APS *NEWS*

The official Publication of the Auxiliary-powered Sailplane Association, Inc.

Volume XVIII Issue #115 **ASA Web Site: <www.motorglider.org>** **May - June 2007**

Now THIS is a a WING !!! 91 feet - Modified ASH-25 - the 28EB by Walter Binder

In this Issue:

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President’s Corner

I am on my way home from the best ASA fly-in ever.

The weather was fantastic. The people were the greatest and of course the soaring was the best. There were seventy-five flights greater than 500 km posted on the OLC during our camp. Three of the flights were more than 1000 km (Bill Gawthrop, Ed Salkeld, and Norbert Schlafke).

Congratulations go to Bill Gawthrop who was awarded The Malcolm Stevenson Trophy. The total of his best three flights was 2921 km (2407 OLC points).
Ed Salkeld - 2nd
Russ Owens- 3rd
Rolf Seibert - 4th
Eric Greenwell - 5th

Bill only flew with us for the first week and then went to the Hilton Ranch to represent the Western US.

I am asking the pilots who attended to send pictures and write about their camp experiences. Send them to our editor: ASA_Editor@mindspring.com

Thank you all for your safe flying…..and only one “land out”.

We are proud to have been inducted into AARR by Dave Nelson and friends.

Great Soaring !!
Rick “FD” Howell

SAFETY COLUMN

Oliver Dyer-Bennet, CFI/CFIG
Safety Director ASA

Devoted to the enjoyment and safety of the sport of high performance powered sailplanes and motorgliders.

Some of our brethern use standard, non glider, control tower airports to start their powered glider flights.

A review of Air Traffic Control, ATC, instructions while taxing out for take off is good operational idea.

Quoting from the FAA Runway safety manual, 2nd edition, "A pilots Guide to Safe Surface Operations", once ATC, taxi instructions are received you should;

1. Write down taxi instructions, especially instructions that are complex. This can help reduce the chance of forgetting part of the ATC instructions.

2. Monitor ATC instructions/clearances issued to other aircraft.

3. Be especially vigilant if another aircraft has a similiar sounding call sign.

4. Listen carefully to avoid taking an instruction/ clearance intended for someone else.

5. Ask immediately if you are uncertain about any ATC instruction or clearance.

6. Read back all instructions/clearances with your aircraft call sign.

7. Remember an ATC instruction to taxi to a runway is not a clearance to cross the assigned takeoff runway, or to taxi on that runway at any point. It is a clearance to cross other runways that intersect the taxi route to the assigned takeoff runway.

8. Advise ATC if you anticipate a delay, or are unable to comply with their instructions.

9. If you suspect radio problems, look for light gun signals from ATC, in the control tower.

In general its safest to move your motorglider from its tie down, only when you are ready, have verified the ATC instructions, and the ground path ahead is clear.

Carat & the 750 K

Oliver Dyer-Bennet

After licensing the latest Carat, CA027, at Minden, it was up in the thin, high dessert Nevada air, to check out the systems.

After a couple of local test hops and a little contest tweaking of the Carat, its varios and the GPS computer, things were looking good.

A run to the White mountains, Silver Springs and back to Minden was warranted. On the return run north we had company, SUN, a DG-400M/17. We team flew a stretch of some 80 miles together and had a ball in the good lift conditions.

This flight was just over 500 km and we knew the Carat was ready to stretch its wings.

Tuesday was to be the start of the 750 KM attempt in the Carat.

We let a few markers, Joe, Mitch, Bob, Tupper, etc., start about an hour ahead of George and Ollie.

Carat 750k cont. pg. 6...

FROM THE DESERT BETA TEST FACILITY

TECH TALK

by Gary Evans

CARBON FIBER TE PROBE REPAIR

This article is specifically for the DG supplied carbon fiber 3 port probes. Other brands may or may not utilize the same design. While the carbon fiber looks high tech it is prone to cracking on the ends if someone accidentally bumps into it. This can occur at either or both ends of the tube. The cracks are small so you need to inspect the ends carefully to see them. You may find that yours is already cracked.

