

Cockpit Chatter

By Roger Bocox

As of this writing, Summer has finally come. It is 92 degrees with a heat index of 101 degrees and a 20 MPH wind out of the south. All in all, a typical summer day in Iowa. I recently returned from the SAA "Sport Aviation Association" fly-in in Urbana, Illinois. What a great event! Even with low ceilings and rain on Friday and part of Saturday, it was a most enjoyable time. It is wonderful to have some time to sit down with people like Paul Poberezny and discuss life. He is a very interesting man. Our host for the weekend was Rudy Frasca. For those of you who don't know Rudy, Rudy started a company back in the '50s called "Frasca Simulators". Frasca makes simulators for just about every commercial airplane from a Cessna 172 through, I think, some jets. We took a factory tour and the technology is amazing. The mechanisms, that connect the yoke, throttles, pedals, etc. to the computer that runs everything are really unique. Rudy owns the entire airport with a beautiful runway and a tower on top of the factory. The museum contains lots of old simulators and other interesting memorabilia. Rudy's airplanes are well known also. He owns the famous P-40 (with #47 on the side) that has graced a ton of magazine covers. He has a Fiat and a Mk VIII Spitfire. (2500 HP engine with a big paddle prop) He also has a Mk VIII project in the hangar. Along with a Bearcat, a T-6 decked out like a Tora-Tora squadron Zero many other aircraft, and his old Luscombe that he flew into Urbana with in the '50s with a suitcase and \$500 in his pocket. He seems to have done alright. Rudy is a great guy, and was a wonderful host.

For me, the most interesting item in his stable is one of the Fluegwerks FW-190s that they are selling in Europe. I think that, legally, this might be called a production plane, since they are serialized consecutively from Luftwaffe production and are built from factory fixtures and plans. This should be an interesting one for the Feds to figure out. The work is somewhat of a semi-kit with a fuselage, wing, and engine. The craftsmanship is very good, and the Germans had interesting ways of doing things. Ask me sometime about how they secured access doors.

Quite ingenious! Not a ton of planes showed up because of the weather, but there were a lot of vintage planes like Howard DGAs and a Laird. Some I didn't even recognize. I am sure that there are others in the chapter that would recognize them all. With great food at a banquet each night and good breakfasts, it was a nice, laid back weekend. Take a look at some of the pictures of the SAA fly-in included. Try and make a point of getting over to Urbana next year. It is well worth the time and effort. The cost to get in is only \$20 for the whole weekend.

On a different note, maybe you should all consider impeaching me. I just can't seem to make the monthly meeting. For some reason this year, every second Saturday is booked with something that keeps me from the meeting. In July, Donna and I have a family wedding that we have to go to. That should be OK, though. Paul Steingrabe, our illustrious Vice-President can stand up there and talk as well as, probably better than, me.

I received a copy of the video that Channel 13 took from the B-17 when it was in Ankeny in May. For the July program, I am going to put together a videotape of the B-17 trip and the people who flew in it are going to get up and give their impressions, comments, and take questions about the flight and the B-17 in general. That should be pretty interesting.

Enjoy this warm/hot weather. At least you don't have to shovel it!!



YOUNG EAGLES UPDATE



Thanks to all the Young Eagle volunteers who made the June 6, 7, 8 weekend a success. Sign up table workers: Maury, Terri, Brant and Mark.

Pilots: George, Mike, Jack, Greg, Dave, Alan

Ground coordinator Boss: Denise

We flew 36 Young Eagles and several siblings and parents. Lots of registration forms and Learn to Fly books were distributed. We have 30 names on a list that need flown, anyone up for the 12th of July? The Modelaires were happy with our performance at their event. All in all a great event. Thanks again! (thank goodness the hundreds they were hoping for didn't show up).

The May 24th fly at Ankeny flew 22 scouts and afterwards several found their way to the new home of the Gast RV for a critical look at his handiwork, not bad for an amateur Bill!

Report on the Boone event of June 15, 16, 17 coming next issue.

—Alan Core

Approximately 36 kids were flown in Boone on the 15, 16 & 17. Thanks to everyone's help. Here's a couple pictures from the Sunday night flying.



AUGUST CHAPTER MEETING.... Is the annual chapter picnic. Saturday, August 9, 2003 at Ankeny Airport in the hangar. Starts 1 pm. We'll eat about 3 pm. Chapter to furnish the meat, drinks, and place settings. Each member brings a dish to pass, along with your lawn chairs. Bring your family, and enjoy great food and conversation.

