The Bend High Desert Flyer of Chapter 1345

WEBSITE: http://1345.eaachapter.org/ ***KBDN AWOS 134.425*** **April 2017, Vol. 16, #4**

PREZ SEZ:

It's almost that time! B-17 "Aluminum Overcast" time that is!
Soooo many things have been taken care of and still so many things to do. Our up-coming monthly meeting is a mixed bag of some really great things and some testing. Most of you know our hanger neighbor, Chuck Allen. I submitted him to get the "Wright Brothers Master Pilots Award" last fall (he's been flying for over 60 years!), and then he fled our lovely winters to bask in the sunny (warm) deserts south of us. Well, he's back and Curt Cowely of the FAA will be here to talk about the "Kinder, Gentler, FAA" and to present Chuck's award. I've also invited the press to cover the presentation so, of course we'll be talking up a storm about the B-17 weekend.

All airport personnel are invited so, get the word out to everyone you know and invite them to come on down!

Our April meeting is this coming Wednesday, April 12th, meeting at the Robertson "Bend Builders Assist" hanger, 63030 Powell Butte Hwy. Dale Anderson will be giving the Young Eagles portion from 4 -6 and then the "test"! Our own "Chef Mike Robertson" will be using us as "test subjects" as he tries out the new grill and some recipes. (Mike is also doing all of the cooking duties both Friday and Saturday 4/28- 29th). The meeting will start around 6:30.

For the Aluminum Overcast event: She arrives Thursday 4/27- Sunday 4/30. Press flights will be around 1 o'clock Thursday and then everybody gets to settle in. Friday's flights begin around 10 till 1, then its ground tours till 4:30-5 ish.

That evening we're pulling the stops out for our "Swingin on the Runway" Dinner/ Dance in the historic Gibson "Red Hanger"! Chef Mike is catering us, starting around 5:30.

Deschutes Brewery is providing a keg of their "Mirror Pond, Pale Ale". We have a guest dance instructor from 7- 7:30. And then, the 18 piece swing bands "The Notables" entertain us till 10:30! So bring out the dancing shoes and let's Party! Early Bird tickets are on sale for $20 for the Dinner/ Dance, $25 @ the door.

Saturday morning, EAA Chapter 617 is putting on a pancake breakfast from 8-10 for $5 bucks!!!!!. Aluminum Overcast will again be flying from 10-1 and ground tours till 4:30-5ish. Car clubs, antique planes, anything that makes noise really are invited to come on out for an "Airport Appreciation Day". Chef Mike will also be providing grilled food from about 11:30 till???

Oh yea, we need volunteers! Silly that I waited this long to spell that one out but, it's true. This is your chapter and a hand full of fine people has been doing lots of prep work to make this event come alive. So come on out and support your chapter!

So, until we see you on Wednesday, Fly safe!

Thomas Phy,
President

Minutes of a regular meeting of The Chapter held on Wednesday, March 8, 2017, at the "Bend Builders Assist"/Robertson Hangar at the Bend Municipal Airport. Meetings are held on the second Wednesday of each month.

ATTENDEES

There were twelve in attendance including: Thomas Phy, Mike Robertson, Jack Watson, Dale Anderson, Mike Bond, Charles Brown, Henry Graham, Joel Timmerman and his father, Gary Timmerman, and new members Matthew Phillips and Faye Phillips (son and mother). It was good to see Jack Watson back on his feet, with the use of a cane, and in attendance tonight.

DINNER

Consisting of burgers prepared by chef Robertson along with Costco Pizza and potato salad was served to at 6:00 pm followed by:

CALL TO ORDER

At 6:40 pm (several of us were still eating) President Phy opened the meeting and initiated a round of self-introductions and updates on what everyone is working on. Charlie told about his airplane falling off a trailer and passed his phone around to share photos.

PROGRAM

President Phy announced that the FAAST Safety Program Manager will be our guest speaker next month. There was discussion of the possibility of flying to John Day or possibly Madras for the August 21st total eclipse. We heard about a story in the news of a Danish schoolboy who found the remains of an ME-109 that crashed in his family's farm field during WWII. We discussed the phasing out of VOR's as we transition over to GPS. We discussed the plans for the arrival of the B-17 Aluminum Overcast the last weekend of April. Then at 7:25 the meeting was . . .

