



# The Bend High Desert Flyer of Chapter 1345

WEBSITE: <http://www.eaa1345.org/>

KBDN AWOS 134.425

NOVEMBER 2011, VOL10, #11

## **PREZ SEZ:**

Thank you for the opportunity to serve as President this past year. Thank you to all the officers and others who volunteered this year to put the meetings and presentations together. A big thank you also to Thomas Phy for hosting the October meeting at his house, providing a great dinner and an up-close look at his RV-7. It was a fun night for the eight of us who attended.

As discussed during the last meeting, elections for our chapters 2012 officer positions will be held next week during our November meeting. Due to changing priorities, both Thomas Phy and myself will be stepping aside as Vice President and President for 2012. We were pleased to have Henry volunteer as a nominee for Vice President. Thank you Henry! Jack, Mike and Erik have volunteered to continue on as Treasurer, Newsletter Editor and Secretary for 2012. Thanks guys! I have not confirmed with Bud to know if he is willing to continue as Young Eagles coordinator.

That leaves the President and Website editor open for new volunteers in my absence. I am hopeful that one or two of you are ready and willing to take on these positions. While the Website Editor position is not mandatory to fill, we do need a volunteer to lead the chapter as President to keep the chapter viable. If you are interested and want to know more about the responsibilities, please call me (207-415-5592) or go to the website for details.

Thanks again for a great year.

*Sean Harbison*, President

## **November Meeting**

Our November 9th meeting will take place at the "Ellsberg Hanger". Doors open around 6ish with the meeting starting at 6:30.

It's that time of the year again and fortunately most officers' positions have already been filled. Thanks to all who have committed to continue volunteering and to Henry for taking on the position of VP.

This meeting will be about moving forward and having a discussion about where you would like the chapter to go. Sean and I have put together a "wish list" that we would like to present to the members. I'll also have some movies if time allows.

Also the December Christmas Party/ meeting plans will be open for review.

I'd like to thank all the members for letting me be the VP of chapter 1345 for the last year. I hope you have enjoyed the presentations as much as I have. As with Sean, I need to focus on my personal and family business, which have been challenging these past few years. I look forward to the next year and helping our chapter grow.

Respectfully,

*Tom Phy*, Vice-president

## **Get well, Bruce!**

From Erik Rustand:

Bruce Myers who, as many might not know, is trying to recover from his badly broken left leg. His road to recovery will be quite long. He told me that the doctors said it would be three months before he will be walking again.

## ***Treasurer's Report***

Financial for period 1/1/11 through 10/31/11

Total Income:	\$610.00
Total Expense:	\$515.76
Net Income (Loss)	\$94.24
Cash Balance:	\$2163.64

**Jack Watson**, Treasurer

## ***October meeting minutes***

This was not a formal meeting so there are no minutes.

Thank you to Thomas Phy for hosting the October meeting at his house.

A select band of members were treated to an up-close look at his RV-7 and he provided a great dinner.

### ***A homebuilt from an F-4 Phantom drop tank***



## ***LOP checklist***

Since we mostly are based and fly above 3500', operating Lean Of Peak is logical (lower fuel costs) and safer (no danger of detonation) than for the 'lowlanders'.

Portions of the following assume you have an engine monitor, such as the EDM700 or UBG16, but the same principles apply; you just see one cylinder's EGT and CHT, instead of all.

### ***After Start Up and Ground Ops***

- Lean aggressively. This helps minimize fouling plugs and reminds you to enrichen on take-off.

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### ***Prior to Take Off***

- With an engine monitor, typical mag checks are not much value. The first flight of the day you can run up RPM to 1700, cycle the prop once, then place the engine monitor in "normalize" mode. Check the right mag then watch the EGTs on the EDM 700. All should rise. Then go to the left mag, EGTs should continue to rise (no need to cycle through both) then back to both. A fouled plug will be indicated by a dropping EGT.

- VERY IMPORTANT- PUSH THE MIXTURE TO FULL FORWARD PRIOR TO TAKEOFF:

Unless operating at high altitude or high density altitude fields, throttle, RPM and mixture should be full forward

### ***Climb Profile***

- Simple formula, WOT [wide open throttle] and 2700 RPM to cruise altitude. Fuel flow should be at maximum until about 3,000 ft, then start leaning (this needs to be modified at high altitude airports and in some cases where max power is a necessity for terrain and obstruction avoidance).