Hartmann Update

After it was discovered that there were 2 left wings, instead of a left and a right wing, the group had to refabricate the additional left wing to make it a right wing. The fuselage is taking shape, along with Mike Abrahams working on the engine and propeller. Although there has been only a couple of guys show up the last few weeks, the work continues to plod along. We continue to need guys to come out and help sand etc each Saturday morning starting at 9 am. In order to complete the project by the end of September or early October, we need to have all the help we can get each Saturday. Please see the map in this newsletter for directions, and plan on stopping by to help.

**Chapter 135 Meeting
June 14, 2003**

What a great night for a hangar meeting. The Treasurer, Brant Hollensbe, opened the meeting at 7:05, and we had our speaker Richard Milburn, go first, because he had to leave and be home before dark. He flew his Newport in, and it was beautiful. Although he has over 500 hours on it now, those hours certainly haven't been uneventful. He described some of the downfalls of building the plane, along with the high points. He passed around pictures from when he started, and told us the kids in the pictures, which looked about 5 or 6 in the picture, are now 18 and 20, so he didn't build it overnight!! His presentation was terrific, and even though not all of us have a project we are working on, it was still very interesting to see and hear about. The business portion of the meeting consisted of a Treasurer's report, and board members reports. Brant reported we profited \$2682 from the B-17 event in May. This will help towards our home finding endeavors. Wes reported he will not be able to make it to the Youth Aviation Camp to build ribs so he was soliciting volunteers. Brant and Paul volunteered. Young Eagles reported a good turn out at the Modelaires event at Water Works Park on June 7&8. Mark informed the group that there will be work on the Hartman EVERY Saturday from now on. Starting at 9AM. He also stated that for some unknown reason, the group has built two left wings. One can be corrected, so they don't have to start over building it. Seems they were so engrossed in making it, they forgot to make sure we were building a right AND a left wing. Secretary reported that anyone interested in Oshkosh camping needs to get their check to Gerald Clark (e-mail and phone number on page 6 of newsletter), to ensure a spot in the camping area. Meeting was adjourned at 8:37pm.



Bill Gast weighs in low!!!

Bill's RV6 –A comes in at 1083 lbs. empty weight. Bill figures that this low figure will now allow him to carry a gross of golf balls, and buy a new leather golf bag. Having seen Bill's approaches, the additional weight will probably be a good idea....

—Mike Abrahams

Chapter Location Update

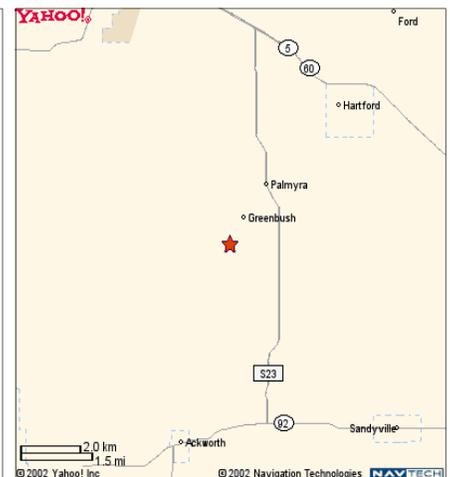
Here's how the questionnaire for chapter home location tallied in order of most to least desired locations:

1. Ankeny Airport
2. Morning Star
3. Todd's Field
4. Nash Field
5. Dallas Co. Air.
6. Airplane Super.
7. Off Airport Location
8. Des Moines Air.
9. Adel Airport
10. Winterset

We are continuing our search for a new chapter home. For the past several months one or more of the committee members have attended the Polk County Aviation Authority meeting, and the Northfield (Morning Star) monthly meeting, in addition to contacting the other locations on the list. When we have a concrete location secured, and the board has made their definite decision we will announce it in the newsletter. Please keep in mind, that we will explore all our opportunities, and choose the one that we feel will be the best fit for all the chapter needs.

Heard on a Southwest Airline Flight..."Ladies and Gentlemen, if you wish to smoke, the smoking section on the airplane is on the wing and if you can light'em, you can smoke'em"

Mark Kokstis
1818 Fulton
Carlisle.
Take 5 to Carlisle to S23. Turn south on S23, go through Pamyra and one mile out of town, turn right on Fulton, going approx 1 mile. Don't follow the left curve sign that you come to, go straight. House is 1st on left,



Chapter Dues are past due. Please pay Brant \$20.