ADJOURNED

Faye Phillips
Secretary

Treasurer's Report

Financial For period: 01/01/17 to 03/31/17

TOTAL INCOME	$596.00
TOTAL EXPENSE	$469.00
NET INCOME (loss)	$127.00
TOTAL CASH IN BANK	**$3142.64**
Payments outstanding	**NONE**

Jack Watson, *Treasurer*

B-17 Tour: Fly the *Aluminum Overcast*

March 31-April 2: Reno, NV
April 7-9: Marysville, CA
April 21-23: Redding, CA
April 28-30: Bend, OR
May 5-7: Eugene, OR
May 12-14: Olympia, WA

View tour details and book flight, or call 800-359-6217.

It's a PZL-104MA (WILGA 2000) powered by an IO-540 and based in Bend, just across from the "Robertson Hangar"

Young Eagles Support Group Meeting

(everyone interested in aviation are welcome to attend any/all sessions)

Wednesday, March 8, 2017
Bend Builders Assist (EAA) hangar, Bend Municipal Airport

4 PM Aircraft Building Workshop (everyone welcome) – Topics: Preparation of aluminum parts in the construction process. Hands on - cleaning rough edges, filing sharp corners, use of a "Scotchbright" wheel, checking for potential cracks, scuffing & priming, etc.
We will "clean" and prep some actual parts as we discuss why these steps are important.

5 PM FAA Safety Team Topic: Maneuvering Flight - is where a large percentage of general aviation accidents occur. Let's take a look at what maneuvering flight is and what the problems are.
EAA's B-17 "Aluminum Overcast" will be here the last weekend of April. Discussion of how we will be involved and what options we would like as a part of hosting this event.
We want to promote as many rides and tours of the WWII bomber as we can.

6 PM Pizza, burgers, etc.

6:30 PM EAA Chapter 1345, High Desert Flyers, monthly meeting

Questions? Call Dale at 607-591-1714

Dale Anderson,
Young Eagles Coordinator

Cross-wind taxiing

If the wind sock looks like this and it's not aligned with the runway, consider a tune-up with your favorite CFI.

Wind socks must withstand wind speeds of up to 75 knots. They must be fully extended in 15 knot winds and must rotate to indicate wind direction in winds of 3 knots or greater.

The goal is to use the flight controls to prevent the wind from picking up a wing and or the tail of the aircraft. So if you can imagine where the wind is contacting your airplane, then position the ailerons and elevator to prevent that from happening.

One saying that helps pilots is to climb into a headwind and dive away from a tailwind. So if the wind is coming from in front of the wing, climb (elevator back) into the headwind (aileron toward the wind). If the wind is coming from behind the plane, dive (elevator forward) away from the wind (aileron away from the wind). As you turn the airplane and the wind moves from ahead of the wing to behind the wing, follow the rule.

Another tip for taxiing in strong winds is to make all turns at a slow speed. The centrifugal force of a fast turn can help the wind to tip the airplane.

So, visualize if the wind is in front of the wing or behind it and position the controls accordingly, taxi and make turns slowly and maybe if the wind is really that strong you should reconsider your decision to leave the tie down."

Sometimes You get to do something really cool, and flying the Evangel 4500 in South America was one of the best

As we turned final, my heart nearly stopped because it was wedged solidly against the back of my teeth. We had the gear down and were pointed at this ridiculously tiny box canyon. It wasn't actually a canyon, but it might as well have been because it was just a slit in the jungle and the trees on three sides were 60 feet high. What was scaring the devil out of me was that the whole "canyon" was a little over 900 feet long, and we weren't exactly flying a Super Cub. The sweat running down my legs was starting to pool in my boots as I looked back between the seats at all the junk packed behind us: a 55-gallon drum of gas, three people, assorted jungle goodies and goodness knows what else. I figured the pilot, Ron Macintosh, knew what he was doing, but twin-engine airplanes just don't land on air-strips like this one---not more than once anyway.

