

Brazos Area Recreational Flyers

Bragging and Gossip

EAA Chapter 983 Newsletter

June 2006

PO Box 5191 Granbury, TX. 76049

Visit us at: www.eaa983.org

Chapter 983 meets every second Saturday at 10:00 am in The Houseman Hangar. N.E. corner of the runway

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Experimental, homebuilt and built from plans.

You can't use those words to describe John Hudec's Waco any more than you can use *Knick knacks and eggs*, to describe the Faberge Jeweled Eggs made for the Tsars of Russia.

Simply put, I have not seen a nicer production or professionally built airplane, ever.

The only way to appreciate the beauty and accomplishment of this project is to see it and perhaps, with John's approval, touch a piece of gleaming brass, soft leather or deep, lustrous paint. John (EAA Chapter 10) brought his fabulous Waco down from Collinsville, Ok. for our Spring Fly-In and wowed everyone who saw it.

Like your RV or Baby Ace, this aircraft is all experimental and truly a homebuilt. "Did he build the cowling Dad?" "Yes he did son." The model designation is a Waco UMF 5 of which only 18 were built in 1934 and 1935. "Did he build the wings Dad?" "Yes he did son, every rib, fitting, drag wire and aluminum fairing." It was a 12 year / 9500 hour project built from plans obtained from the Smithsonian Institute and using aviation artist Dick Mati's drawings. "Did he build the fuselage too Dad?" "Sure did, from the tubing to the door panels, the rudder to the leather seats, the engine mount to the tail wheel." In fact, John is quite proud that, in addition to the engine, basically only eight items were purchased for the entire project: Prop, spinner, dishpan, flying wires, tires, wheels, instruments and AN hardware. Every other piece he made. Take a look at the corrugated flight controls for an example of his fabrication skills.

(Continued on p.3)



Reset... Mulligan... Reload...

The Chapter 983 Spring Fly-In cancelled in May due to wet ground and skies has been rescheduled for JUNE 10.

All plans, jobs and activities remain as before. Don't miss it, bring your friends.



“Give me a lever and I can move the world”

Or

“It’s not your Momma’s rotisserie”

When Tech Counselor Dick Keyt started planning a major overhaul and redesign of a number of systems on his Polen Special, it became clear that a rotisserie was going to be an essential piece of equipment. The single biggest single job was going to be redesigning and building a completely new landing gear system. Lying on his back and working from below was just not going to work. It became quite a project in its own right. What was originally

planned to be simple and take a week to build, ended up being much more complex and took several weeks longer.

Weight distribution and cg control was the single biggest problem. The fuselage without the engine weighs about 750#, 60% supported by the tail (vertical and horizontal stabilizer spars) and 40% by the engine mount attachments. The location of the cowlings and mount supports required the cg be displaced from the center of rotation by about 12". Not such a big deal when it's level or inverted but a huge consideration when it's in knife edge attitude and 2/3's of that 750# is trying to tip the whole apparatus on its side. Another effect of the offset cg; rotating the fuselage required the strength of several grown men. The fix was, a geared boat hoist, adapted to rotate the rotisserie with a hand crank.

It's finished now and work on the Polen is ready to begin. Anyone who's worked with Dick knows that much of the satisfaction of a job done well is in the set up. No different here. It's an elegant bit of design and engineering. Stop by and take a look.



This is Part II of Don Saint's article on his Glasair conversion from 180 HP to approx. 230 HP.

The initial engine run was some what successful in that it started after about one revolution of the starter. Oil pressure came right up. It idled a little high and rich and did not want to shut down when mixture was pulled lean. After several engine runs, the idle, mixture and shutdown worked correctly, however, the prop did not cycle properly, so about one week was spent troubleshooting this problem.



After a trip to Byam Propellor at Meacham Airport for a governor check, I still can't explain the solution for the governor, but a recent service bulletin had been issued regarding a .040 shim and gasket under the governor on this engine. The description for the problem in the SB did not explain why the governor did not cycle, but when installed, the problem was solved. As much as I hate to admit it, at Charles Williams' insistence, I had to read the instructions in order to get it to work. Charles even made the shim for the "experiment" which solved the problem. I'd still like for someone to explain why the shim fixed the problem. BTW, Karl Byam loaned me an adapter for the governor pad as a troubleshooting aid. This was helpful to measure oil pressure to the governor as well as applying pressure to the prop to see it cycle. (Continued p.3)

PA from the Captain: ROE WALKER

FLY IN The rain was needed, but it came at a bad time – the ground was soaked – so we had to postpone the fly-in. It has been rescheduled for 10 Jun, same time, same place. Everyone has responded well to the call for volunteers, but don't let that keep you from coming early and helping in any of the areas needed. Just find Dick Carmichael and let him know that you are available for assignment. Dick and his crew have done a great job of planning. What we need now are volunteers to run the fall fly-in. The current crop of leaders need a rest and would like to take time out to enjoy the activities. There's an old saying about working the good horses to death, and we don't want that to happen in the chapter! Come out and see how it is done so you can pick up the baton for the next fly-in. There will be lots of info available on how to do it.