Get ready for sticker shock when you ask the cost of a DG replacement, which is the reason for this article.

While this damage appears to be un-repairable especially if you don't know what's inside the tubing it is in fact a fairly simple procedure if the damage is confined to the end/s of the CF tube. You will in the process lose as much tube length as must be removed but that is likely negligible in terms of performance.

Even if you replace the damaged probe with another brand it may result in a length change so I consider it to be a non-issue.

I'll explain the process of each end of the probe separately starting with the end that plugs into the tail receptor. First you need to see what inside so the explanation makes more sense. This shows the end removed with the inter parts.

The pressure port is the silicone tube that connects to the metal end. The static port is the CF tube itself and exits via flat sides on the metal end. The TE port is the silicone tube that connects to the piece of brass tubing. The brass tube has a small tube soldered length wise that connects to a hole it is side which in turn aligns with a hole drilled in the CF tube (that is the hole that you see on the side of the CF tube).

The repair is accomplished in the following order.
1) Remove the damaged section of the CF. I use a dremel cutting disk being very carefully not to cut into the metal end of totally through the tube wall which could damage the silicone tubing inside. If you cut down each side and around the tube you can then fracture the tube with a small screwdriver.

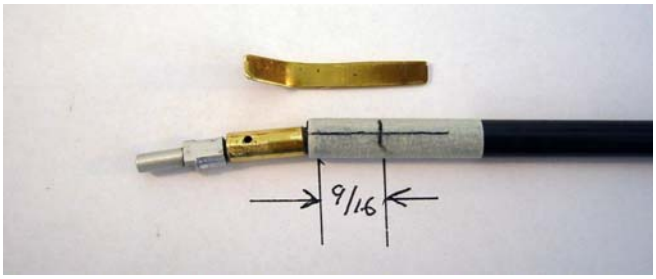
2) File the ends on the tube square and then to bevel the edge. A set of jeweler's files is perfect for this job. I protect the silicone tubing with my fingertip while working with the file.
3) Clean up the interior of the CF tube and the metal end for good adhesive grip.
4) Cut as much length from the silicone tubing as you have removed from the CF tube. This is important because trying to push the extra length of silicone tubing into the CF tube will guarantee kinking as it is very soft. The tubing is just a push fit on the TE port but the pressure port is bonded to the metal ends. Clean out the pressure port hole in the metal end using a number drill.

During the cutting and bonding operation you just stretch the silicone tubes as much as need and hold them extended with a spring-loaded clothespin. If you have trouble getting the silicone tubing to retract to its un-stretched length due to friction between the silicone tubes you can squirt some water with a couple drops of detergent added of into the CF tube. The water can be later removed with compressed air.

Bonding silicone tubing requires the correct silicone adhesive. I suggest either DAD 100% silicone adhesive or Locktite Superflex silicone adhesive. These required 24 hours to fully cure. Don't rush it!

Do not use RTV automotive sealers or anything you may have lying around, as this is not the best application for experimenting.

5) Drill a hole in the CF tubing to match the hole in the brass tube for the TE port. This hole must be in the same position as the original. On mine that meant drilling the hole 9/16 from the end. I used a small strip of brass inserted in the CF tube during drilling to prevent damage to the silicone tubes.



6) Re-bond the brass tube and the metal end back into the CF tube. Before bonding make sure that you have a free airflow through the both ports. First apply 5 min epoxy to the inside of the CF and the outside of the brass tube. Before pushing the brass tube in stretch out the silicone tubing and wipe off and excess epoxy. Carefully align the hole in the brass tube with the drilled hole in the CF tube and press it into place until the holes align. Lastly bond the metal end in place being careful not to plug the flat sides, which must flow air. Do a quick check to make sure you still have clear airflow before the epoxy hardens.

7) Bevel the TE hole with a very fine pointed grinding stone.

8) Finally polish the end of the CF tubing with 2000 wet paper followed by plastic polish for a perfect finish.

Repairs to the opposite end of the probe are done much the same using heat to soften the adhesive holding the ends in place. This is what the removed ends look like.