Use altitude leaning guidelines on the factory FF gage above 3,000 feet altitude.

- Cruise climb with cowl flaps open (if you have them!)

### ***Upon reaching cruise altitude***

- Do nothing, then do nothing some more. Let the aircraft get up to full speed. This will take a couple of minutes.
- Close the cowl flaps (if CHT and oil temps allow)
- Reduce the RPM to 2500
- Do the BPM, the **Big Mixture Pull**. The higher the altitude you are at, the lower the FF.

Note that above 6,000, or below 65% HP, there is nothing that you can do to hurt a normally aspirated engine, but flying LOP will save gas, result in cooler CHTs, and provide for a cleaner engine with only a small loss of cruise speed.

- Note: Degree of LOP varies with altitude (because O2 density varies with altitude)

### ***Procedure for cruising LOP (lean of peak)***

- Note: you'll only need to do this one time at different altitudes to get an idea of the fuel flows you will need on your airplane. Then, on subsequent flights just set the FF. (will vary with different RPM)
- Do the BMP to the lean side of peak. Slowly, very slowly (no that's too fast) enrichen the mixture until the first cylinder-to-peak EGT peaks on the EDM 700. Note the EGT temp. Then lean the mixture until you are 70 degrees LOP, if below 6,000.

## **LOP checklist - continued**

If at 7,000' to 9,000' you will want to be about 40 degrees LOP. There is no need to be any further LOP. Above 9,000 you will likely want to be close to peak EGT.

- At LOP cruise you may feel a little roughness, which is completely normal (it's called cycle to cycle variability). You can always enrichen 0.1 or 0.2 gph to get a smoother ride. Leaner means less fuel.

If you choose to fly at a lower RPM 2400 or 2300, fuel flows will be lower, because you are pumping less air into the jugs.

### **Descent**

- Generally in the normally aspirated aircraft, I leave the throttle at WOT and descend no more than 500 FPM unless flight ops dictate. As you descend, you may feel a little roughness, because the lower you go the leaner the mixture or the further LOP.

Increase FF .1 or .2 gph to keep the engine running smoothly. As you get below 5,000 or 6,000 you will need to start reducing the throttle.

- Leave the RPM set at cruise (2500, etc)
- Do not go to full rich on approach, leave everything as is and use the throttle to adjust airspeed.
- In the event a go around is necessary, you can push everything forward then.

### **Back on the Ground**

- Leave everything as is until exiting the runway
- Open cowl flaps, raise flaps, leave the mixture leaned (remember we always lean for ground ops)
- I generally set my pitch trim to about 3 degrees so I'll be ready for the next flight.

### **Final Thoughts**

- It's your airplane and you can fly it anyway you want. If flying ROP, then please make sure you're at least 100 degrees Rich of Peak). I fly ROP if doing maneuvers, during climb etc., otherwise I'm LOP.
- With the higher TO Fuel flows you've already solved the bulk of the CHT heating problems. The CHT high temp warning on my EDM 700 is set to 390 degrees. If a column starts blinking then its above 390, and I suggest increasing airspeed to cool the CHTs. I like to keep mine below 380 degrees and very rarely see anything above 360 degrees even in climb. If you see one above 400, then that's a problem that requires action.

## **The Bar Tailed Godwit**



**Two juvenile bar-tailed godwits fly over the central Yukon River delta in September 2004. The birds were soon to start a migration to New Zealand or Australia during which they might not land to feed during a five or six-day trip.**

The Bar Tailed Godwit is an incredible creature that currently holds the record for the longest non-stop flight traversing 7,258 miles along a route from Alaska to New Zealand.

Inspired by this bird's abilities, designer William Brown created the Lockheed Stratoliner, a futuristic commercial airliner that is designed to fly any distance without the need to stop and refuel.



With an aerodynamic, bird-like design, the Stratoliner achieves maximum efficiency by utilizing oversized wings that allow the jet to generate enough lift to fly at very high altitudes. In addition, four Cryogenic Hydrogen Turbofan engines power the Stratoliner allowing it to fly massive distances while operating in a lower-power state with zero emissions.

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