We crept over the first row of trees and Ron slowly brought the throttles back and started to flare. I didn't notice what he was doing because I couldn't take my eyes off the trees at the other end of the runway. I thought about my wife and child. I thought about the five bucks I owed a friend. The trees were staring down on us as the tires thumped onto the runway, and I instinctively slid my feet up on the rudder pedals to help Ron smash the brakes to the floor. Then a crazy miraculous thing happened we stopped moving. Just like that. The brakes helped a little, but even so, we hadn't used more than two-thirds of what they laughingly called a runway. Then I heard a loud rush of air and I realized I'd been holding my breath ever since: we turned base. Was I scared? I'd prefer to say pensive, but I'll have to admit that I saw the Evangel 4500 do things that no twin-engine airplane has a right to do. The Evangel has had its share of press coverage since its debut in 1969, and it's been the brunt of many jokes: "looks like it's still in its shipping crate," or "has the grace and lines of a tool box." And every one of these remarks is true, even though most of them were probably made by someone gazing at the Evangel's outright cubism through a coffee shop window at some Stateside airport. When test flying a STOL airplane from a 3,000-foot runway, it makes little difference that it uses only 500 feet because you still have lots of room left. Under those circumstances, it's easy to seize upon the obvious and be terribly witty. And the Evangel definitely inspires the comic in all of us. But somehow, when I was standing 200 miles out in the jungle, swatting gnats that mistook me for a banana, and measuring off runways that were as short as 450 feet, those fantastically funny metaphors were neither funny nor appropriate. The Evangel will not send devotees of sleek and beautiful aircraft into a frenzy, but, when it comes to doing the STOL thing, it is one fantastic piece of hardware.

The South American interpretation of "functional" is that an airplane has to be able to pogo-stick its way in and out of tiny airstrips, but the average Tijuana teenager has to be able to fly and maintain it. The Stateside definition of STOL includes slats, slots, flaperons, fences, cuffs and all sorts of fancy add-on stuff that can go wrong. Not so the Evangel. It gets its leapfrog STOL characteristics from a fat wing and two 300-hp Lycomings-nothing complicated to foul up. As far as maintenance goes, the airframe is so incredibly simple, most parts can be made by bending flat sheet over a table edge. When I looked closely, I noticed lots of little patches on the outside of the skin that were actually doublers and clips. All airplanes have these, but most hide them inside, so they don't show. Nailing there on the outside means the structure doesn't have to be joggled or set back to make room for them, which also simplifies field repair.

The main gear legs are identical and can be swapped left for right. They are welded up out of heavy wall steel tubing and look beefy enough to support an airplane twice the Evangel's weight. The full-swivel tailwheel just sits back there, centered by bungees, keeping the tail up out of the dirt.

The outer wing panels have to make up for the center section's lack of dihedral, so they are angled sharply upward, ending in bat-like booster tips. With all the bending and curving, the wings make the airplane look like Orange City's answer to the pterodactyl.

Several things made the trip from Bogotá to the missionaries' base camp at Lomalinda interesting. I knew this wasn't the place for me to be flying when Ron fired up the engines and then started stuffing a steady stream of Spanish into the boom mike. No habla Espanol. Another thing that had me mildly worried was that the altimeter read more than 8,000 feet while we were still on the ground; I'd read in the manual

that the Evangel's single-engine ceiling was only 6,200 feet. I asked Ron what would happen if we lost an engine. He replied the obvious: We'd land shortly thereafter-another reason I didn't really want to be a bush pilot.

Ron has an interesting way of working around the Evangel's low single-engine ceiling. That was good because the mountains between us and Lomalinda were over 10,000 feet MSL and covered with clouds. The rest of the world knows them as the Andes. He climbs out over Bogotá to 15,000 feet before he heads over the mountains. He calls this his "drift-down" altitude because he's found he can drift down to airports on either side of the mountains from that altitude. As we were poking holes in the clouds, we occasionally broke out between build-ups and I'd see the not-so-friendly mountains below us and I hoped his drift-down theories would work. (Evangel is now certifying a turbocharger installation that should reduce the pucker factor of this type of flying considerably.)

Since the Evangel is the key to the SIL operation and the means of survival for many, it is maintained like Air Force One. Of course, an open-sided shed with dust blowing through is a long way from a climate-controlled hangar, but to the Evangel it's just as good. When Mortensen designed his airplane, he knew that maintenance would have to be simple enough to be done with pliers and some bailing wire, so everything is easy to get at and easy to fix. The 300-hp Lycomings are housed in foot lockers cantilevered off each wing and are easy to get to. We came in once with the symptoms of a clogged injector and the mechanics had the engine stripped, injector cleaned and the cowl back on before you could say, "Where's the lineboy?"