The pressure port silicone tube is bonded with adhesive as the brass tubing is smaller in diameter and doesn't make a good push fit. When bonding apply the adhesive to the outside of the metal tube not the inside of the silicone tube to it from getting into the brass tube. The TE port connection is just a push fit. It is further possible to reinforce the two CF tube ends at the outer end with fiberglass tubes epoxyed over the joints as shown.

Tech Talk cont....

The fiberglass tubing required is .312 I.D. x.392 O.D. for the main tube and .234 I.D. x .278 O.D. for the TE leg. These are available in 32 inch lengths as part # TU-02 and TU-01 from Aerospace Composite Products. They can be ordered on-line at - http://tinyurl.com/yqwmls.

Attempting to reinforce the other end of the probe in this manner would only localize the bending stress at the point the probe enters the tail fin which would increase the chance for damage.

Now we will be more careful in the future to protect the probe, like leaving it on the pilots seat during ground handling. You can also tell your wife that with the money you saved repairing the probe that you are going to buy some other necessity for the glider.

Carat 750k cont....

After a Minden remote start a course change was made, one of many that day. A run down the Sierra Nevada mountains, rather than the traditional Mt. Patterson direction. This ended up saving about an hour in time.

With the boys ahead giving us good information over the radio the course line became the Sierras, Lee Vinning, Glass Mtn. on to the White mountains at White Mtn., with a turn south to Bishop and Lone Pine remote.

At Lone Pine a turn was made north with a run up the Whites, to Boundary Peak remote with a cruise speed of 125 mph TAS.

Headed towards the north end of the White mountains, at 17,800 ft. a decision had to be made. Jump off the end of the Whites and continue north, or turn again south, and do one more lap race on the Whites as the sun was moving lower to the west.....

.....Approaching the the north end at Boundary Peak, and looking at a shear drop off of 10,000 ft. to the valley floor, it was time for the decision.
Either head towards home or once again turn away from home and head south.....

The decision was made, left rudder and aileron, a quick 180 degree turn to the
left, and we were again headed south, committed to one more lap on the Whites.

The day was drawing down, but the Whites were still working well. Running between 15,000 to 17,800 ft., and crusing between 110 to 130 mph TAS, Bishop remote was quickly acheived and now it was a mad dash back up the Whites to the north end.

Jumping off the Whites a little north of Boundary Peak, a course line was laid for Minden. Up ahead were small storm cells and a gently dying day.

Cruising between 60 to 70 knots, IAS and dolphin flying as much as possible, we gently floated the Carat east of Potato Peak and used the west side of the Sweetwater range to good advantage.

Finally...., Minden was acheived. 750 kilometers at an average speed of 75.38 mph.

The Carat had indeed stretched its wings and performed admirably, with its longest flight yet.

Parowan 2007

Brian Utley

I arrived at Parowan at 9:00 AM on the 12th of June expecting to be an early bird for the ASA/MSC camp. Not so! In fact I had to settle for a 4th row tie down.

Perhaps the wash out at Albert Lea and the rain through the mid west had spurred everyone on, nevertheless it was stimulating to see many friends and acquaintances all eager to feel the surge of the typical Parowan thermal.

I had watched the OLC for weeks looking for signs of activity but almost nothing until Bill Gawthrop showed up the week before with a couple of long flights. Enough, looks like a good forecast. Not that there had been some doubt.

Travelling through Wyoming a few days earlier I was following a snow storm that dumped six inches of the white powder everywhere. But that was last week and now the sun was shining and it was time to assemble and get in the air!

For the next eleven days the weather never missed a beat. Day after day Bill Gawthrop, Ed Salkeld, Tom Kelley, Russ Owens, Bill Richardson and Rolf Siebert showed how it should be done while the rest of us played and had great fun.

Some memorable moments:

Bill Gawthrop describing how he had discovered a convergence zone about 85 miles to the NE that allowed him to fly without thermalling for hundreds of kilometers.