Chapter 135 Board Meeting June 23, 2003

Board meeting opened at 7:03 by President Roger Bocox. Treasurer reported on funds in bank. Board member reports were: Paul had comments on the last chapter meeting, Mark stated there has been light turn-out on Harman work. The 2 left wings are being converted into 1 right and 1 left. Rob reported on Fathers Day Pancake breakfast at Exec I. Bill had his RV weighed. Other board comments were not relevant to chapter business. There were approximately 40 kids flown from Aviation Camp in Boone over the 15,16 &17 of June. There are some details that need to be worked out before next year. It was decided that Steve Truby would need to be contacted to work on details for next year. July meeting will be a viewing of the B-17 visit to Ankeny.

Old Business:

Roger reported on the scales status. It was also decided that the calendars left over for 2003 would be given out at YE events.

New Business:

The board received an update on the Chapter Home Project from committee members. Jack updated the board on the upcoming Ercoupe convention, June 17-20, 2004 which will be held in Knoxville. This will be a huge event for the chapter, and even though it is a year away, the planning is beginning. Look for more details on the event in each upcoming newsletter. Board decided to have the August meeting be a family picnic, to be held at the main FBO hangar at Ankeny (same location as last year). Chapter to supply meat, drinks, and table servings. Each member to bring a dish to pass. Meeting adjourned at 8:40 pm.

THE LOW TIME PILOT

by Brant Hollensbe

It has been a very busy month for Chapter 135. Alan Core has put the Young Eagle program in full gear. The chapter filled up several pages when we signed up YE at the Modelaire Convention on June 7 & 8. The Chapter flew many of the YE that Saturday from the Ankeny Airport. Dave K. will head up the effort to give the rest of the kids a flight experience in the coming weeks. Chapter 135 flew 35 YE out of the Boone Airport in conjunction with the 4-H camp on June 15,16, &17. Of course Wes Olson and his merry band of EAA'ers were having the 4-H kids build airplane ribs that Monday afternoon.

I got the opportunity to fly my first Young Eagles at Boone on Sunday and Monday. What a blast. My first kid was very apprehensive and unsure if flying was for him. I had him do the preflight with me then I got him seated and belted in. He was nervous as we turned onto the runway so I decided that this flight would be limited to very shallow turns and climbs. I flashed him a reassuring smile and pushed the throttle forward. At 200 AGL he asked me if we were off the ground yet. After 10 minutes he settled down and started to enjoy the flight. As I started to return to the airport he took the controls to try a few turns. He was mesmerized with flying on the final approach. As we taxied back to the ramp, I glanced over and saw him grin ear to ear. "When is the next YE flight day?"

The Hartman replica project was not forgotten. Every Saturday our members have been faithfully showing up to make this dream a reality. I have discovered that more guys that show up, the more fun there is. I want to thank all of you that have been involved in the wing sanding work, you guys are awesome. The wings are looking really terrific. Two sharp eyed members did an quick inventory of the parts bin and discovered that the right wing parts bin was empty but that the left wing parts bin showed a quantity of 2. Oops! After a short discussion it was decided that that one of the surplus left wings could easily be modified into the right wing. On Sat. June 21, a small crew of Chapter 135 guys proceeded with that modification. We should have a new right wing completed on June 28. Way to go guys!

What's Going On

July 5-6, 2003—Fly Iowa, Eastern Iowa Airport. Questions pamh@cedar-rapids.org.

July 12, 2003—EAA Chapter 135 regular monthly meeting 7:00 pm at Exec I, Ankeny Airport.

July 29-Aug 4, 2003—AIRVENTURE 2003

August 9, 2003—Chapter Picnic

August 22-24, 2003—Replica Fighters Fly-In weekend, Osceola.

August 24, 2003 — Fly-In Breakfast. 7 AM to Noon. Pilots in command free. Displays and parachuting. Iowa City Muni. Airport, Iowa City, IA Info: 319-338-9222

August 27-Sept 1, 2003 — Blakesburg, IA Reunion of Travel Aires with the AAA/APM International Fly-In at Antique Airfield.

