cylinder Compression Gage for the tool crib.

Darrin and Melanie Dexheimer said there are only 15 slots left for the Young Eagles event scheduled for June 29, 2013. They desperately need more pilots to sign up as there are only two signed up at the time of the meeting.

Emerald Ridge HS hosted "Ed Saylor Day" on May 21st. The Eagles Nest kids had their RV-12 tail assembly on stage. It was a huge success with their auditorium filled. People loved hearing Ed's story of the Doolittle Raid and stood in long lines for autographs and pictures with Ed.

Randy announced Bill Wilson and Bette were getting married on Saturday, May 18, 2013 with a reception to follow.

We've been told that Charlie Cotton is in Hong Kong and should be back in the states soon. There are two or three aircraft inspections awaiting Charlie.

Randy and Kerry had their first engine start-up on their RV9-A a couple of weeks ago.

John and Pat Brick just arrived home from a long cross country in their RV-4. They attended a reunion celebrating the 50th anniversary of John's Air Force pilot training class, 63G, at Vance AFB in Enid Oklahoma. Then they flew to Saint Louis to visit Pat's relatives. We are so glad they didn't get involved in all the tornado activity down there.

John announced he was headed to the freight terminal on the 15th to pick up his Skyote project! The Skyote is a single place, open-cockpit bi-plane. It is equipped with slightly swept wings for center-of-gravity and lateral stability reasons and to improve performance in snap rolls. The equal span, staggered wings, 20ft. in length, are braced together with conventional struts and wires that form a single bay. The fuselage is built from welded steel tubing with wooden stringers and formers to give it shape and is completely covered in fabric. It is typically powered with a Continental C90-8F engine with a maximum speed of 157 mph and a range of 207 miles. The Skyote has no battery, no starter and no electrical system and loves grass strips. John said what sold him on the project is that Bob Hoover once flew the Skyote and loved it.

John added that he went through "Freightquote.com" who gave him a good deal on the shipping.

Randy and Marv went to Madera, California at the end of April for the annual "West Coast Ravens Formation Clinic". Marv flew down on Thursday, joining up with the Oregon bunch from Vans while Randy and I flew down on Friday. The weather for traveling to Cali was perfect. At one time in our flight while flying over Mt. St. Helens, I was able to see Mt. Baker, Mt Rainier, Mt. Adams, Mt. Hood and Mt. Bachelor all in visual range and what a site to behold!

There were about 65 RV's signed up for the clinic that started with sign up members, class, and pizza on day one. Day two, everyone flew at least four practice formations with different leads, weeding out those not capable of the "All Up". After a grueling day of formation flight everyone was treated to a huge BBQ dinner, complete with all the fixings at a local airpark then back to the hotel for an after BBQ hangout. Twenty-eight ships were chosen for the All Up, dividing them into two 14-ship formation groups. Four planes take off in formation at a time, joining in the sky. Both 14-ship

groups flew around the town and did two cross-overs. There was plenty of smoke and lots of RV grins going out there. I certainly enjoyed my back seat show and Marv and Randy couldn't have made me any prouder with their flying skills. What a fantastic time flying and the camaraderie in the group was outstanding.

Guest Speaker: Elden Larsen, WW2 B-17 pilot

Elden, who had only ridden in a plane twice before began his training in Roswell, New Mexico where he had to learn not only how to fly the B-17's, but had to know everything about the aircraft. The training was intense and if you didn't do well you could be washed out immediately to a crew member or something other than a pilot. Elden's brother was a B-17 pilot and also was a prisoner of war so he was totally dedicated to learning and doing everything by the book. He would be responsible for a 10-man crew, learning each man's duties and taking care of any problems they may encounter whether in the plane or on the ground. Elden picked up a crew and they left for Sioux City, Iowa where they did their pilot/crew training. Elden was not just a pilot, but now an Airplane Commander of a miniature army that he was responsible for 24 hours of every day while in command. After his training with the crew they flew to Manchester, New Hampshire along with 1,000 other bombers in formation and stayed overnight. From there, Elden and crew flew to Goose Bay, Labrador in December of 1944. In Goosebay, during December, the snow where the airplanes were parked was piled high up to the wingtips and ice covered the runway. They left Goose Bay, heading over Greenland on their way to Iceland at an altitude of 15,500 and on instruments. The Germans at that time were sending out signals from the North Sea to submarines out there and a lot of B-17's were lost because of this so Elden and crew had to fly with dead reckoning for a total of nine hours, not being able to see anything, but the stars. Elden, using the VOR broke out about 60 miles northeast of Reykjavik, Iceland where they went up and obtained a fix for their celestial navigation. Elden then turned around toward Reykjavik where he would meet up with a 50-mph direct crosswind and ice on the runway!. Elden, like most of the B-17 pilots had low flying time and he had logged approximately 320 hours when he had to make this terrifying landing. Elden stated " I must of done something wrong, because I broke the tail wheel off". He came in with the