Discovering the same for myself and experiencing the thrill of flying at close to redline and having difficulty staying below 18,000' and being sucked up into the clouds.

Taking a day off to enjoy the wonders of Bryce Canyon with all its spectacular views.

The field trip with the "Bird Man" to see prehistoric dinosaur tracks, Golden Eagle nesting and Indian petroglyphs.

The ability to fly until almost sunset!

Rick Howell's organization and operations – there has to be a leader and Rick did a superb job.

The social warmth and friendship fostered by the meals prepared by our Parowan hosts.

The friendliness of everyone at Parowan. It really feels good to know that our presence is wanted and appreciated.

The last day when FH (Dick Andrews and Fred Hewitt) and I discovered a convergence in the range just to the east of Parowan. We both flew almost 600km but Dick and Fred only thermalled twice after getting up into the convergence!

Now, I can't wait for next year…

For those of you who got a chance to fly at Parowan or Ely the editor would like to publish your photos. For the rest of the readers please send photos and articles to: asa_editor@mindspring.com

Parowan 2007

Photos by Brian Utley


XC 90
V8


BS

Flying in Bitterwasser, Africa
Woody Woodward

Bitterwasser, Namibia, Africa - former German Colony (Southwest Africa) - became Namibia 1991 with a democracy. Bitterwasser has been a glider flying resort for the past 40+ years - first started by Peter Kayssler - former Luftwaffe pilot in WW2. He and his brother Binz Kayssler immigrated to Namibia to be farmers. As glider pilots they saw the beautiful skies at Bitterwasser and imported some primitive gliders and a tow plane and started the glider flying resort .

4 Swiss pilots flying at Bitterwasser bought the Bitterwasser Farm and glider flying operation from Peter at dinner one evening. The farm is in the Kalahari Desert - 35,000 acres - sheep growing area at best. The main asset is the dry lake bed adjoining the present resort - 2 miles in diameter – 360 degree runways - land anywhere. We call the dry lake bed a "pan".

The Swiss guys formed a syndicate of 50 shares and used the money to upgrade the resort to a real first class resort - deluxe bungalows and a new restaurant and huge garden and additional runways on higher ground for use when the pan is wet and not usable. Also a very big hangar - new flight office - modern kitchen - and many other first class amenities.

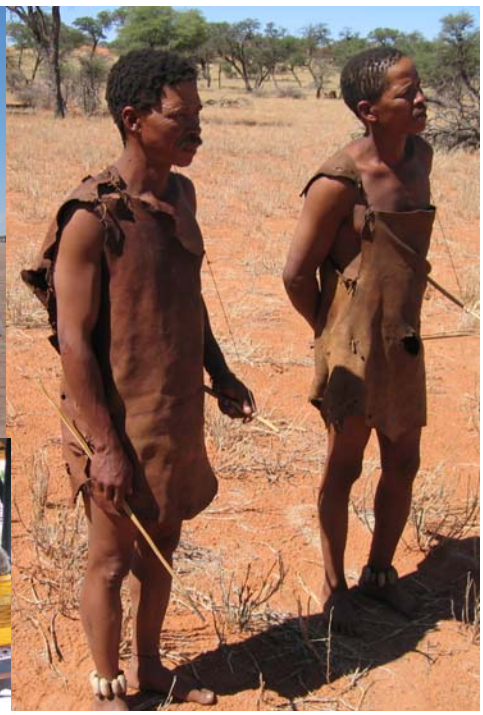
I first visited Bitterwasser in 1997 and have been going there for glider flying ever since - 10 consecutive seasons so far. The max capacity is 70 pilots and crew, including wives, girlfriends, children, and visitors. The flying season is November, December and January - with good flying in February and also October - but the longest days around December 21st are the heart of the flying season.

This past season we (collectively) flew 130 flights over 1000 km - including 2 flights 1250 km FAI Triangle and the longest OLC flight was 1365 km. The previous season we flew 101 flights over 1000 km. We can legally fly up to FL 195 in most areas - there is little power traffic and we essentially have the sky to ourselves.