September 20, 2003 — Fly-In breakfast and air show. Breakfast: 6:30 AM to 10 AM. Pilots in command free. Southeast Iowa Regional Airport, Burlington, IA Info: 319-754-4601

October 16-17, 2003 — Annual Aviation Conference, Marriott Hotel, West Des Moines, IA Info: 515-239-1691

AirVenture 2003

Celebrating 100 years of Powered Flight July 29-August 4, 2003

If you've never been to Oshkosh, this is the year to do it. As National Geographic put it "It's like bees returning to the hive, aviation buffs swarm each summer to Oshkosh, Wisconsin, for the country's premier air show..." That's it in a nutshell. And it's not just for the guys, women will enjoy it as well. This year boasts the Wright Brothers celebration with the Countdown to Kitty Hawk display featuring the Wright *Flyer* reproduction on display. They say this reproduction matches the original as closely as possible, and like it's 1903 predecessor, the *Flyer* will take wing at Kitty Hawk on December 17.

The chapter has a huge area where everyone camps, and cooks dinners together, sits around the campfire at night and tells stories (and we have heard some stories!!). Come for the entire week, or just a few days. The location we have for camping is directly across from the big red barn, and the bathroom/showers. It is by far one of the better, if not the best location in the complex. Bring the motorhome, tent, or just sleep in your van. We have great dinners each night, and there is a tremendous amount of things to do and see while you are there. Be sure to stop by the Replica Fighters building, and show them your support. They are responsible for us being able to have such a prime camping location year after year.

See you all there!!

Propeller Facts Part 2 Flight Safety by John Barcus

How about this? It is a know fact that the amount of horsepower taken from an engine will have a direct relationship to the amount of fuel used. An example, the standard propeller supplied with an aircraft may allow an engine to develop 180 horsepower at 2700 RPM at full throttle in level flight at sea level at standard temperature. Seventy five percent power will require about 2450 RPM with a brake specific fuel consumption of .435 pounds per brake horsepower is equal to 135 horsepower. Fuel usage at this power setting. 58.7 pounds per hour or 9.8 gallons per hour. The mathematics to arrive at this fuel usage is simple. $180\text{HP} \times 75\% = 135\text{HP}$, $135\text{HP} \times .435\text{BSFC} = 58.7\text{ lbs fuel}$.

Now, having made some assessments what can happen with a standard propeller, now we will try to see what happens when a cruise propeller is installed in place of the original. The first thing we must know about the cruise propeller is that it has more pitch than the standard propeller. This means it will take a bigger bite of air than the original propeller with each revolution. Taking a bigger bite of air increases the resistance of the turning propeller with each revolution. This will in fact reduce takeoff performance of any aircraft.

Using the earlier example, the engine was rated at 180 horsepower at full throttle and 2700 RPM. Now in spite of applying full throttle the increased resistance of the cruise propeller will limit the maximum RPM. The maximum attainable RPM will be something less than 2700 RPM. The engine will not develop the horsepower for which it is rated and the aircraft performance will suffer.

Therefore without more thoughtful consideration it seems logical that a cruise propeller might also be set to 2450 RPM when 75% power is desired. Of course there is an increase in performance (airspeed) but this can be attributed to the more efficient cruise propeller (bigger bite). But, watch out now. Instead of 9.8 gallons of fuel, the engine is now using a greater amount per hour.

For purposes of illustration let us assume that the number is 11 GPH. By reversing the mathematics used earlier, it is possible to estimate the horsepower and percentage of power actually being used as a result of operating the cruise propeller at 2450 RPM with best economy fuel air mixture. $11\text{ GPH} \times 6\text{ lbs per gallon} = 66\text{ pounds}$. $66 / .425\text{ BSFC} = 151.7\text{ horsepower}$. $151.7\text{ hp} / 180\text{ hp} = 84.3\%\text{ power}$. This illustrates the need for pilots to change their flying habits.

In addition to the change of habits the discussion shows a real need to reevaluate the takeoff, climb, and cruise performance of an aircraft if the fixed pitched propeller is changed to a different model.

How about a 250 horsepower engine in the modern light airplane that is capable of doing the same work at the same rate as that of 250 average horses. From an engineer's point of view, it is capable of moving 137,500 pounds of weight one foot in one second. Yet what a difference there is in size and weight (approximately 400 pounds compared to the 250 horses it replaces) Now you know what I've been doing at the airport during the weekend we had the big snow storm.

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PROP WASH

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