wing severely down, crabbing to keep her straight, but was not able to straighten her out in time and the tail wheel broke. He and his crew had to stay over in Reykiavik for a couple of days until the tail wheel could be repaired. He, the co-pilot, and the navigator stayed in a Quonset hut which was so filthy, the navigator said he wasn't taking his clothes off to sleep. Well, Elden and the co-pilot did take off their clothes to sleep and flew to England after the tail was re-built. By the time they arrived at the base just 60 miles northwest of London England they were scratching like crazy and were taken to a local hospital where they were stripped down and placed into a bath with just their nose and mouth out of the solution. The nurses scrubbed them down completely and Elden had to admit he wasn't used to that. Looking back on it now Elden says it was kind of funny. They finally arrived at base and their first mission was on December 21st of 1944. Elden flew as co-pilot with another experienced pilot for the first mission and by the second mission, they were on their own. Elden and his crew flew to Erang, in the southern part of Germany just north of Trier where they ran into moderate flak. The #4 engine running low on oil. They continued their missions across southern Germany taking out Giessen Airfield. On their sixth mission, Elden remembers two of the bombers blew up over the North Sea and six ships were shot down by enemy fighters. In January of 1945, they went on several missions to Cologne where even though they developed troubles with the #3 and #4 engines running away with very high RPM's and not feathering, they were able to drop bombs on their targets. They continued in January to bomb railroad bridges in southern Germany and marshaling yards around Friburg, Rheine, Aschassenburg, and Cologne. On his fifteenth mission, flying in the #4 slot while on the way to marshaling yards in Cologne, the #2 engine and prop had been hit and developed a severe oil leak, but Elden continued on to their target with the 3 engines. With a runaway prop, spinning faster and faster the oil pressure dropped to 45lbs. The vibration from the prop and engine shook their landing gear and flaps down. Elden would lift them up and the vibrations would cause them to go down again. This went on for hours while the engine and the prop threatened to come through the fuselage. They ended up dropping the bombs just short of the target after loosing several thousand feet of altitude and came home alone with the engine and prop threatening to come loose at any time. They landed at base with a fire in the #2 engine. Elden noted there was accurate to moderate flak from the IP(initiation point) to the target. Once repairs made and back in the fight,

they made several missions to Lutzendorf, near Marsburg where they encountered intense flak from the opposition. Elden, being a stickler for position in the formation had been chosen to be a work force pilot for a West Point Major and that was how he started flying leads. Their unit was made up of a squadron of 12 airplanes with a 13th as a spare in case one had to abort. There were four squadrons in a group or unit. They normally went out with three squadrons unless it was a maximum effort they would fly four and there were quite a few of those. There were several missions that Elden flew for hours at a time with 2 or more engines out. On one trip Elden was coming in to land with both left engines out. He was cleared to land, although the colonel had allowed two other planes to take off in front of him and he was forced to go around. He was forced to turn left into the dead engines, trying to keep the plane from balling up. He made his landing and while taxiing off the runway a third engine quit. His fuel tanks had been shot up, causing them to loose all their fuel until the engine becomes dead. On February 15, 1945 their mission was to Dortmund where again they came upon intense and accurate flak, lasting more than 10 minutes. Their #3 engine was damaged, oil pressure dropping and the #1 engine developed an oil leak. They continued on to their target, intense flak continued and the Ball Turret gunner was hit while over the target. The tail gunner was missed by just a few inches. The Ball gunner, even though wounded, continued to take pictures of the area with the Ball camera until the waist gunner was able to pull him out from the ball. There was major flak damage to the plane with hits in both wings, putting a hole in the #1 and #3 gas tanks and holes in the waist, ball, and tail positions. Because of the bad oil leak in the #1 engine and short on fuel, they were forced to feather it and return to base with formation. Their missions continued with the bombing of tank factories of Nuremberg, rail yards in Wittenburg and on to Hamburg and Munich. March 18, their mission to the Big "B" (Berlin) encountered intense flak and attacks from the German ME262's and ME109's. Two of their ships were lost to the fighters. Elden said to get all the B-17's assembled for formation would take a little over an hour. As each squadron took off they flew to what Elden called the "wash" which was an area near Scotland where the B-17's would air join. It was quite a deal to assemble 1,000, 2,000 or more B-17's at one time and they kept a tight formation with only 50 feet apart. Elden said the largest formation raid that he was a part of was greater than 2,000 ships. Elden was an instructor for the only "All weather instrument squadron" in the Eight Air