After loading a 55-gallon drum of gas and buttoning up the cowlings, Ron told us to saddle up. The seating accommodations in the rear are eight cushions that you position against the wall and belt yourself into. The front seat was at least as uncomfortable as a clothes hamper, but I understand current models are better.

The cockpit is as homey as a Patton tank. There isn't a single compromise to aesthetics. No curves, no ABS plastic panel cover, no vinyl seat covers. Although later models have been spruced up a little, 02 Lima's cockpit was so Spartan it was comical. The throttles, mixture and prop controls were levers sticking out of a square box-they didn't even have knobs on the ends. It looked like a herd of butter knives stuck in a loaf of aluminum bread. The flaps and gear were operated by a hand pump (replaced by an electric/hydraulic unit in later models) between the seats with a selector valve that chose either flaps or gear. And of course, in true bush-pilot fashion, it uses a he-man stick rather than a control wheel.

Takeoff was not unusual and I didn't give a thought to where we were going. I had no feeling of being over jungle until we were well on our way to cache our gas barrel at the strip at Utoya. I looked down at a dirt road under us and commented to Ron that if worse came to worse, we could land on a dirt road. He smiled slightly and told me that would be the last road we would see for almost 150 miles. He also said all the water was full of piranhas.

As far as the eye could see, a level green layer of trees stretched out, broken only occasionally by a river. In the distance we could clearly see some flat-top hills, and a quick measurement with the plotter showed them to be an incredible 95 miles away. Out there, over the region called the Vaupes, you don't hop from omni to omni. The Evangel had one omni, two ADFs and a high-frequency transceiver, and the VOR didn't look as if it was used much. The compass and ADFs were the primary navigation aids. This was the first time I had ever flown with an HF radio and it is the most incredible form of communication I have ever seen. When we left Bogotá the day before, Ron had contacted the relay station at Lomalinda right over the mountains to tell them we were ready to take off. While we were out over the jungle, he kept a constant narrative going with the radio. He would report his position over such and such-a rock formation that was usually so small I could hardly see it-and his ETA over the next known checkpoint. He even reported when he started his takeoff runs so if he stuffed it in they would know immediately. The SIL had established their own form of flight-following so the base knew where the Evangel was at all times.

The 900-foot strip at Utoya was where I first saw the Evangel perform as a bush plane. In addition to Ron and me, we had nearly full tanks, three people, a full 55-gallon drum of gas and so much other junk I couldn't see over it back down the cabin. We were close to gross weight. Ron started letting down and pumped his gear and flaps out. Then before he set up a pattern to this slit in the jungle, he slowed to near stall speed and felt for the stall buffet. This way he knew exactly what his stall speed was for this weight. He fixed that number in his mind and made his approach accordingly. I followed him through because I knew somewhere along the line, I would have to do this same thing.

Utoya was definitely a one-way strip. One end had 60-foot trees while the other had little 20-foot ones, so you had to land into the big ones and take off away from them. This time we were lucky because there wasn't any wind at all, which is at least better than a tail-wind. We came down the chute at a little over 70 mph IAS and touched down in the first 100 feet. Even though we were skating down into a tremendous dip, normal braking got us stopped in not much more than 500 feet.

I spent the next several days being impressed by the Evangel. We went into runways as short as 750 feet with loads varying from half to full, and not once did the Evangel need much more than half the available runway for landing. The takeoffs were interesting because VMC. wasn't really taken into consideration. The handbook, which is one of the most thorough ever compiled on an airplane, lists takeoff distances at various weights and liftoffs of 65, 70 and 75 mph. It also gives correction factors for soft runways and tailwinds. Ron referred to the book religiously, computing his density altitude often, and we almost never used more than 400 to 500 feet to get off. He'd lift off and then fly right on the deck until he had VMC which took 1,200 feet. Then we'd pull up and climb out at more than 1,000 fpm.