KUDOS Congratulations to two of our members who have gotten new ratings. Andy Shane is now an A&P, and Charlie Adams is a newly minted IA. Way to go, guys.

Barnstormers has sent me some business cards. I'll have them at our next meeting if you are interested. For those of you not familiar with Barnstormers, it is an excellent site for selling surplus aviation gear of all kinds, and the price is right. It's free to list an item, and a donation when it is sold if that is your pleasure. I've sold several items through them. They get good response. Check them out at www.barnstormers.com



(Glasair... continued from p.2)

Now that the engine was running normally, it was time to fit the cowling and new baffling. The bottom cowling was modified to accommodate the new exhaust pipes. Using screen and tape to shape compound curves, provides a convenient means to add some fiberglass laid up on plastic sheet. The left side of the cowling was reshaped to clear the #2 cylinder by adding a rib to the side of the cowling using foam and glass. The small clearance was assisted with a Teflon "rub" sheet. The forward induction air inlet was added with a few layups of bidirectional cloth and resin. The top cowling was modified by adding bumps to clear the cylinders. The bumps were minimized by removing the cylinder baffling attachment ear (there goes the core value). The new baffling took longer than planned (since I did not

plan for that). Several evenings were spent installing baffling that fit the new cowling, and it worked with minimal leaks. I use 0.25" safety wire to sew the pieces together when compound curves are needed.

There was a noticeable vibration during ground runs and it was accentuated during flight. Sam Butler was flying chase and could easily see aileron movement due to the vibration. I replaced the hard aerobatic engine mounts with softer Barry mounts made for the Mooney's. This made a significant improvement both on the ground and in flight.

Oil temperature was higher than it should be for winter flying. I had to expand the inlet scoop and enlarge the ducting to the cooler which improved its efficiency. The original scoop and duct size was about 8 square inches. A 4" duct is about 12 square inches. I still may need a second cooler for summer flying in Texas.

During a cross country flight, I was cruising at 75% power and seeing about 190 KTAS which is about 15 KTAS faster than with the 180 HP engine. Assuming equal drag, the engine is producing about 172 HP at 75% power setting or 230 HP at 100%. Leaned fuel flow at 75% is about 11 gallons per hour. In cruise, the induction air selector valve makes a difference of 2 inches of manifold pressure between the cowling air and the ram air.

I might be able to go for three of those Red Flag Migs with the additional horsepower. -Don

A recent update from Don:

"After 25 hours and 8 quarts of oil, here's what she looks like. *(Picture of a cylinder-less Lycoming on his Glasair)* I have replaced the gapless rings with standard ECI rings. Break-in is in progress.

"I believe Glasair conversion article Part III is also in progress. -Damon

Here's an interesting e-mail from Gary Green (Regarding his almost finished T-18 project) to Don Saint.

Don,

I have been meaning to ask you about the first start and run-in on your re-built engine. So far, I have not even put oil in the engine Charles Henry and I put together. I am concerned about the first start up, run-in, and first flight. There are several things I would like to do during taxi test prior to flight that are mutually incompatible with breaking in a new engine. I mull it over in my mind, but never come up with a good solution. I have considered swapping engines with the old Thorp. And, I have considered taking it off and taking it to Tulsa to put in Barrett's test cell for an hour or two.

What is your advice? What have Martin, Jim and others around there been doing with brand new engines and brand new planes on their start-up and run-in procedures?

One of the things I did with the old plane was to put the tail wheel in a ditch to achieve an exaggerated climb attitude, then run the engine at full throttle for about 3 minutes to verify the gravity feed would supply the engine on climb out. Then, I did several taxi test to feel out the braking effectiveness, tail wheel steering geometry, find leaks (and I had some), see how straight it rolled down the centerline, etc. None of that is compatible with initial run-in of a new engine.

Our Thorp gathering is here on June 9-11. The same weekend as your rain date for the Pecan Fly-in. I hate that. I was looking forward to coming down there to see all you guys.

From The Right Seat: Chip Mull

Vice President Chip has been in California for a couple of weeks being treated at the USC Medical Center. Updates when they come in. He's very hopeful that his medical will be secure and he can return to US Air, flying the left seat again.



I don't know why, but I really like this guy!



The Safety Note

Here's a few well worn phrases from Flying Lessons 101 that bear repeating. "Land on the centerline." "Clear the area before you start." "Preflight every time you fly." "Know where you are when your GPS fails."