Force so the weather was never a factor. The lead ships were equipped with radar and a specialist to work the radar, making it a 13-man ship. In the US Air Force you had to fly so many hours (4) a month to get your flying pay so in April of 1945, Elden and three others went up, taking turns of flying the plane so they could get their pay. Elden, who had done everything by the book and completed all of his missions decided he needed to "cut loose" and flew the B-17 up the Thames River from southern England all the way up to the Tower of London did a 180 around the tower and flew back down the Thames river to South Hampton and while heading back to base he spotted an RAF B-24 airplane. The RAF flew Lancasters and B-24's and their idea of a formation was about a mile or two apart. Well, Elden thought he should demonstrate to them how to fly a "real" formation and formed up with the B-24 about 50ft. off their wing. The B-24 pilot kept waving for him to back off and Elden just smiled and waved

back. They kept trying to back Elden off while heading to their own base, but he continued his tight formation. When they put their gear down to land, Elden put his gear down also like he was going to do a formation landing with them. Anyway, they landed and when they did Elden put the power on and went home and when arrived at their base, for some damn reason the colonel wanted to see him. The colonel said he didn't know what he was going to do with him. Elden, being a smart a.. told the colonel "why don't you just send me home"! Well... Elden did get to come home, of course, but not until the colonel was ready to send him there. Elden, we are all glad you made it home and thank you for your stories of the B-17.