Last season (like the previous season) I flew 4 flights over 1000 km (1009, 1017, 1037, 1202) and now have 31 long flights over 1000 km at Bitterwasser. Bitterwasser is well known in the soaring community for long flights.

During the past 2 seasons we have had 2 really big 28 meter (91 feet) gliders - ASH-25 EB-28 - made by Walter Binder in Germany. This past season Walter brought his new prototype EB-28 with a newly designed wing - a really fantastic glider with L/D = 65:1 at 850 kg. I will get #4 of the production series in April 2008.

At Bitterwasser we live like very well - excellent food and drink and accommodations and service as well as the very excellent glider flying. Have a look at - www.bitterwasser.com and http://www.binder-flugmotorenbau.de/ for more information. I hope you enjoy the story and the photos. Best regards, Ralph "Woody" Woodward 25 Glen Garry Drive Aspen, CO, 81611 (USA) 970-925-3960 tel 970-544-3552 fax rhwoody@earthlink.net



Carat @ the Ranch

Oliver Dyer-Benett

The 2nd annual, Carat Fly In, at the Harris Ranch, was held May 4th through May 6th.

The Harris Ranch is well located, about halfway between Los Angeles and San Francisco, alongside I-5. The Ranch has its own private paved airstrip, 100LL fuel, and wonderful hotel accommodations with a large center courtyard swimming pool and veranda area.

The Carat Fly In was timed to coincide with the Avenal glider contest which ran from April 30th through May 4th. Avenal is about 19 miles south of the Harris Ranch. If you have to land out during the contest, the Harris Ranch turnpoint, is a good place to wait for your crew to arrive. Land out pilots are usually found with their "mitts" wrapped around a large steak sandwich at the Harris Ranch restaurant.

Arrived at the Harris Ranch on Thursday and flew the Carat on Thursday, Friday & Sunday.

On Friday the Admiral* and myself, flew our Carats over to the Avenal contest and did a little competition flying with the boys. We launched with the contest pilots and nailed the first 3-GPS turnpoints in quick succession. After the 3rd turnpoint, we set up a final glide to the Harris Ranch, for the winners large steak dinner.

On Saturday we had a full day of meetings, mostly around the large swimming pool. Topics covered were, Carat assembly and disassembly techniques. Maintenance and annuals, and what to look for. We also ran through the Carat electrical system and how to perform an electronic battery test.

Saturday night was the formal steak dinner and the awards presentations.

*From the Admiral: " I had the fun of flying on Oliver's wing as we announced our presence at the annual Avenal contest, by flying down their dirt runway, under power, at about 200 ft. and 100 kts. I've flown a tons of formation in Navy fighters over the years but this little demo was especially fun in a light wing loaded aircraft with thermals starting to pop."

Parowan 2007 photos by Terry Edmonds

ASA Mission

The Auxiliary-powered Sailplane Association, Inc. was founded in 1988 as a non-profit organization to encourage the design, development and safe use of motorgliders, self-launching and sustainer engine sailplanes.

ASA Membership

Membership in ASA is open to anyone interested in powered sailplanes. Write or call: Brian Utley, ASA Membership Chairman, 9541 Virginia Ave. South Bloomington, MN 55438
Ph: 952-941-5683 email:<Utleyb@aol.com> USA Dues $20/yr, $38/2 yrs, $55/3 yrs. International Dues $25/yr, $48/2 yrs, $70/3 yrs.

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Stemme S10V

Stemme S10V with Factory Trailer. Always hangared. Located in NJ. Engine hours 210. Airframe hours app. 400. No Damage History. Excellent Condition. www.rasair.com
Email jojo94@patmedia.net

EDITOR NEEDS HELP

Thanks to Brian Utley, Eric Greenwell, Oliver Dyer-Bennet, Woody Woodward, Rick Howell, Brian Utlen and Terry Edmonds for contributing to this issue. For the rest of the readers I could really use your help with articles and photos. There's lots of flying being done and a lot of us have digital cameras so it is easy to submit photos. I am always looking for content so please contribute to the newsletter.