"Clear final before you take the runway." "Time your fuel burn. Do not believe fuel gauges." "Study the owners manual." "Clear before you make a turn." "Practice your stalls, steep turns, engine outs and landings." And if you are really serious about not dying in an airplane: "Never, under any circumstances, offer your pilot wife any unsolicited flying advice."

It is said that experience is a tough teacher because she gives the test first and the lesson afterwards



(Experimental, homebuilt... from p.1)

The engine is an interesting story. It's a Continental W670, 240 HP originally sold to the U.S. government as a tank engine. It was pickled in Cosmoline in 1943 where it waited until 2001 for John to crack the drum and rebuild it.

I'm sure there is a wall and desk full of awards and trophies back in Collinsville. Notably he won a Bronze Lindy for Best Replica at Osh Kosh and most recently Grand Champion Plans Built at SWRFI in Hondo.

As I said earlier, you truly have to see it to appreciate it. You have that opportunity if you missed it at the Fly-In. John and his Waco will be at an American Antique Association Gathering at Gainesville, Tx. the second weekend of June.

Faberge Eggs, Cartier watches, Tiffany lamps and John Hudec's Waco all belong together in the same museum but John's too busy flying this treasure.

Notices to Airmen

- ✓ Page 102, Trade-A-Plane, Mig 21 for sale. \$45,000. Will someone out there please buy it? I'd just like to watch it take off once.
- ✓ Abilene Airfest at the Abilene Regional Airport (KABI) August 19. Air show, military demo's, air race, warbirds and hot rod car show. Fly in and support what is proving to be a great event.
- ✓ When you send or receive an e-mail that helps you describe, solve or understand an aircraft problem, please send a copy to me. I'd like to publish some of them. You may not realize how interesting and informative they are to the rest of us. -Damon
- ✓ Being retired is a wonderful thing. Donna and I are going to spend the month of August in Salt Lake City. I would like to have someone put together the newsletter for September. It's simple and I'll show you how.
- ✓ I have been using the Aloft Technologies, Clarity lightweight headset for several months now and have great things to say about it.
- ✓ Martin Sutter and Gary Bricker have purchased the new Quiet Technologies lightweight headsets. Martin says they are quieter than the Bose. \$340 vs. \$475 for the Clarity.

CLASSIFIEDS

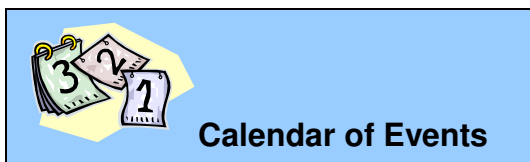
Henney Boys Lawn Service: Regular cuts or one time vacation jobs, we'll mow, edge, blow, and weed eat; Small lawns \$20, Large \$50 Vacant lot contracts also available. 817 573-4301

RV4 0-320, C/S, 909 SMOH, Garmin 430, A/P. \$50,000 or offer. tw.cfi@sbcglobal.net 210 275-7780

48" Work bench sheet metal brake \$85. Almost new Craftsman Shop Vac, the big one w/all the attachments \$85. Contact Damon at famber@charter.net or 817 573-3444

Small Sailboat – Grumman "Teenee" aluminum 9 Ft. Sail Boat and trailer. Includes sails and 1.2 HP engine-\$950 OBO, Contact Jean Houseman at 817-579-1913

Exxon Elite Aircraft Oil. I am now a distributor. It sells for \$48.00 per 12 quart case. It has the best ratings for both wear protection and corrosion prevention. I am donating the profits from sales to the Dennis N. Polen educational foundation. Contact Dick Keyt 817-279-7590 flykeys@charter.net



June	2 & 3	Biplane Expo	Bartlesville, Ok, (BVO)
	9 – 11	Thorp T-18 Fly-In	near Flippin, Ark. (KFLP) Gary Greens
	10	Chapter 983 Fly-In	Pecan Plantation (0TX1)
	17	Snyder Airshow/Fly In	Snyder, Tx. (KSNK)
	23-25	Chapter Branson Trip	Branson Mo.
July	8	Chapter 983 Meeting	Housemans hangar (0TX1)
	24-30	Airventure 2006	Whitman Field (OSH)
August	12	Chapter 983 Meeting	Housemans hangar (0TX1)
	19	Big Country Airfest	Abilene, Tx (KABI)
September	9	Chapter 983 Meeting	Housemans hangar (0TX1)
	23 & 24	Red River Airshow	Grayson Co. Airport (KGYI)
	30	Hilltop Lakes Fly-In	Hilltop Lakes, Tx (0TE4)
October	10	Commemorative Air Force Airshow	Midland, Tx
	21	Moonlight Airshow	New Braunfels, Tx (KBAZ)

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