Kerry Albritton
Secretary/Biographer

NAE Udate

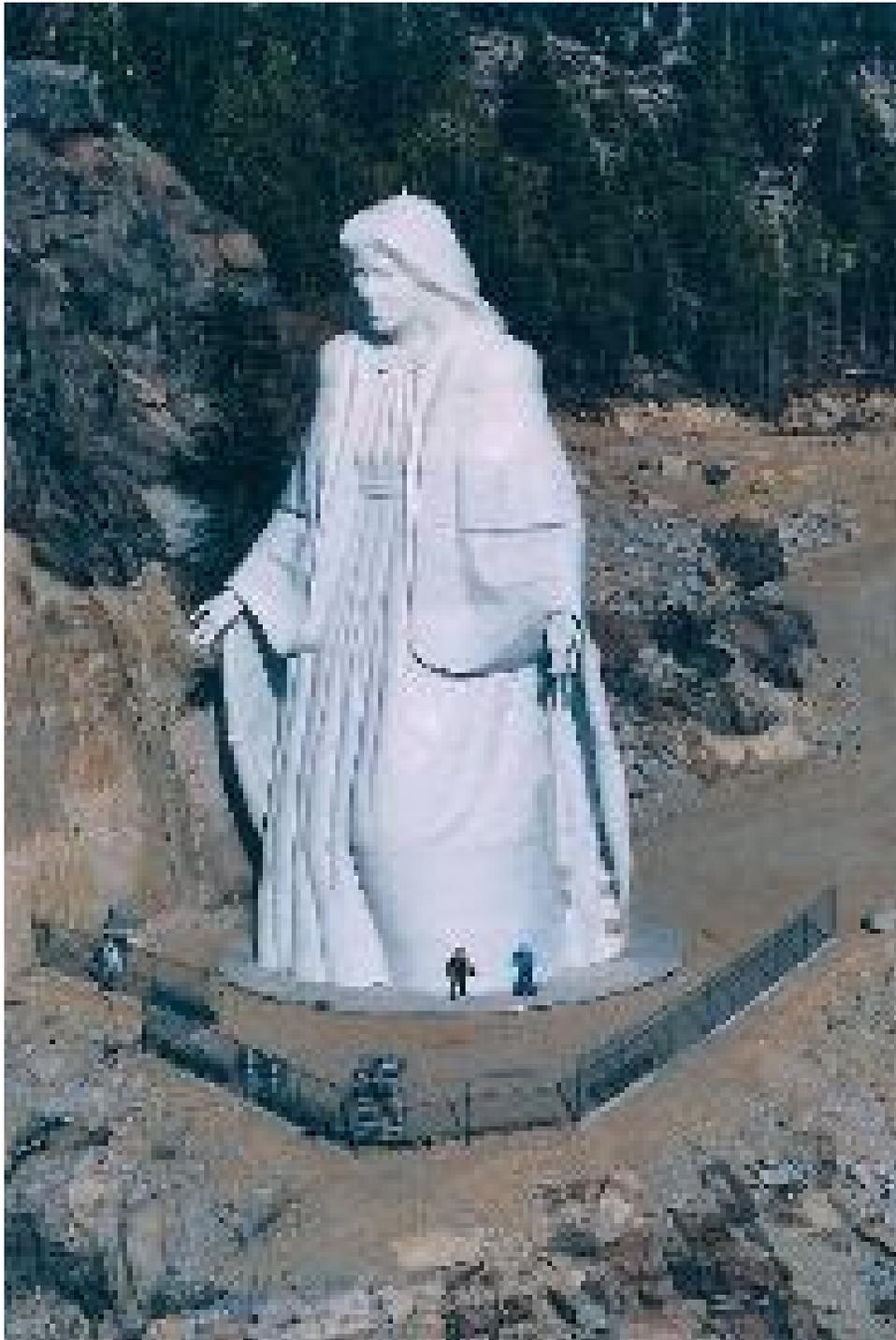
We have a few appearances this summer and pretty significant ones at that! On June 15 we will conduct an engine run just to check out systems as we haven't run the engine since last October. The event will be at the Shelton Airport known as Sanderson Field near Shelton, WA. On Friday the 14th, Jessi Combs will fly into Seatac and spend the weekend with us. We expect to have her do an engine run so she can become familiar with the processes. In case you don't know, Jessi is a Baja racer, spokesperson for Warn Industries and Lincoln Welders. Her trade is fabricating and welding but she also known for hosting All Girls Garage and The List. She is also co-host with Chip Fouse on the show Overhauled. If you come to the engine run, you will get a chance to meet Jessi in person. I'm sure you will be impressed!

We are scheduled to be on display July 27-29 at the Boeing Museum of Flight as part of the kickoff for Seafair in Seattle. Keith and I will also be speaking on stage at the event. It should prove to be fun and exciting. Next, we load up for a trip to Austin, Texas for the National Instruments National Conference, August 5-8. Keith, Steve Wallace and I will also be guest speakers in the main tent. National Instruments provided a complete data acquisition system for the NAE and this is part of the agreement with NI.

Tentative plans call for the NAE to be on display during the run of the Washington State Fair for 17 days in September. It has not been confirmed yet but they are working on details. The Bureau of Land Management (BLM) will not allow us to go back to the Alvord Desert until after the middle of September. Our plans call for being on the lakebed during the first two weeks of October to begin high speed runs. One of our goals is to set a new female land speed record with Jessi Combs in the cockpit. She only (*only?*) needs to exceed 511 MPH. Our runs this fall will give us a very clear picture as to how soon we can go after the absolute land speed record. We're actively seeking revenue sponsorship for the upcoming events. I have also been working with a film company for inclusion in an upcoming film documentary called Extreme Speed. I don't know when it is scheduled to air but we will be a part of the documentary.

I'll keep you all informed as progress is made. Otherwise, keep checking the postings on facebook "North American Eagle" and our website www.landspeed.com. It is best viewed with Google Chrome or Firefox.

Sincerely,
Ed Shadle
NAE Driver/Owner



As we were flying past Butte Montana on our way home, Pat and I saw this white rock at the top of the mountain range overlooking Butte. The statue is looking west, so we spotted from the back side and that's what it looked like at first... just a white rock. We were at 8500' and as we got closer it started to take shape. Still, we had no idea it was a statue until we passed abeam. Had to look it up after we got home. jb

"Our Lady of the Rockies", a 90-foot statue sitting atop the Continental Divide is the result of a dream and six years of hard work.

With the help of generous donations and a wealth of love and faith, countless volunteers completed a seemingly impossible task. On December 20, 1985 "Our Lady" was placed on the East Ridge to overlook Butte, Montana. The base sits at an elevation of 8510 feet above sea level and 3500 feet above the mile high city of Butte. The statue, lighted and visible at night, is a spectacular sight to behold.