Little by little, I got to try my hand at being a bush pilot and I found the Evangel made it almost easy. On takeoff, the problem wasn't getting it off, it was keeping it on. On my first takeoff with only a 'partial load, I didn't get the tail high enough and we lifted off at 55 mph and climbed out with no sweat. Later, I tried to hold it on to get up to the 80 mph VMC, but I just couldn't do it. At around 70 to 75 mph, no matter what you do, or how you're loaded, the rough runways bounce you into the air.

Initially, you have to depend on brakes for directional control, but the huge tail gets effective pronto. The best rate-of-climb speed is 95 mph, which really pokes the nose up in the dive. We almost never climbed at less than 1,000 fpm, regardless of load, and the temperature was close to 100 degrees most of the time.

During landing, I came to really appreciate having a stick control, rather than the conventional wheel. The kind of runways and approaches, as well as the general feeling of the airplane, made you feel as if you should be flying a Super Cub, and the stick seems to be more appropriate than a wheel. It also gives a feeling of more precise control over the bird.

A three-point landing using the normal approach of 80 mph was duck soup and the superslow short jobs were only slightly more difficult. With all the flaps hanging out and a 70-mph approach, very little power is needed to control the glideslope. The only thing that must be watched is forgetting how long the gear is and bouncing because of flaring too late. You also have to watch that you don't flare too soon when slow and dirty because the second the nose comes up, you'll run out of speed.

The single-engine characteristics are just as dumpy as the airplane itself. When one engine is shut down, you have all day to do something about it, unlike some high-performance twins that try to bite their tails when one quits. Ron gave me some bush-pilot training on losing an engine on takeoff and I found we could easily recover and fly away, regardless of our takeoff speed, as long as we had about 200 feet of altitude to spare. Shoving the nose down gave us 80 mph, and the other engine would eventually get us up to the 95-mph single-engine climb speed.

One thing I definitely didn't like was the inadequate rudder trim. When we actually feathered one engine and charged around the Lomalinda area for a while, I thought I was going to have varicose knee caps. It took all the trim, a lot of aileron and more leg than I had to hold a heading. It could be a real drag flying 100 miles that way. And, although the heavyish ailerons bothered me at first, when we were punching through the clouds on the way back to Bogotá, I came to appreciate the lead-sled stability. As an instrument platform it's great, although I still wished the ailerons were a little more harmonized with the much-lighter elevators.

Although the Evangel isn't exactly a Lear in the speed department, it's practically supersonic compared to most STOL ships. Even at 7,700 feet, we were truing 156 mph at 22 inches and 2300 rpm. With 110 gallons of fuel, this gives a range of 750 miles. With full tanks, you have a useful load of over 1,200 pounds, but you can get 1,500 pounds in and still have two hours fuel aboard.

Now I have seen the Evangel in its native habitat. I've seen it do what it was meant to do, and I'm mighty impressed. There is nothing about it that is commonplace, but at the same time, there is nothing about it that is totally new. It may not be pretty, and it lacks a lot in the sophistication department, but it's a tremendous STOL airplane. It may just be the only truly satisfactory bush twin in the world.

Swingin' On the Runway

DINNER & DANCE

Friday, April 28th

Come on out for the Dinner & Dance in the historic "Red Hangar" at the Bend Municipal Airport with the B-17 "Aluminum Overcast" as a back drop!

Dinner starts around 5:30 pm catered by EAA Chapter 1345

Dance lesson at 7:00 pm, then "The Notables" step up the beat at 7:30 pm

Cost: $25 - Dinner & Dance
$10 - Dance Only

For information, call 541-306-1500 or email eaa1345@gmail.com

Sponsored by EAA Chapter 1345 High Desert Flyers

www.1345.eaachapter.org

2017 CHAPTER BOARD:

President	Tom Phy	541-306-1500
	maxfly55@gmail.com	
Vice-president	Charles Brown	541-576-4912
	cbshomebiz@gmail.com	
Secretary	Faye Phillips	541-
	fayephil@gmail.com	
Treasurer:	Jack Watson	541-408-5614
	jswatson30@cs.com	
Young Eagles Coordinator	Dale Anderson	607-591-1714
	daleanderson779@gmail.com	
Newsletter Ed.	Mike Bond	541-317-8443
	mvbond@q.com	