Height 90 Feet
Weight 51 Tons
(80 tons with interior scaffolding, ladders and decking)
Altitude at Base 8,510 feet above sea level
(3,500 feet above Butte)
Project Began December 29, 1979
Project End December 20, 1985

Tool Crib

Joe Andre is our tool custodian. 253-539-2408

Marv Scott and Andy Karmy do the prop balancing. \$50.

Marv 253-691-5496 Andy 253-347-1597

New Stuff

Compression Tester
Mag Timing Buzz Box



Engine Stand
Prop Flange Interface
for vertical mounting



Compressor
6 hp 150 psi 33 gal
Oil free



Kerosene Heater



Electronic Scales
comes with ramps
\$20 rental fee



Engine Stand
Bolt your engine mount to plywood and
rotate as you please



Gas Welding Rig
Kept in Smitty's Hangar

Refreshment Schedule

May	the Dexheimers
June	Norm Pauk
July	Joe Andre & Tom Brown
September	Kevin Behrent
October	Steve Dickinson
November	need volunteer
January 2014	need volunteer

Fly Out Opportunities

Twin Oaks (7S3): Pancake breakfast by Chapter 105. First Saturday of every month.

Chapter 2013 Activities

NW Conf & Trade Show: Feb 23 & 24

Young Eagles Day: Sat June 29th

Burger Burn: Sun Aug 11th

Christmas Party: Tue Dec 10th 6 PM

Chapter Membership

113 paid up members

Joining or Renewing Membership?

Chapter 326 Dues are \$15 per year. Make check payable to EAA Chapter 326. Pay our Treasurer, Norm Pauk, at a meeting, Or mail to Norm at:

**Norman Pauk
12012 SE 260 PL
Kent, WA 98030**

Paypal is now an option too:
<http://www.eaa326.org/members.htm>

Dinner at the RAM

Last Thursday of the month (not Nov or Dec). Join us for dinner at the RAM restaurant, at 7 PM.

The RAM is on the east side of Meridian, across from South Hill Mall, in the same parking lot as Home Depot.

We are normally seated as a group in the back dining room.

CALENDAR

June 27 Bruce Thun & Bill Boughter Retirement Party noon to 3 pm conference room

June 29 Young Eagles Day Thun Field

July 6 Tacoma Freedom Fair

July 11 - 13 Arlington

July 13 - 14 Olympia

July 19 - 21 Concrete

July 19 - 21 NW Biplane Fly-In Felts Field Spokane

July 27 Friday Harbor

July 29 - Aug 4 Oshkosh

Aug 2 -4 Eastsound

Aug 10 -11 Olympic Airshow Olympia

Aug 11 Burger Burn Thun Field

Aug 16 - 18 NW Antique Aircraft Fly-In Scappoose, OR

Aug 16 - 18 Van's Homecoming Independence, OR

Sept 6 - 8 Hood River WAAAM

Sept 11 - 15 Reno Air Races

LINKS

Here's a great video of an American photo recce Spitfire pilot

In 2005, an 83 year-old World War II pilot is surprised to see 16mm footage of his 1944 Spitfire crash for the first time.

<http://www.youtube.com/watch?v=ie3SrlLcUY&sns=em>

15 minutes

Planes of Fame 2013 Airshow "Lightning Strikes Chino"

Warbirds at Chino Airport, Chino, CA - May 4-5, 2013
"The Gold Standard of Warbird Airshows"

Actually there were five Lightning Strikes as five of six of the flyable P-38s in the US were overhead all together at the show.

<http://www.warbirdsandairshows.com/Airshows%202013/Chino%202013.htm>

FOR SALE

RANS S-19 Ventura Kit

- Emp & Wings complete... Fuselage half done.
- Finish kit still in box.
- Strobe lights and parking brake options.

New cost \$26,000 plus shipping

Will sell for \$20k

Dick Migas 480-234-1471

Located in Enumclaw

Jet SBR-40N. 40" combination shear, brake, and roll

It weighs approx. 650# . Buyer will need a truck and a friend.

I am asking \$600 o.b.o., or trade - I am a tool junkie! - for what have you. This does not include the stand/table you see in the picture!

Dan Henderson
253-882-7945
University Place



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